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Mediterranean Conference on Information Systems (MCIS)

2007

SOCIAL PRACTICE DESIGN (SPD), PATHOS, IMPROVISATION, MOOD, AND BRICOLAGE: THE MEDITERRANEAN WAY TO MAKE PLACE FOR IT?

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SOCIAL PRACTICE DESIGN (SPD), PATHOS, IMPROVISATION, MOOD, AND BRICOLAGE: THE MEDITERRANEAN WAY TO MAKE PLACE FOR IT?

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Abstract

Our proposal for Social Practice Design *(SPD), i.e., the* design *of social practices – in itself a* social *design activity -, seeks to ensure that the potential benefits of envisioned novel technologies can be realized, by increasing the bias towards the* social *in Information Systems Development (ISD).*

SPD is a form of intervention research or action research based on counselling. It can be considered an extension of Participatory Design *(PD) approaches to the implementation phase of information systems. It regards the concept and participative introduction of new things to do, or of new ways to do things, by humans, in order to* make place *for technology (Ehn 2006), and in order to resolve a variety of other pending social problems in organisations.*

In this paper we present SPD as a fully phenomenology-based approach, we reason about its stand in the IS discipline, and we briefly describe and point to an application for a European research project.

What characterize our position in defining SPD are Claudio Ciborra's Pathos, Improvisation, Caretaking, Bricolage*, and other key concepts he puts forth in order to shift the ISD focus from 'method', and direct it 'on human existence and everyday life'* (Ciborra 2002)*. We are motivated in this choice by the quest for more impact of ISD research on ISD practice, and our belief that phenomenology and counselling are the right recipe ingredients for this.*

The approach of Social Practice Design is based on the idea that problem solutions are in the hands of the organisation's personnel, and that person centred counselling approaches are capable of empowering them and support them to success.

It is well known that social practices cannot be 'engineered' but that they are evolving as part of people's activities of integrating a new technology into their ways of doing. Using the word 'design' we wish to stress intentionality, proactiveness, creativity and planning *as necessary ingredients of organisational innovation processes; i.e., we underline the usefulness of the* cognition *of the necessity of a conscious* design *approach to the development of innovative social practices. Thus, our choice of an oxymoron in the SPD title.*

In structure, SPD is similar to any methodology for the social, i.e., it includes multiple perspectives *into the usual triad of scientific paradigms: observation, analysis, and synthesis. Its core actions reside in the two basic phases of the 'design' approach for innovating social practices:*

- *an ethnographic analysis phase to identify outstanding problems in the area of social practice*
- *a creative design phase for developing social practice innovations*

We judge the quality of the SPD approach by three requirements (*Baskerville and Myers 2004): a contribution to practice (the action), a contribution to research (the theory), the criteria by which to judge the research, and we show explicitly how the research in the case meets these criteria.*

Keywords: Social Practice Design, Participatory Design, Information System Development, Ethnography.

1 INTRODUCTION

1.1 Information System Development practice has an inherent contradiction of perspectives

Do we devote as much attention to *how* we do things, as we devote to *what* we do? Upon introducing IT, do we match the discourse on architectural co-design of technology and of new business processes, with similarly committed, intentional discourses on ethnography-based analysis of the enterprise organisation and on organisational change management? In short, in implementing IT, do we match - both in the profession and in academia - technology and economy with enough politics, towards innovating the organisation? Or do we just end up introducing automation to do wrong things faster? Do we unconsciously nurture such a shortcoming? Could this be at the root of a deep crisis of the Information Systems Development discipline, of its possible insufficient impact on practice?

It has been long recognised that Information Systems Development is inherently, unavoidably, inseparably socio-technical.

"A classical dichotomy in the discipline of Information Systems Development (ISD) is to view such systems from either a technical perspective or a social perspective (Goldkuhl and Lyytinen 1982). However, SPD has to deal with both technical and social aspects (Hirsheim, Klein et al. 1995). The inherent contradiction of perspectives is an important cause of the failure of many Information Systems (cfr. Riesewijk and Warmerdam 1988; Nuseibeh and Easterbrook 2000)." (Dumay, Dietz and Mulder 2005).

It appears to us that while in ISD the technical perspective is well developed in practice into intentional, formalised design methods and techniques (e.g., the Object Oriented Analysis and Design approach: OOAD), the social perspective component is not comparatively developed to a similar degree. We believe further that this apparent fact in turn is reflected, in the profession and in the activity of technical development labs, in insufficient current, intentional, formalised activities dedicated to the social perspective, and pursued and practiced with cognition and determination. If this is so, we lack noted, necessary ingredients for success:

"ISD is an applied discipline. ISD practitioners do not just engineer artefacts, but application of these artefacts affects organisation itself. Formalisation of work practice due to the introduction of a new information system is a profound example. The invoked change can be regarded as an intervention. In this respect, organisational analysts are not merely passive observers, but actively involved in organisational change themselves. To possibly understand the effects of the intended intervention, full appreciation and a degree of understanding of organisation as social phenomenon is required. To do so, each and every organisation has to be regarded as a unique object of study. Due to the subjective interpretation of the analyst, the resulting impression of organisation fits within the ontological position of nominalism. Nevertheless, as the term *engineering* of artefacts suggests, the design and construction of Information Systems deals with formal, constructive methods and techniques as well. As this requires a completely different approach, ISD practice has to deal with an inherent contradiction of perspectives." (Dumay, Dietz and Mulder 2005).

A subjective universe vs. an objective universe. And, organisational analysts are to be actively involved in organisational change themselves. Indeed. This is our starting point for SPD.

1.2 The dual problem in ISD, and the heritage of Claudio Ciborra

Introducing Information Technologies (IT) organisations is an irreducible socio-technical problem. One needs develop technologies, and change organisation. And, one cannot do it separately, for the non-dissolvable connections existing between the two. In any case, one needs know how to go about technology development proper, and how to go about general organisational change management. How are we equipped on these two fronts, with reference to Information Systems (IS) in particular?

Technology development. Current IT development approaches are based on Object Oriented Analysis and Design (OOAD), a sophisticated and powerful, very innovative software development approach, invented in Norway half a century ago by Ole-Johan Dahl and Kristen Nygaard in their pioneering

work on object-orientation, currently in the course of slowly completing its transition towards establishing itself as main a stream approach (see e.g. Mathiassen *et al.* 2000). To face the accompanying unavoidable organisational change management problems, OOAD is augmented in practice by Participatory Design (PD), a traditionally Scandinavian approach(see for example Boedker, Kensing, and Simonsen 2004), originated a quarter of century ago, with the fundamental contribution of (again) Kristen Nygaard (Nygaard, Bergo 1975). PD entails an evolutionary technology development process, featuring iteration of the cycle design → user validate → redesign, involving mock-ups, user workshops, etc.

Organisational change. What do we have as an approach for organisational change management? A question not as commonly asked as appropriate, perhaps, also having a rather uncertain answer.

Social theory helps by eliciting social aspects to be taken into account, e.g., Giddens' structuration theory, for representations: interpretation schemes, norms/routines, power structures (Walsham 2004).

In addition, Action Research (AR) approaches to ISD come pragmatically to the rescue to help manage organisational change while caring for socio-cultural needs (Baskerville, Myers 2004). These AR approaches emerged in UK at least three decades ago around the Tavistock Institute, with an action research style participatory design approach by Mumford (1979), while Wood-Harper was an early advocate for the use of the AR method for IS research (1985), and at Lancaster work started with the somewhat related Soft System Method of Checkland (1984). Some of those approaches have been followed until recent times (see e.g., the Multiview approach: Avison *et al*. 1998; and, the special issue of MISQ on AR in IS edited by Baskerville and Myers in 2004). SO, AR is looked upon as a good candidate approach to organisational change management in ISD. As at times is PD.

Yet, we may say that there is no universally followed, successful, mainstream approach for organisational change management in ISD. As there is instead on the other side PD augmented OOAD for technology development. *Informatics*, the logic-based technology component of ISD, is in place; not *accountability*, the ethno-methodology based social component (or *techno-methodology*: see Dourish 2003?), of the modern puzzle constituted by people, computers and work. What can we do?

Let us see how the work of Claudio Ciborra can help us. Claudio has introduced many new things, in the social study of IS. Besides the need of deploying caretaking and hospitality towards technologies in spending everyday life with them, we could say that he has insisted on the relevance for the present issue in particular of two concepts, that appear to us to be fundamental in his work: technology drift (the systematic departure of developed technology, and of implemented technology-use, from project plans and originally declared goals, see Ciborra 2000), and actor's mood (the emotions of the central actor in the relational situation, see Ciborra 2002). One concept incardinated on technology, and the other on humans. Precisely two. As this be the sign of the need to explicitly consider the two fundamental aspects - technical and social - in the socio-technical endeavour, and arena. Should we consider them as the two sides of a coin?

All messages from Claudio on technology drift, on shifting from control to drift, on the failures of Business Process Reengineering, on the crisis of the Information Systems discipline, all criticize and *abhor* the rationalistic approach of the calculating mind, the top down approach, management push, technology push, viewing *organisation* as a dependent variable, viewing it as the *external object* of manager ordering activity.

All messages from Claudio on actor's mood, emotions, pathos, the *how are you* of the actor in the relational situation, the time felt as boredom or panic or else *kayros* –appropriate time -, all criticize and *abhor cognitivism*, the *mentalism* of bounded rationality, the *situation* as given independently form the central actor, as *external object* of subject ordering activity.

The unifying aspect of the two apparently strongest messages of Claudio, on the present issue, their substantial unity, is the refusal of separating *object* and *subject*, accompanied by a complete philosophy shift from positivism to phenomenology, the human actor thrown in the world together with her/his emotions, and sense making projected at the centre of the life of people and organisations.

Thus Claudio Ciborra leads the way to completing the transformation of the philosophical stand informing and supporting all activities in the Information Systems Development (ISD) field, forever abandoning the traditional, honestly positivistic approach to IT design in the socio-technical domain – i.e., design science applied to system design, and behaviourism applied to changing human behaviour in organisations (Evner *et al.* 2004) -: the new frontier to be gained with a complete shift to a much needed, phenomenology-based approach, as it has been long advocated by Winograd and Flores (1986) (see also: Goldkuhl and Lyytinen 1982). As in pedagogy in recent decades, and in other disciplines anchored in the human/social: ethnography in anthropology, and language psychology. In fact, this appears to be a non-avoidable shift from nineteenth to twentieth century Western philosophy.

Where are we left by this new approach of Claudio, with respect to our central problem in IS, in ISD? The *method* for developing IS, the one taught in sacred textbooks, is in crisis, says Claudio (2002), in fact the existence of a method is only *appearance,* the method is still taught in school, but not followed in practice. Technology drift is the *apparition*, the indicator that things go differently, in the real world of development. The ISD discipline will have to adapt, eventually. In fact, recent applications of OOAD to ISD have abandoned the systematic, sequential, waterfall model, and have moved to PD, to an evolutionary approach, with design/validate iterations, to user workshops.

OK then, for the design of technology architectures and for their alignment to work processes. But how do we tackle, in the new phenomenology based optics, the organisational part, the part of social intervention, of change management, of social practice change to make place for IT (Ehn 2006)?

Of course, many and diverse are the business school approaches to change management proposed in the literature. However, we note that while for the Participatory Design approach applied to OOAD there is wide consensus and there are nowadays classic, albeit recent, reference textbooks (e.g., Mathiassen *et al.* 2000), no similar consensus yet emerges about an innovative organisational change management approach in ISD, featuring a philosophical matrix of phenomenology imprint.

Whenever available, this new approach should be founded on phenomenology pillars of social study and intervention research, like *active learning* (Rogers 1969), and *person centred counselling* (Rogers 1951), i.e., the genuinely phenomenology-based thought currents in pedagogy and counselling domains.

In sum, in ISD there is both need and space for a genuinely phenomenology based proposal to *organisational change management*, or, in order not to employ a terminology loaded of positivist flavour, but one intentionally rooted in phenomenology, to *social practice design*. SPD intends to be an organic proposal to fill this gap.

1.3 A *social* design activity: the *design* of social practices

Our proposal for a *Social Practice Design* (SPD), i.e., the *design* of social practices – in itself a *social* design activity -, is intended as a necessary equilibrium restoring initiative with respect to the two perspectives. In the end, it seeks to ensure that the potential benefits of envisioned novel technologies can be realised.

Social Practice Design can be considered an extension of the historical PD approach to the implementation phase of information system use. It regards the concept and participative introduction of new things to do, or of new ways to do things, by humans, in order to *make place* for technologies (Ehn 2006), and in order to resolve a variety of other pending social problems. SPD is a form of intervention research or action research. It recognises the epistemological postulate that we can learn about the real world only by trying to change it (Lewin, 1946). For this reason it pairs comfortably with groups and group psychology, that also use action research and share this epistemological option. Intervention research and action research are born precisely on the psychological interest for small groups, later augmented to larger social systems (Sussman & Evered, 1978).

The potential impact of Social Practice Design is not restricted to IT design. Other examples or fields in which practitioners have elaborated a form of joint design are education, health care, land use planning, and even management (Shon 1991).

The expression *social practice design* is somewhat of a misnomer, as social practices emerge by social construction, rather then being designed; in an action research project they can be put only as a goal.

Two reasons to maintain the word design in this expression:

- for underlying the necessary intentionality for creative action, an intentionality respected by Claudio Ciborra, and transparent in his suggestions of taking care, of providing hospitality, of intervening in situation with the entire self and with one's own mood: emotions and responsibility
- because the word *design* is present in the technology side of phenomenology based ISD, and it is wise to repeat it for the other side of the coin as well, the social practices one, to keep the point that it is necessary to dedicate equal care to the development of socio-organisational change, as for the development of technology.

So, we are aware of using an *oxymoron* in this definition: it is well known that social practices cannot be 'engineered' but that they are evolving as part of people's activities of integrating a new technology into their ways of doing. This is a process that requires a transformation of organisational and work practices and sometimes even of the formal framework in which they are embedded. We wish to stress *intentionality*, *proactive-ness and explicitly declared initiative, creativity and planning, determination and persistence* as necessary ingredients of organisational innovation processes; i.e., we underline the usefulness of the *cognition* of the necessity of a conscious *design-like* approach to promote people involvement in the invention, and emergent development, of innovative social practices. Thus our choice of the oxymoron in the SPD title: almost a provocation.

In this paper we present our SPD approach, we reason about its stand in the IS discipline, and we briefly mention and point to work presented elsewhere (Jacucci, Tellioglu, Wagner 2006), (Jacucci, Tellioglu, Wagner 2007), (Cattani, Jacucci 2007) for an application of SPD in the frame of a European research project. What is the structure or methodology scheme of the SPD approach, if any? Why do we need ethnography? Why do we need creative design? What is the relation of SPD to Claudio Ciborra's quest for unveiling the world? Why do we think that SPD enforces Claudio Ciborra's heritage? How have we tried out SPD in practice, and with what degree of success? These are questions addressed in this paper.

2 THEORY: THE *LEGATE* OF CLAUDIO CIBORRA

2.1 The *crisis* of ISD and Ciborra's concern for *method*

In SPD we do not want to deal mainly with technology and business architectures, but with organisational issues. In ISD, we asked, do we match technology and economy with enough politics, towards organisational innovation? Could this lack of social concern on organisation be at the root of a deep crisis of the ISD discipline, of its insufficient impact on practice?

So, let's go *social*. And, let's do it also in the *language* we employ. In adopting SPD, we do not wish to talk about *method*. We said that ISD practice has to deal with an inherent contradiction of perspectives: it would be strange that concepts and words were no issue… In the *engineering* of artefacts the design and construction of IS deals with formal, constructive methods and techniques. At the same time, organisational analysts are actively involved in organisational change themselves. To possibly understand the effects of the intended intervention, they need full appreciation and a degree of understanding of organisation as *social* phenomenon. To this end speaking and elaborating on *method* is not useful. The word 'method' is rather a conceptual trap, as Ciborra has crisply pointed out - this issue is even more important, as he indicates, in the present era of distributed manufacturing, virtual enterprising, online communities -:

"…Our concern for *methods* stands for something even more fundamental. What calls us to devise methodologies? Possibly it is technology itself, and its enframing effect. Methods can be regarded as the language in which technology has spoken to us through specialised human agents…. Newer systems, such as strategic information systems, the Internet, and the emergence of global ICT infrastructures, all seem to suggest that today technology may require us to speak another language, less formal and structured, more fragmented and oriented to recombination (object orientation may be

read as a sign in this direction)…. Structured methodologies do not capture the intricacies of everyday life… The plea o this book can then be restated as follows: Let us drop the old methodologies, in order to be better able to see the new dimensions the technology is going to disclose to us. It is not time for calculation, but for a sort of deep contemplation of the everyday life surrounding the design and use of technology. Let truth be always our goal, but understood as the Greek word *Aletheia*: the unveiling of what lies hidden; this time what is concealed beneath the phenomenon of work, organisation, information, and technology…." From "*krisis*", chapter 2, page 27, of Claudio Ciborra's Labyrinths of Information (Ciborra 2002).

2.2 Ciborra's thrust towards *unveiling the world*

The unveiling of real world organisational forms requires (Ciborra 2002, p.174) a different analytical approach from the one especially common in industrial organisation research. Here, new organisational forms are:

"usually explained by referring to established concepts in organisational theory, business policy, industrial economics, and information theory. Though different in perspectives, all these disciplinary explanations share… the same basic assumptions: there are goals that guide the agents' decisions, there is a complex problem to be solved or task to be executed; a corresponding strategy is deployed to achieve the goals and solve the problem; and a new structure is put in place to implement the solution. Hence, unitary, multidivisional, matrix, or networked organisational structures were regarded by scholars and practitioners as the rational response to such moves. ….I then took an alternative approach. First, the typical difficulties which appear when one endeavours to reconcile business practices with the actual choice in strategy formulation and structural design (are) attributed ….to inadequacy of the conceptual models… Second …. I came to the conclusion that organisational models tend to focus on snapshots of a complex, evolutionary process…."

This explains the need for *ethnography* in SPD, where this need comes from.

2.3 Ciborra's *key ideas* for unveiling the world of IT

Claudio Ciborra's 2002 book *Labyrinths of Information* invites us to consider the relevance, for the social study of information systems, of a number of key concepts, about *human existence in everyday life*, he has identified and elaborated in his own work, that are denoted by characteristic words in different languages, corresponding to concepts characteristic of those cultures. To each word and concept he dedicates an essay, a chapter of the book:
Krisis: Judging methods
Bricolage: Improvisation, hacking, patching
Gestell: The power of infrastructures
Derive: Drift and deviation
Xenia: Hosting an innovation
Shih: Architecture and action
*Kairo*s (and *Affection*): Seizing the opportunity (and moods and mental states)
These essays attempt to "engage the reader in thinking and articulating his or her practice otherwise …(than) …current descriptions of the design, implementation, management, and use of information technology in organizations …largely founded in notions of rationality, science, and method. … In particular they point to an alternative centre of gravity: human existence in everyday life" (ibid. p. 1).

Human existence in everyday life: we have found that Claudio Ciborra's concepts above represent key ideas in indeed effectively addressing multiple perspectives in SPD, nurturing the emergence, development, and *sense-making* of relevant *apparitions* and *visions* in the basic acts of our *design* approach to innovating social practices. We feel that explicitly employing these concepts in SPD is the best way of making good use Claudio's work.

3 THE *SPD* APPROACH

3.1 Recalling *Participatory Design* as background

Let's go back to the outstanding Scandinavian tradition of Participatory Design of IT. The PD approach consists in a conceptual framework and a coherent method for design, in an organizational context, within the participatory design tradition (Bodker, Kensing, and Simonsen 2004). The method is based on thorough participation with users and managers, and it combines the use of ethnographic techniques and intervention. The PD approach entails a perspective of the method, some general principles on which the method is based, and several main activities providing a stepwise decision-making process in the overall design process.

In PD, IT design is carried out as a project to design sustainable IT usage:

with 4 PD principles:
- the principle of a coherent vision for change
- the principle of genuine user participation
- the principle of firsthand experience with work practices
- the principle of anchoring visions

and a PD method in 4 phases:
- initiation phase: project establishment
- in-line analysis phase: strategic alignment analysis
- in-depth analysis phase: ethnographically inspired analysis
- innovation phase: vision development

e.g., in adapting work organisation to standard systems, in adapting IT systems to work organisation, or in the simultaneous development of IT systems and work organisation.

Note that strategic alignment analysis of the in-line analysis phase is not considered to be enough, in PD, at variance from traditional IT design approaches. There is need for something more, the ethnographically inspired analysis of the in-depth analysis phase. This addition makes room for additional concept development, to aliment more satisfactorily and correctly the vision development of the innovation phase.

3.2 SPD features, key concepts in its actions, and counselling,

This makes room, in the innovation phase of PD, for SPD or the design in the organisation of new *social practices* and for the *social design* of new *practices.*

SPD and practice based research approaches. SPD involves practice based research know how in action research, in participatory design – including ethnography -, and in counselling.

SPD and theory principles. Principles inspiring the vision in SPD of innovative social practice arise from phenomenology oriented social theories and afford many different social dimensions, like:
- active learning
- creative design for innovation
- groups, and teamwork culture for cooperation
- communities of practice
- computer supported cooperative work (CSCW)

SPD and technology. SPD serves in general the objective to 'make place' for IT. In fact, SPD can be rooted in visions of technology as "inscription", so that reflexivity on this issue is the key to good implementation of social practice. Yet, aside from the design of IT, in organisations there is always room/necessity for interventions to solve organisational problems. So that, while employed for making place for IT, SPD can also address other issues, and propose solutions for those. These solutions may or may not entail the implementation of IT; or they may, but not as a central ingredient.

Difference with PD. In addition to PD, SPD addresses socio-organisational change. How? Two items:

3.2.1 Ciborra's set of phenomenology key concepts

A mission critical issue in SPD is the choice of a set of key concepts to effectively address multiple social perspectives, in the organisational change task. SPD takes up the phenomenology-based set of key concepts suggested by Claudio Ciborra, here recalled in the previous chapter, substantiating *human existence in everyday life*. These key ideas populate the emergence / development of relevant concepts in the two distinct, basic *acts* of the SPD *design* approach to innovating social practice:

- an *ethnographic* analysis action to identify outstanding problems in the area of social practice
- a *creative design* action for developing the social practice innovation

It should be emphasized that there is no presumed 'universality' for the outcome of design acts in SPD: the outcome is characterised by the fact that 'it could have been otherwise', e.g., with different designers/consultants, it always could have been otherwise. Not *universal*, but *relevant*.

3.2.2 Counselling

With the introduction of *counselling*, SPD makes an additional significant step forward, based on the idea that problem solutions are in the hands of the organisation's personnel, and that *person centred counselling* approaches (Rogers 1951, 1980; Shein 1987, 1999) are needed and capable of empowering them for the task. Furthermore, with the *person centred counselling* approach, SPD analyst/designers/ /consultants are enabled as *counsellors*, taking up new initiatives and responsibilities, substantially widening the of their intervention (Cattani, Jacucci 2007).

3.3 SPD and the usual triad of scientific paradigms

In order to illustrate in detail how SPD exceeds traditional PD, let us elicit the different perspectives and phases of the SPD approach, while underlining that the sequence of phases is not strictly fixed, and that phases can be iteratively intertwined. In perspectives and phases, SPD is similar to any methodology for the social, i.e., it includes *multiple perspectives* in a recursive flow of phases, otherwise reminiscent of the usual triad of scientific paradigms: observation, analysis, and synthesis (see Kirstin Nygaard's inspiring preface to Claudio Ciborra' Labyrinths of Information (Ciborra 2002)), a triad addressing How Questions, Visions of Solution, Interventions, respectively:

<u>Observation</u>

- *Initial Conversations (Pathos?)*: opening the process of interaction with users to capture and understand their *declared objectives* and *perceived problems*
- *Ethnographic Field Study (Improvisation?)*: observing an organisation and analysing the data from multiple perspectives, we develop concepts unveiling *existing problems*
- *Co-constructing How Questions (Pathos?)*: we confront with personnel, problems emerged and declared, we consolidate them into 'How Questions' (*i.e.: How can we solve this problem?*) populating various Perspectives, and initiate change generating awareness and shared understanding

<u>Analysis</u>

- *Identifying relevant Theory Principles (Bricolage?)*: with the help of appropriate social theories (e.g., group dynamics, communities of practice, action learning, CSCW), we creatively pick-up crisp Principles relevant for each Perspective, i.e., ideas to be leveraged in addressing each How Question
- *Generating tentative Visions of Solution (Mood and Improvisation?)*: confronting each How Question with the appropriate Theory Principle we conceive and generate tentative Visions of Solution
- *Co-constructing Visions of Solution (Pathos?)*: in conversations with personnel, we discuss and modify these tentative Visions, co-constructing consolidated Visions of Solution

<u>Synthesis</u>

- *Generating tentative Solutions (Bricolage?)*: elaborate Intervention strategies and plans, by *mixing* Visions with Counselling design, captured and inscribed in *training modules* and *technology mock-ups*
- *Co-Constructing Solutions (Pathos?):* proceed to co-construct in conversations consolidated solutions, Interventions that we *perform* in practice with them, in active learning and mentoring phases
- *Evaluation and Iteration (Improvisation?):* assess the outcome, possibly iterating the entire path.

3.4 Ethnography

In essence, performing the participatory design SPD approach basically includes two *visionary* phases:
- an *ethnographic* observation/analysis phase to unveil - in strict cooperation with clients - outstanding problems in the area of social practice
- a *creative design* synthesis phase for - co-constructing with clients - the social practice innovation

What do we mean by Ethnography?
- Rich accounts of work, attention to social detail, concept design, and validation.
- Guiding principles of ethnographic research: natural settings, holism, descriptive, members' point-of-view: "understanding other people's behaviour in the context in which it occurs and from the point of view of the people studied"
- Methods: (Video-supported) observations (coupled with interviews), (semi-structured) interviews, document analysis.

Why observe?
- What people say and what they do is not the same - the inability of giving accurate accounts of one's own activity (people provide approximations, seek to match cultural expectations, the existence of inarticulate or tacit knowledge)
- The salience of concreteness and detail for understanding other people's activities
- 'Invisible work' - aspects of work that are 'informal'/'unclassified'/relegated to the background

3.5 Creative design

What about creative design? Does SPD have its own strategy in design? Yes, the phenomenology based one spelled out by Ciborra: to put at the centre *human existence in everyday life*:

"The current description of the design, implementation, management, and use of information technologies in organisations are largely founded on notions of rationality, science, and method. This is probably because the initial diffusion of business applications of computers and networks, and the highly formalised nature of programming and software, suggested a vigorous and structured understanding and representation of the multiple systems practices, from requirement analysis to use, maintenance, and documentation. … (we) attempt to engage the reader in thinking and articulating his or her practices otherwise. … (we) put forward a significant shift from the scientific paradigm that looms large over the multiple facets of the introduction and use of information and communication technologies in organisations. In particular they point to an alternative centre of gravity: human existence in everyday life. Such a Copernican revolution is accomplished first by unveiling the hidden or dark side of information systems, or, to put it differently, focusing on the obvious, the workaday, and the very well known to any practitioner in the field. These are events, episodes, practices, and related narratives seldom hosted in the neat representations of systems, data flows, processes, entities, and relationships; rather they are made popular by the swapping of war stories among practitioners. Indeed, activities such as hacking, improvising, tinkering, applying patches, and cutting corners seem to punctuate ubiquitously the everyday life of systems." (Page 1,2) "I suggest that the information systems field, with its rational views of knowledge, decision making, strategy, and orderly systems development, is based on a narrow model of rational, ideal actors. In this book, by focusing on the mundane and the existential, I want to contribute to a transition of the field towards ….passion and improvisation; moods and bricolage; emotions and workaday chores; existence and procedures will become integral to systems design and use, casting new shadows and lights on the unfolding world of technology (in its deployment and management in organisations and society)." (Ibid. page 9)

Creative design will foster commitment and undertaking in his crucial direction: "*a transition of the field towards ….passion and improvisation; moods and bricolage; emotions and workaday chores; existence and procedures will become integral to systems design and use*" as indicated by Ciborra, the emergence and development, in the basic acts of SPD, of relevant concepts he clearly indicated, and that we spouse in our *design* approach to innovating social practices.

3.6 Judging the SPD approach: action, theory, evaluation criteria

How can we judge the quality of the SPD approach? In the foreword to their Action Research special issue of MISQ, Baskerville and Myers (2004) state that there were three requirements for the acceptance of articles for their special issue. First, the authors must demonstrate a contribution or potential contribution to practice (the *action*). Second, the authors must demonstrate a clear contribution to research (the theory). Third, the authors must identify in the methods section of the manuscript the criteria by which to judge the research and show explicitly how the research in their manuscript meets those criteria. Let's try to apply these criteria to our SPD approach, and later to the application of SPD to the present case.

Contribution to practice. Production of how questions with ethnography and conversations with personnel, of visions of solution with reference theories and conversations with personnel, of intervention projects with counselling and conversations with personnel, of socio-organisational and business change with empowerment and activation of personnel supported through counselling.

Contribution to theory. Confirmation of the usefulness of:
- recursive dialogic process for the involvement of company personnel
- ethnography observations for letting emerge how questions
- key ideas in Ciborra's list for visions of solution for different perspectives
- person centred counselling for empowerment and activation of personnel
- phenomenology based approach focusing on human existence in everyday life, rather than on method

Evaluation criteria for intermediate results. During the application of the SPD approach, a series of six intermediate results are produced for each problem issue of the list of issues identified and confronted: *tentative and consolidated how questions; tentative and consolidated visions of solution; tentative and consolidated intervention projects*. Five criteria of evaluation of success of the application of the approach present themselves spontaneously, w.r.t. intermediate results, degree of:
- satisfaction of company managers for the issue list identified and confronted
- realized production of the six intermediate results for each problem issue of the list
- satisfaction of co. managers for quantity and quality of intermediate results
- satisfaction of co. personnel for quantity and quality of intermediate results
- satisfaction of counsellors for quantity and quality of intermediate results

Evaluation criteria for final results. At the end of a complete application of the SPD approach, final results are produced for each problem issue of the list of issues identified and confronted: *in socio-organisational and business change, the establishment of innovative social practices*. Three criteria of evaluation of success of the application of the approach present themselves spontaneously, w.r.t. final results, degree of:
- satisfaction of company managers for change produced, confronting issues of the list
- satisfaction of company personnel for change produced, confronting issues of the list
- satisfaction of counsellors for change produced, confronting issues of the list

3.7 Open issues on structure and content of the SPD approach.

Given the premises of SPD, among which:
- we can learn about the real world only by trying to change it (action research)
- ethnographic work and genuine user involvement (participatory design)
- counselling

we have drawn scenarios of implementation of the approach, indicating some of its features. A number of questions arise naturally, indicating directions of further work:

Ways of reforming practice. The creative design phase (for developing the social practice innovation) should consider other ways of intervening in social practices. We list ways for reforming practice here:

- In practical work in several contexts we saw in the arts, reforming practices through practical attempts relied on the capacity of generating "variations". The way of articulating the meaning of "reform" or "change" critically relied on this principle. E.g., reform through:
    - diversification
    - deviation
    - repetition
    - perturbation
    - digression
    - displacement

(Ref.: Barba, Brook, and some other directors)

- The principle of Co-governance: Not working for people but working with people. How to do it, what participatory evaluation means, . . . (Ref.: Freire)

From theatre work:

- A palette in your hand to facilitate creation. Instead of having strong theories, principles, or methods which are attuned to addressing an identified "problem", some innovative practices in the arts just use a "palette" of ways of intervening in the world. It is more like a set of special rocks to be thrown in a lake to see what perturbations can be produced and then intervene accordingly (as we said, not necessarily in the best way ever, but "relevantly").
- Driving a truly blind search: don't tell people what to do, otherwise you kill the possibilities to attune your work to the (silent) vital forces. So, how do you proceed without telling people what to do? Some special approaches teach you that.
- Don't pull: similar to "cultivation" (Ciborra), but with specific tactics for the 3 main farmer's actions to be reiterated: observe, nourish, prune. A critical feature is that reiteration must be timed, i.e., in phase with the natural cycles in the environment.

Order and path dependency. We described SPD in terms of phases: we identify relevant principles, strong ideas to leverage in order to overcome the problems observed, etc.. Is it really necessary to make all these choices? Maybe the reasons for constraining the approach in this particular way are still implicit? For example:

--> Why this order: Problem-Theory-Principles-TheirApplicationToSolveTheProblem-Evaluation

--> All SPD work is depend on the way the problem has been identified in the first place

Word definition. In SPD, what definition of 'practice' do we use? Different works we cite mean (social) "practice" in different ways. A clarification can be useful and innovative as well. The strength of SPD can become more apparent also by clarifying what "social practice" means. This could come from comparing how each work we cite can be linked to the details of a common definition, such as that of the dictionary (for "practice", but we might have a look also at "wisdom"):

Definition of "practice" from the Oxford dictionary: "Practice" = "habitual action or performance; exercise in activities requiring the development of skill"; but also "method" and "procedure".

Definition of "wisdom" from the Oxford dictionary: "Wisdom" = "experience and knowledge together with the power of applying them critically and practically + prudence + common sense "

4 AN EXAMPLE OF SPD APPLICATION

This section briefly recounts how we have successfully applied SPD in the case of an active European Research IST project of the 6th FP (IST project MAPPER), and it points to more detailed publications on the case (see below). The European research project at hand leveraged model based enterprise systems to promote SME adoption of sustainable ICT support for cooperation in global manufacturing. The project provided experiences of practicing SPD with user groups. Users were involved in identifying problems and constraints in their organization and in rethinking it. Some users declared at the end that SPD outcomes were more relevant to them than most other design activities in the project.

4.1 Ethnography and concept development for *how questions*

Our ethnographic analysis made use of field-work in two companies – SHC is a large supplier of specialized car components for the automotive industry, VCP a small producer of virtual electronic components. In both companies we spent several days observing ongoing work, combining video observations with field notes and conversations with personnel.

Concepts that developed from ethnography concentrated on practices and cultures of knowledge management (Jacucci, Tellioglu, Wagner 2006). We took a CSCW perspective on knowledge management, looking at it at the level of daily work practice in two different contexts – project management and engineering design work. Special attention being paid to the diversity of artefacts central to knowledge management.

The vignettes from our study illustrated a variety of knowledge management issues of which mainly we addressed three:

- The existence of different professional cultures and their interpretation schemes and how these influence representational genres
- Issues of boundary management and what we describe as a 'fragmentation' of the knowledge base
- Knowledge management practices as part of cooperative work.

We identified several examples of boundaries in our fieldwork at SHC and VCP and what interested us here is the ways in which these become embedded and encoded in representational formats and styles. The artefacts we discussed in the paper – e.g., issue lists, long emails - are examples of *coordinative* artefacts.

We paid two visits to SHC, where we had the opportunity to learn to know a series of activities related to advanced engineering. During our first visit we mainly were able to observe how projects are managed. During our second visit we focussed on the 'process of innovation' as well as interactions with suppliers. We observed co-located and distributed meetings, project meetings as well as design reviews, and ongoing work at a series of workplaces in design, testing and purchase.

At VCP we had the opportunity to mainly observe ongoing production work (at seven different workplaces) but we also participated in several meetings – a management meeting, a meeting about marketing issues, a 'crisis' meeting, as well as teleconference/skype meetings with a customer and with the US based distributor of VCP. Engineers at VCP work in co-located project teams – four to five in one room – and they cooperate with a series of external distributed partners. They are engaged in four different types of activity – they provide design services to other companies, they produce different types of virtual components, and they provide pre-sales and post-sales support for their customers.

In our observations we were interested in the complexity of the work, in people's flexibility in ordering the work process and adapting it situationally to the exigencies as they unfold, in their need for getting an overview of the process/status of work. We studied collaboration needs and practices, how different media are used and combined, strategies of aligning work across boundaries, and how cultural differences between professions and/or organizations were dealt with. We in particular looked at the key tools and artefacts in use, at the role of standard descriptions and procedures, and at the use of the physical space for making work visible, sharing, etc. and the role of physical objects/documents.

4.2 *How questions* and *visions of solution*

Let us concentrate here on SPD activities at VCP, equivalent results having been achieved at SHC. In workplace observations that have been carried out at VCP, attention of project researchers has focussed on salient features of need for more strategic business management culture, in a company with otherwise top quality technical competences and work practices. These, characterised by a strong software engineering culture, exhibit sophisticated knowledge management practices, and tools for cooperation (long e-mail threads, distributed platforms, cheap video-conferencing), in the distributed setting of global outsourcing. On the other hand: a captive resource business setting; lack of direct access to the market; de-concentration of best personnel skills and competences from business mission

critical areas (like CRM, and new product development); weak marketing strategy; need for greater focus on core business, and for reduction of multiple parallel unrelated production activities in a gigantic effort of striving for survival; all indicate need for more strategic business management.

The major problem issue emerged: *How to create one's own brand and direct access to the market, with own new product lines, in order to escape the captive resource trap?* did not really have to do with technology use. While we also tackled technology related issues, or issues that could have leveraged the use of technology towards solution, we point out that this issue resonated more with company personnel. Within the scarce time and resources of the European research project, we have addressed this case of organisational problem solving by careful, context respectful counselling, using the central portion of the SPD approach: counsellors have freely suggested *principles* (motivation; consideration/involvement; peripheral participation) from *social theories* (active learning; group dynamics; communities of practice) relevant to the perspectives of empowering the company's personnel, helping them strengthening their own capabilities in strategic business management; conscience-full *visions of solution* are counsellor generated at first, and then co-constructed together in conversations with managers/personnel (empowerment and proactive agency of personnel towards bootstrapping a new organisational culture and social practices).

Visions of Solutions in the SPD method first emerge through the liaison between what has been seen/heard/perceived in the organization (after a first feedback on the part of the client, to check what has been observed), and reference social theories (group dynamics, etc.). Then the Visions are transformed, coming back to the company, in the dialogue with the client, by co-constructing solutions with them (having present at hand an elaboration of appropriate solutions; but also being capable of 'forgetting' it, to live fully the encounter with the client and construct candidate solutions with them: this is the 'pivot' of SPD) (for details see Cattani, Jacucci 2007)

4.3 Design games, *how questions*, and *visions of solution*

We have reverted to a PD technique for involving users in visionary work: design games (see Jacucci, Tellioglu, Wagner 2007). The relevance of the How Questions we had prepared was confirmed in the design game activities, by the fact that participants seem to discuss exactly these questions amongst themselves. The design games helped them voice their concerns, get a common understanding, and even go a step further beyond ideas they had already addressed amongst themselves. The physical objects that served as game elements supported their engagement. Image cards and organization building blocks served as thinking tools – we could observe participants selecting, picking up, moving, labelling these elements, and thereby enacting ideas whilst talking. The playful and fun aspect of a game activated participants to engage, explore options, and enter the realm of the imaginary. Cooperatively probing options confirmed their competence as change agents in their own company.

4.4 Evaluation of the success of the SPD application

As SPD application was not complete, we use only evaluation criteria based on intermediate results: 5 tentat/consolid how questions, 5 tentat/consolid visions of solution, 3 tentative intervention projects.

Evaluation criteria for intermediate results. During the application of the SPD approach, a series of six intermediate results can be produced for each problem issue of the list of issues identified and confronted: *tentative and consolidated how questions; tentative and consolidated visions of solution; tentative and consolidated intervention projects*. Five criteria of evaluation of success of the application of the approach have been established, w.r.t. intermediate results, degree of:

- satisfaction of company CEO for the issue list identified and confronted: *5 items, good*
- realized production of the six intermediate results for each problem issue of the list:
    - *5 how questions, 5 visions of solution, 3 interventions: good*
- satisfaction of CEO for quantity and quality of intermediate results: *good*
- satisfaction of co. personnel for quantity and quality of intermediate results: *excellent*
- satisfaction of counsellors for quantity and quality of intermediate results: *very good*
    - *both for action and for theory.*

5 CONCLUSIONS

SPD is a novel, entirely *phenomenology-based* approach, using *person centred counselling* (Rogers 1951), to successful organisational innovation and organisational change management in ISD. Phenomenology and person centred counselling are precisely SPD distinctive features and powerful success factors: in our opinion, Ciborra's work guarantees phenomenology stand to SPD, counselling guarantees results. SPD depicts a way of achieving sustainable 'design' of people computers and work, through empowerment and activation of personnel and managers. The SPD approach is based on participatory design, action research, and counselling, and it entails ethnography, social theories, the conception of visions of solution, the co-construction of intervention projects, together with the central actors of the scene: the organisation managers and personnel / IT users.

The phenomenology-based philosophical stand of SPD is granted by its deep roots in the work of Claudio Ciborra, the prominent author in transporting Heidegger's thought to ISD. SPD leverages in many ways the rich heritage left to us by Claudio Ciborra. In essence, to: "…point to an alternative centre of gravity: human existence in everyday life", by employing his key concepts (Ciborra 2002) to help identify apparitions and unveil the world, and to help evoke visions of solution that may inform interventions projects, co-constructed with users through counselling support.

We have judged the quality of the SPD approach by its satisfaction of three requirements (Baskerville and Myers 2004): a contribution to practice (the *action*), a contribution to research (the theory), the criteria by which to judge the research, and we show explicitly how the research meets these criteria.

SPD satisfies the need for awareness and cognition on organisational change management in IT related organisational and business innovations: the need of *intentionality, reflection, proactivity, persistence, planning, action, evaluation* – in order to strike success also from the social perspective, just as customary from the technical perspective. With SPD we match technology and economy with *politics and the social*, towards innovating the organisation, in order to have impact on practice. SPD is intended as a necessary equilibrium restoring initiative towards the social, with respect to the two perspectives, to ensure that the potential benefits of envisioned novel technologies can be realised.

Acknowledgments

The author is grateful for relevant contributions to: Liam Bannon, Chiara Bassetti, Gianmarco Campagnolo, Claudia Cattani, Antonio Cordella, Vincenzo D'Andrea, Stefano De Paoli, Pelle Ehn, Giolo Fele, Miria Grisot, Carlo Jacucci, Edoardo Jacucci, Giulio Jacucci, Giovan Francesco Lanzara, Claudia Loebbecke, Andrea Resca, Cristiano Storni, Maurizio Teli, Hilda Tellioglu, Ina Wagner. The author is also indebted to all partners of the FP6/IST-MAPPER project.

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