On the Importance of Experience-Based Work Action and Tacit Knowledge for Workplace and Social Innovation[1]

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Abstract

Companies are increasingly facing uncertainties and a variety of dimensions of imponderability. Being innovative and economically successful in turbulent times moreover increasingly requires companies to address topics of sustainability and to respect requirements of customers and other stakeholders. Companies have to bring civil society back in to find solutions to current and future challenges. But this deeply challenges the traditional forms of organisation. After an era of re-engineering organisations towards standardised processes that where tightly bound to the logic of short-term profit and shareholder markets, companies have to open up and become agile and competent for dialogue on an organisational level. This development is accompanied by the necessity to cope with uncertainties instead of annihilating them. This article argues why the tacit and experiential knowledge of employees is the key factor to tackle uncertainties and to design appropriate workplace and organisational innovation. We will outline how these factors elude approaches to formalise or digitise them and are therefore endangered by objectification of work. A new quality of participation is needed to acknowledge and support the employees' tacit and experiential knowledge and experience-based work action to strengthen processes and results of workplace innovation and social innovation.

Introduction

Confronted with skyrocketing challenges to compete successfully in globalised markets in terms of economy and innovation, companies and their organisations are increasingly facing uncertainties and a variety of dimensions of imponderability to be tackled successfully. Being innovative and economically successful more and more requires companies to open up, to address topics of sustainability and to respect requirements of employees, customers and other stakeholders: Companies have to bring civil society back in to address future challenges. But this process itself challenges the established forms of organisation, especially those which are regarded as professional. Companies underwent an era of re-engineering different areas and job levels towards standardised processes that were tightly bound to the logic of short-term profit and shareholder markets – e.g. in the fields of quality management, project management and risk management, in control, steering and assessment of actual work performance, but also in automatisation technologies and new concepts of production systems. Now they have to become agile and competent for dialogue on an organisational level. This concerns the design and culture of coordination, cooperation and communication processes in an enterprise in general. Additionally as in todays' world economy change processes become permanent issues in companies, uncertainties are daily issues as well. They cannot be eliminated by even more detailed strategies and planning tools but have to be coped with.

Both becoming more agile and competent for dialogue as well as tackling uncertainties in everyday work demands for overcoming the referring inefficiencies and hurdles of mere top down logic and indirect control of human work: These management strategies do abstract from the necessities and challenges of the work processes on site by focusing on the collection and evaluation of economic figures. Often enough this leaves employees with contradictory work requirements. This leads to reconsidering the role of employees. Current international debates on for example 'employee driven innovation' (e.g. Høyrup, Bonnafous-Boucher, Hasse 2012; Kesting, Ulhøi 2010; Teglborg-Lefèvre 2010) or 'organisational improvisation' (e.g. Hadida, Tarvainen 2015; Dell 2012) focus on the topic of innovation and uncertainty in companies and address the necessary challenge of establishing new ways of

participatory organisations: It is the employees who are to ensure economic results under conditions of market driven imponderabilities and who are apt to design future organisational forms. Agile and open forms of enterprise organisations have to be developed in a bottom up process and management concepts are more and more adjusting to this challenge. In our perspective, the various concepts of social innovation (e.g. Howaldt, Kopp, Schwarz 2009; Széll 2009) and workplace innovation (e.g. Eeckelaert et al. 2012; Pot, Dhondt, Oeji 2012) clearly help to analyse and design such innovative change processes, but again underestimate the crucial perspective of the employees. We would like to support the discussion by adding two – as we think – central aspects to two of the core elements of workplace innovation: participation and job autonomy. In the article an in-depth view on participation is offered as well as an analytical focus on an organisational barrier to workplace innovation, which is usually overlooked when talking about job autonomy, the objectification of work action and the referring knowledge. To do so, the concept of experience-based work action and its connection to innovation in general and workplace innovation in particular will be explained.

1. Social Innovation and Tacit Knowledge

Every kind of innovation implies the fundamental aspect of uncertainty. When creating something new, you can never tell in detail, what the result will be exactly like, how the process or the result will work, which unknown problems will have to be solved to reach the innovation goal – often the innovation goal itself is unclear not only in the beginning but changes throughout the process. Recent findings about innovation prove limits of plannability due to the openness of innovation (cf. Erdmann 1993; Lazonick 2005; Rammert 2008: 294; Wegner 1995: 188), the parallelisation of innovation activities, innovation projects and subprojects which leads to growing complexity of innovation processes (cf. Brockhoff 1999: 43; Bürgermeister, Schambach 2005), and the uniqueness of every innovation process which leads to the necessity of shaping innovation processes individually with respect to technical and organisational framework, staff, problems and barriers etc. (cf. Coopey, Keegan, Emler1 998: 279; Nippa 2007; Pavitt 2005: 95). It is generally only partially possible to standardise innovation processes, not least because creativity can hardly be commanded, ruled and controlled in a standardised manner (cf. Amabile, Gryskiewicz 1989; Schuler, Görlich 2007; Kanter 2006). In this context,

existent systems of innovation management aiming at controlling uncertainties by planning and steering processes reach their limits (Böhle 2011). In our opinion, this is due to focusing on standardisation and referring to objective knowledge as sole bases for a professional handling of uncertainty. Even new approaches of innovation management – e.g. Stage Gate (Cooper 2002) – seldom succeed in leaving organisational standardisation and its top down logic of control behind; by providing the illusion that innovation processes could be totally tamed, these innovation management approaches paradoxically even demand more employee flexibility and improvisations, for example in meeting unrealistic deadlines. At the same time improper standards can seriously effect the innovativeness of personnel and the entire organisation. When applications of innovation standardisation hinder or contradict innovativeness itself, it is then up to qualified personnel to individually balance these conflicts. Logical consequences are stress and extensive work load on account of for example 'trouble shooting', documentation, helping out and permanent meetings (Pfeiffer, Schütt, Wühr 2010: 13ff.). Organisations that move beyond the old control paradigm and embrace more open forms to manage innovation processes – e.g. agile project management – not only need to allow an hitherto unknown degree of employee participation but can only follow this path via processes of social innovation.

The German debate on social innovation is largely inspired by an economy-driven necessity as described so far, seeing social innovation as a solution for economic and/or societal problems, explicitly turning against a normative notion of the term (cf. Howaldt, Kopp, Schwarz 2009). On the contrary, the international debate on social innovation much more stresses normative goals like 'the improvement of working life, to overcome alienation, to create sustainability' (Széll 2009: 456). We refer our readers to detailed discussion about the term itself elsewhere (e.g. Moulaert, MacCallum, Mehmood, Hamdouch 2013), but argue that – no matter how essential one sees the normative notion of social innovation – employee participation is increasingly important for innovation work as it is for workplace innovation. The core competence in coping with imponderability in general and imponderability in processes of social innovation in particular is a special form of knowledge, genuine and corporeal, derived from everyday and context embedded *concrete* work, often addressed as tacit and experiential knowledge. A necessary new degree of employee participation builds on acknowledging this tacit and experiential knowledge of employees as elements of professional work action and allowing for informal work processes, in which employees can work experience-based. Both again calls for innovation not only on the workplace-level but also on the societal level. In western

societies there is a dominant emphasis on rational and planning-oriented action. But due to the uncertainty of modern economic developments in general and innovation processes in particular, a planning-oriented course of action alone cannot be the ultimate solution. For successfully coping with uncertainties, opportunities for situated action must be institutionalised by new ways of organising work processes. The dimensions and the genuine quality of what we call subjectifying[2] or experience-based work action are described in chapter 3, chapter 4 summarises its essentials for workplace innovation.
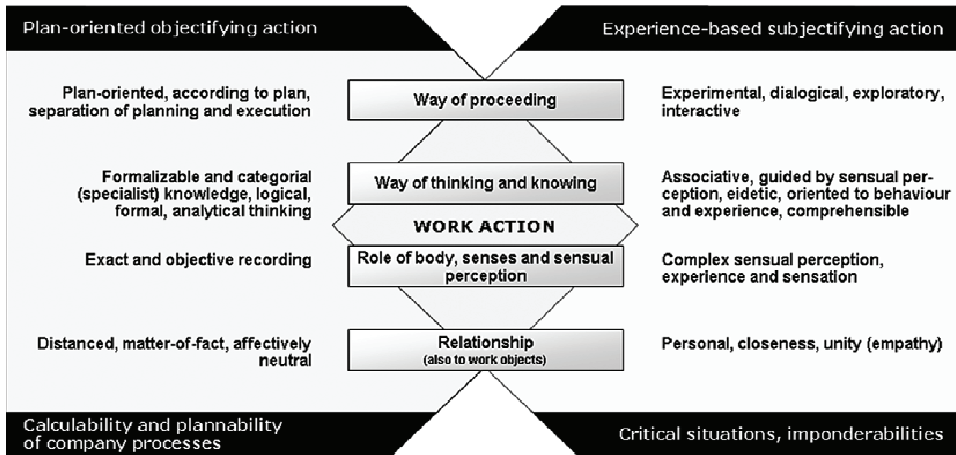
2. Innovation and Two Modes of Action

Professional action is generally equated with rational action, which stands for proceeding in a *planning-oriented* manner, concentrating on *exact and objective informations*, considering these informations in a *logical-analytical* way and relating to the task and the work objects *fact-bound and impersonally*. This course of action is based on professional knowledge as exclusively objective and factual knowledge.

According to our research professional action does in fact contain an additional aspect, which is crucial especially regarding innovation. In innovation processes the involved employees do handle imponderabilities and uncertainties in an experience-based way: They proceed in an *exploratory manner*, they explore the problem by practical action and thereby develop and specify solution processes. Their perception is not merely intellectual, but also *sensory*. All senses perceive informations, they might be diffuse and qualitative, but they give special hints on problem origins or possible ongoing developments: a 'singing sound' of the machine, a 'sharp smell' in the testing plant, a 'tense atmosphere' in the meeting room or just the vague feeling that something is going the wrong way. Unlike analysis and reflection, *pictorial-associative thought* is directly involved in practical action: here, experts remember similar situations or have pictorial anticipations of possible developments in their minds' eye. And their relation to the task and work objects is characterised by *closeness*, material circumstances are perceived as similar to subjects, which have

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[2] Elsewhere we discuss subjectifying work action as a phenomenon of *labouring capacity* (Arbeitsvermögen), following Marx' dialectical distinction between the use-value (labouring capacity) and the exchange-value (labour power), and transforming it into an operationalised model that could be and has been successfully used for empirical studies of digital labour (see Pfeiffer 2014).

'a life of their own' and cannot be calculated completely. This course of action is based on implicit or tacit and practical knowledge.

Plan-oriented objectifying action		Experience-based subjectifying action
Plan-oriented, according to plan, separation of planning and execution	Way of proceeding	Experimental, dialogical, exploratory, interactive
Formalizable and categorial (specialist) knowledge, logical, formal, analytical thinking	Way of thinking and knowing **WORK ACTION**	Associative, guided by sensual perception, eidetic, oriented to behaviour and experience, comprehensible
Exact and objective recording	Role of body, senses and sensual perception	Complex sensual perception, experience and sensation
Distanced, matter-of-fact, affectively neutral	Relationship (also to work objects)	Personal, closeness, unity (empathy)
Calculability and plannability of company processes		Critical situations, imponderabilities

Source: Illustration Following Böhle 2013.

Plan-oriented work action is best applied to tasks, which do not really require innovative problem solving but are best handled by sticking to known and already established courses of action. As long as these tasks are not too complex and can therefore be well calculated objective knowledge measures up to understanding the situations at hand and its possible developments. But as soon as unforeseen imponderabilities occur, an according-to-plan work action quickly reaches its limits. This is particularly the case in complex rationalised and automatised work contexts. The more complex technical and organisational systems get, the more new (!) limits of control through planning and steering become obvious (Böhle 2009: 208). A more 'situational control' is needed, which grounds on exploring the specific situation at hand with all senses and in exploring it approaching a proper solution. This experience-based work action manifests in tacit skills and is based on forms of tacit knowledge. It most notably occurs in informal work practices, because its' named elements and dimensions can, if ever, only partially be expatiated. This is why experience-based work action can hardly be transferred in standardised procedures, but it can be sustained by giving way to informal work practices.

The acknowledgement and support of this informal side of professional action could and should be one of the starting points of further workplace innovation,

especially in order to strengthen the capacities of employees and enterprises to cope with the uncertainties of innovation processes in general. Informal work practices and tacit knowledge are, of course, supported by possibilities for self-regulation and self-organisation. But beyond that and more precisely, our empirical research shows that promoting informal work action is about:

- expanded scopes of action for informal cooperation instead of mere formalised cooperation, as it is established through discursive coordination restricted to scheduled meetings (e.g. Neumer 2012),
- supporting informal work practices by acknowledgement of informal work performances and its achievements (e.g. Böhle, Bürgermeister, Porschen 2012),
- allowing for experience-based workplace learning instead of restriction to classical formal education and training (e.g. Böhle 1994),
- giving way to cooperative transfer of experience instead of mere transfer of explicit knowledge (e.g. Porschen 2012),
- situational project management instead of conventional planning-oriented and, in this sense, 'ex ante' project management (e.g. Heidling 2012),
- fostering the establishment of trustful interactions and maybe trust-organisations (e.g. Böhle et al. 2014; Huchler, Sauer 2015).

These exemplary aspects of informal work practices and their contexts imply several prerequisites for sustainable workplace design and good work. In several action research oriented projects we developed organisation and management models which consider and integrate these prerequisites and thus give way to such informal processes, e.g. 'Innovation Management by Promoting the Informal' (Böhle, Bürgermeister, Porschen 2012) or 'Reflexive Experience-based Trust-organisation' (Böhle et al. 2014). The concepts do not only allow for openness and uncertainties of innovation processes, but also use this openness as a potential to increase innovation capacity. The functionality of informal processes and the tacit skills of employees have proved to be the centre point of these strategies. Also acknowledging informal work practices helps to provide space for autonomous action and expanding scopes of action on the part of employees without implying the risk of self-exploitation and unhealthy working conditions due to contradictory work requirements, as for example the necessity of fast decision making on the one hand and the constraint of a comprehensive formal backup on the other hand. The effect of such paradox conditions on employees can be easily illustrated by looking at stress-level and burnout rates. Conflicting organisational demands, as well as the extension and intensification of labour have been identified as main causes for high exhaustion rates

in innovation and R&D related fields (e.g. Kratzer 2013; Styhre et al. 2002; Kunda 2006).

The named research results mark possible ways and contents of workplace innovation, that is to say of innovations *of* the workplace. But they also contain the aspect of innovation *at* the workplace, which will be focused on in the following.

3. Innovation of the Workplace
– Innovation at the Workplace

To strengthen the innovativeness of all employees is also a strategic turn, anticipating that participation leads to the employees' commitment to new developments. But most of all and often neglected, sustainable workplace innovation requires the experience-based knowledge of the employees concerned by the innovation. As organisations are no trivial machines but complex systems, most change processes are more or less complex, too. A singular alteration in one specific area can provoke different consequences in different areas of the enterprise and the respective work processes. The useful design and handling of change processes is best provided if the employees concerned can decide in and on those processes and designs – they know best about circumstances, problems and requirements on site and can estimate whether the changes do fit their needs for good work or not. And even more, employees themselves do change and renew their workplaces, in technical, organisational and procedural respects: In our research, we explored the experience-based re-design of work organisation by production workers (Neumer 2012; Pfeiffer, Schütt, Wühr 2010), and the experience-based change of innovation and engineering processes (Böhle, Bürgermeister, Porschen 2012; Pfeiffer, Sauer, Wühr 2012), to name just a few. This research processes themselves contained a participatory approach and where designed as a support for the employees to innovate their workplaces according to their needs and understandings of good work (cf. Porschen-Hueck, Neumer 2015; Wühr, Pfeiffer, Schütt 2015).

In this article we took a multiple view at innovation. Aiming at contributing to the discussion on workplace innovation and social innovation we stressed that every kind of innovation implies the fundamental aspect of uncertainty and can therefore hardly be managed by formalisation and standardisation alone. The tacit and experiential knowledge of employees and experience-based work action are decisive when it comes to successfully coping with uncertainty. For workplace innovation this is even true

in two respects: experience-based work action is needed for designing workplaces, which really allow for innovative work and it is needed for coping with unforeseen imponderabilities that might occur in changing the workplace. Innovation *of* the workplace calls for innovation *at* the workplace by the employees themselves. The latter can be organised by an 'Innovation Management by Promoting the informal', which stands for a step towards social innovation in organising work processes in companies in general.

4. Challenges of Workplace Innovation

According to prominent definitions and descriptions of the concept (e.g. Dortmund/ Brussels Position Paper 2012: 2; Eeckelaert et al. 2012: 4; Pot, Dhondt, Oeji 2012: 262), workplace innovation aims at more participation, decentralisation of responsibility, job autonomy, self-organisation and learning opportunities by changes in an organisations' practice of managing and organising. In our perspective, the political goal of the concept to promote the well-being of employees and the possibilities for good work in all its facets and aspects demands an appropriate interconnection of innovation *of* and *at* the workplace. That means, new management concepts to innovate the workplace should include the experience and the knowledge of the employees which they develop and realise at their workplaces.

The employees' perspective, the necessity, chances and conditions of innovation at the workplace need to be at the centre of the managerial development of innovation strategies. But this is more easily said than done. It seems to us that one of the most challenging issues of current developments in work organisation is a contradiction between self-organisation and objectification. The current developments in world economy (increasing interdependencies, the need of flexibilisation and the increasing pressure for innovativeness) cause enterprises to develop and implement new organisational and managerial concepts. Most of these concepts aim at self-organisation and self-responsible work, which implies lots of possibilities for informal work along with its functional aspects of coping with uncertainties. At the same time there is a contradictory tendency to formalise work processes and a strong emphasis on trying to transform implicit into explicit knowledge (Böhle, Pfeiffer, Porschen-Hueck, Sevsay-Tegethoff 2011), which is only to a minor extent possible (Dick, Wehner 2002: 16 ff.; Polanyi 2009). For example design recommendations regarding innovation processes include adherence to standardisation, which strives

to formalise and streamline organisational practices (Brunsson, Rasche, Seidl 2012; Cooper, Edgett 2010, 2012). This development is coupled with the implementation of digital technologies whose process rigidity however, is known to impede innovation activities (Henderson 1991; Thurk, Fine 2003).

We interpret this contradictory constellation as a result of new strategies of controlling, steering and regulating self-organised work by objectifying work processes and the respective knowledge (e.g. Pfeiffer, Schütt, Wühr 2010). The solution of this contradiction requires innovation on the organisational as well as on the societal level.

At first sight, new organisational and managerial concepts and the political programme of workplace innovation itself seem to match quite well. And even more, participation and job autonomy are known concepts which have been developed and supported by several national political programmes, for example in Germany within the programme 'Humanisierung der Arbeit' – humanisation of work in the 1980s. The core goals actually seem to be continued by a successor, the currently announced national research programme called "Innovations for production, service and work of tomorrow" (http://www.bmbf.de/de/686.php). But from the perspective of experience-based work action, in this programmes as well as in the common definitions of workplace innovation employees are not sufficiently regarded and supported as innovators themselves, their role as innovators of products, of technology *and* of organisation is often still underrated or even neglected. When it comes to workplace innovation, workers must be the subject, not the object of innovation. There is more to participation and job autonomy than for example taking part in decision processes, being informed and asked. Participation and job autonomy become supportive for good work when they intertwine, when employees can design work and organisation processes for the sake of good work – not only for the sake of a top-down strategy, which never can comprehensively take into account the necessities and needs on site. Innovation at the workplace is more than taking part in the adaption of change once induced top-down, it is not just about 'being organised' to work in a participatory way, it is about designing work and work processes. Even in the ongoing scientific debate on social innovation where the importance of transdisciplinary knowledge is highly rated, the informal and experiential characteristic of tacit knowledge and experience-based work action is overlooked (e.g. Novy, Habersack, Schaller 2013).

The political core of the concept of workplace innovation (as manifold as the current definitions of the term may be) is the emphasis on a special win-win-goal: not in the sense of 'tit for tat', but in the sense of a reciprocal positive influence of performance and quality of working life. However, it seems to us that there is an

argumentative gap regarding the reciprocal influence: The mutuality of performance and quality of working life does obviously not emerge automatically. It must be created by looking exactly on aspects of, for example, participation (cf. Dhondt, Pot, Kraan 2014: 308f). The established forms of participation and job autonomy in Western economy apparently do not sufficiently support this reciprocal influence in a positive direction. On the contrary, there is lots of empirical evidence of increasing stress, workload and contradictory work requirements in the context of new forms of management and organisation (Garibaldo, Telljohann 2010; Kratzer, Dunkel, Menz 2010). This is supported also by literature following the psychological model on Job Demand-Control (Karasek, Theorell 1999). Based on this model Spiegelaere et al. (2012) show that an increase of the innovative behaviour of employees is deeply related to enhancing employees' control over their work task while keeping the amount of job demands low. Further workplace innovation strongly depends on forms of participation and job autonomy that transcend the current and known levels and encompass the central aspects of experience-based knowledge, subjective work action and informal processes of working and organising work. Empirical research shows that these transcending forms of participation and job autonomy manifest for example in certain conditions of cooperation and transfer of experiential knowledge (Porschen 2012), decision processes (Neumer 2012), and learning experiences (Bauer, Hemmer-Schanze, Munz, Wagner 2012). Overall they depend on mutual trust relations, whose reliability is tangible in for example leadership and personnel policy (Böhle et al. 2014).

The example of participation and job autonomy illustrates that the several aspects of good work cannot be separately adjusted and that a comprehensive perspective is needed. Workplace innovation as a scientific topic and a political agenda summarises quite a lot of multiple aspects of good work and implies the opportunity to relate them to each other. This is a challenge in scientific, political and societal respect. In a capitalistic context the process of its accomplishment is still and ever again just at the beginning.

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