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How to get off innovation capabilities by change programs?

Theory and case study

Manfred Moldaschl [1], Tobias Hallensleben [2], Julia Breßler [3], Matthias Wörlen [4]

[1-4] TU Chemnitz, Chemnitz/Germany

[1] Manfred.Moldaschl@wirtschaft.tu-chemnitz.de

ABSTRACT:
Does every change project make sense? For which ones does failure make sense? What hampers organisations from change, or from senseless change? How can we explain inertia, resistance, learning barriers and innovation inabilities beyond the dominating home-made psychologism, and psychologism at all?
We will ask and answer questions like these in an empirical project program. We will address innovation capabilities and inabilities at two levels: institutional and individual.
The first part of the program is based on the theory of Institutional Reflexivity. This approach is situated in the fields of modernization theory, theory of the firm and organization theory. It operates with reflexivity as a fundamental category of the social sciences and deals with expressions of the dilemma of organization and innovation, e.g. in the form of contradictions between objectives like efficiency and flexibility (or routine and change). The approach operationalizes dynamic capabilities of firms in terms of institutional reflexivity and thus offers an alternative to dominating capability-theories in the field.
The second level constitutes a theoretical framework for individual reflexivity as a personal competence or capability. It addresses a set of self-relations people are able to manage, like tolerating uncertainty, or their degree of openness for experiences that are not easily compatible with former assumptions, theories-un-use, and general premises. The two-level conceptualization allows for the study of contradictions as well as coevolution(s) between organizational levels of reflexivity and individual competences, claims and needs with respect to the validity of organizational rules.

***Keywords**: Innovation Research, Innovation Capability, Institutional Reflexivity, Individual Reflexivity*

1 INTRODUCTION - MISGIVINGS OF CAPABILITY APPROACHES AND INSTITUTIONAL REFLEXIVITY AS AN ALTERNATIVE

The “ability” of companies to adapt to new circumstances, to create new products, processes and new knowledge, has been conceptualized in many approaches. Of course, this shift from contingency theory to RBV and competence theory was necessary, particularly in order to acknowledge the role of endogenous forces of change, to understand the increasing importance of knowledge production in modern economies, and to explain performance differences among companies within an industry (cf. Dierickx and Cool 1989). However, they encounter new gaps and weaknesses, as Moldaschl and Fischer (2004) elaborate upon in a summarizing review, e.g.:
CBV did not yet offer a satisfying understanding of the basic dialectics of routine and innovation. Thereby they hinder the fact that precisely the successful practices (core competencies) can easily turn into “core rigidities”.
Success is traced back to capabilities and their combinations. But which of them are superior, however, is only evident ex post, from the achieved rents (cf. Porter 1991, Priem

and Butler 2001, Foss and Foss 2004). The indicators which point on superior competences tend to also be proof.
With concepts of meta.capabilities a lot of authors try to respond to this problem. But in most of these concepts specific skills are seen as negligible compared with "higher order"capabilities (cf. Zollo and Winter 2002, p. 341). Thus, learning might merely appear as a process of higher and higher abstraction – without any content. And how do they operationalize such capabilities of problem solving? By a single variable: R&D expenditures, in comparison with overall expenditures, like Cohen and Levinthal (1990, p. 129) did?

The theory of institutional reflexivity (e.g. Moldaschl 2006) offers an applicable framework for analysing the ability or inclination to change and to assimilate new ideas and knowledge. The approach is based on modernization theory (e.g. Luhmann 1984, Beck 1986, Giddens 1990) and organization theory, especially in pragmatist theories of organizational learning (e.g. Argyris and Schoen 1978, Weick 1995). The approach conceptualizes reflexivity as a fundamental category of the social sciences. The term "reflexivity" rests on the insight, that the ability to manage principle uncertainty is a matter of realizing the recusivity of organisational development, the emergence of unintended consequences and the interdependency of knowing and deciding. Like in theories of inner speech (e.g. Pierce 1932, Archer 2003) we understand reflexivity as the decisive problem-solving mechanism. In picturing a reflexive position towards oneself as one kind of learning, we assume that every actor has this ability (cf. Piaget 2000). However, realizing that it is a self-enforcing mechanism, we further assume that people and systems differ concerning their level of reflexivity. Therefore we understand reflexivity as a type of openness towards conclusions we get, when we refer to our self, our action and our social surrounding (cf. Raeithel 1983). Before we come to the discussion of reflexivity as a personal competence – a topic we are actually starting to research - we present the much more elaborated concept of institutional reflexivity, based on a project, we finished just a few months ago. Therefore we (2) provide insight to the framework of institutional reflexivity as a theoretical and analytical concept, before we (3) give an empirical example to present its potential as a heuristic for analysing organisational change.

2 INSTITUTIONAL REFLEXIVITY AS AN ANALYTICAL CONCEPTION

Now, what is institutional reflexivity? We use the term in two significations:

- As a social phenomenon, a feature of organizational culture and practice, reflecting upon its ways of monitoring, evaluating and modifying its own rules, routines, values and activities (practices, strategies) in terms of inputs and outcomes.
- As an analytical concept to describe and analyze these modes and practices with respect to levels of institutional learning (adaptability, creativity) and non-learning (innovation barriers, inertia) via operational criteria.

We use the word institution in the sense of institutional theories of economics and sociology, signifying patterns of repeated action and thought, formalized (e.g. rules, law) or informal (e.g. normative expectations). As an analytical conception, institutional reflexivity evaluates management strategies and organizational methods with respect to the extent of which they have the potential to contribute to the revision or innovation of previous mental and practical routines[1] It offers three related steps with specific criteria for each: (1) a formal analysis of instruments, (2) a qualitative analysis of "spirit" and (3) an analysis of situational requirements for reflexivity (contextualization).

2.1 Formal criteria of (virtual) reflexivity

Five criteria operationalize the above mentioned reflexivity modes. We assume that organizational routines which correspond to these criteria will increase the likelihood of revision or innovation in their field of application. By formal criteria we only put corporate

[1] *Absorptive capacity* on the other hand, means more and less: more, because it also pertains to mainly new technological or market *knowledge*; less, because the question of revision is not posed systematically.

practices "under suspicion of reflexivity." They can be gathered by observation and standardized interview techniques, but they do not deliver "proofs" (see step 2).
(a) Institutionalization of self-observation and self-criticism. Over the past decades, more and more entities and procedures have been created for subjecting all of the other ones to regular testing, checking and evaluation, especially in larger companies. Departments for Social Affairs, Think Tanks, and the like have been added to departments such as Organizational Development and In-house Consulting.
(b) Systematic recourse to outside observation. The most well-known import of outside reference is surely corporate consulting. Revisions are however more likely, when companies are "irritated" by systemic consultants rather than "assured" by expert consultants. With reference to Luhmann, others suggest responsiveness as a criterion (openness to the environment and sensibility, not to mention "resonance capability"). Also associated with this is, among other things, the analysis of customer complaints, the cooperation with critics (up to the point of their "purchase")[2], round tables, mutual hospitality and the use of boundary spanners (cf. Duschek, Ortmann and Sydow 2001).
(c) Communicative allusion towards external reference. By that I mean the external referential "forms of self-representation" as outlined by Luhmann 1984. Within a corporate context, this is on one hand about reporting practices in reference to anticipated or experienced external perceptions, i.e. not simply advertising as the intentional production of an image, but rather about an examination of external images in a way that refers to the interpretation model of others. On the other hand, accountability in a narrower sense is also addressed, that is the more or less obligatory reporting of a company requested from "outside" (in contrast to internal reporting, or accounting). This includes types of reporting extending beyond environmental reports and Corporate Social Reporting (CSR).
(d) Open evaluation of the consequences of action (sensitivity). If the first and second criteria concern the creation of feedback channels, then the fourth pertains to the creation of content. It pertains to all types of evaluation of activities for other players and the "environment", provided that includes unintended consequences and is not only limited to the (purposeful) measurement of deviations from specific target criteria.
(e) If the return of uncertainty is a characteristic of late modernity, then accentuating not-knowing and the outlining of present alternatives and futures are strategic replies given by companies. If they increase the number of alternatives for taking action, the conditions and consequences of which cannot be overlooked, made easier to process with scenario techniques and similar procedures; this could be coined strategic optionalization. It can be "measured" by the finding of systematic changes in duties, roles, departments and companies, parallel development teams (cf. Nonaka and Takeuchi 1995), or the use of creativity techniques, e.g. the Six Hat Method by De Bono 1989.

2.2 Evaluating reflexive practices

All these practices can easily be identified by standardized surveys. But they only describe a possible function of those institutions. A company with a department for organizational development, which pursues organizational innovations in an engineering rationality, has certainly institutionalized an organization of change, but not necessarily reflexivity. And vice versa, many formal procedures have nothing reflexive about them and can even replace reflexivity. Therefore, we need the second step which utilizes on the one hand more formal and descriptive criteria which are not as easy to conceptualize by standardized surveys, but the other hand uses interpretive criteria which are needed to identify the "spirit" of organizational action.
(a) The number of channels for feedback and the degree of feedback (in the quantitative dimension of 'recursivity').

[2] The "purchase" of critics need not necessarily be assessed as a measure of immobilization or "symbolic politics". The fact that the German Shell AG, for instance, hired the former Senator of the Environment of Hamburg after the Brent Spar-affair can also be interpreted as the internalization of critical competence and – together with others – as an indicator of a revision of corporate politics.

(b) The reach and/or objective and time-based horizon of long-range effects (in the qualitative dimension of 'secondary consequences'). Which players and which systems with respect to which consequences in which spaces and time periods are included in monitoring?
(c) Revision of criteria and objectives: to what extent are these provided and permissible in the self-evaluations? Which measures and objectives are actually being assessed and which ones are made taboo?
(d) The degree of applying or abandoning reflexive rules or procedures. Does environmental monitoring have any consequences at all? And if so, what significance does it have in the decision-making process?
(e) Self-application: to what extent is the respective test or distancing procedure applied to itself? To what extent does it become an object of testing and revision itself (e.g. as an evaluation of the evaluation)? To what extent are failed measures learned, and to what extent are they displaced?

2.3 Contextualizing institutional reflexivity

The above criteria do not provide a way for normative evaluation from a corporate standpoint to be defined. As social capital is not good per se (like dominantly seen as the glue of civil society, rather than as potential of parasitic collectives such as the Mafia or some functional elites), also reflexivity is not good per se. What amount of reflexivity a company needs depends on the context. Why, for example, should one evaluate the organization of garbage collection primarily on the basis of enabling organizational innovation? It cannot be a matter of "the more, the better" when it comes to evaluating reflexivity. A third argument, on the other hand, is that organizations (as well) must find a balance between learning and routine, irritation and confirmation and therefore change and stability. The debate on organizational learning demonstrates this in particular.

3 KAIZEN FOR DEVELOPMENT TEAMS: A CASE STUDY IN ORGANIZATIONAL SENSEMAKING

Our case is on the introduction of kaizen as an element of a far-reaching organizational change project in a German high-tech company of the automotive sector. 1200 employees work at the head office and almost 1000 of them are engineers. In total, the company employs 4200 people worldwide. The kaizen issue was put on the company's agenda by management about one and a half years before our research started. Since then, kaizen was given »top priority«, as an earlier attempt to implement a continuous improvement process died a few years before and the management seeks to avoid past mistakes, i.e. a lack of transparency, of feedback on suggestions by employees, of clearly defined fields of responsibility, of time and financial resources, and, ultimately, of support at the management level. Consequently, considerable pressure is now being put on successful implementation. A few words on how the process works from an institutionalized point of view:

Whenever engineers working in development teams see a need to optimize parts of their everyday practices, they communicate the issue at hand to the competent implementation coordinators in the respective development team. The conception of concrete optimization proposals is always part of this initial communication. At that point the process has been initiated. However, this approach does not merely target technical, but all processes within the entire enterprise (e.g. those in executive management or in corporate communications). Other topics that come up frequently: The improvement of work stations and work environments as well as product and service quality. Next, the implementation coordinators review the proposals. From time to time, they develop alternative solutions to the problems and send completed concepts to process support where the proposals from all profit centers are consolidated, prioritized, categorized and entered into the system. The implementation coordinators and team leaders of the profit centers involved in kaizen subsequently develop group-wide interdisciplinary standards to be submitted – if applicable – to an impending proposal approval process. Ultimately, the decision on whether the measure is to be

approved and financed is made by a superior decision-making board composing of the group's management and representatives of senior management.

As pointed out above, a consequence of the failed attempt to implement a continuous improvement process, which had suffered the fate of a silent death just a few years earlier, is that the company today is under a lot of pressure to bring the implementation to a successful completion. However, what does being successful actually mean, and who determines success? The implementation of kaizen initially started in one of the corporate group's top profit centers. Here was called into question what had remained valid for decades until then. Within the protected microcosm of the pilot project rules and practices of negotiation which finally leads to the acceptance or rejection of problem solutions prepared by the employees had remained necessarily incomplete, context-related and left a wide scope for interpretation. Having regard to the particular circumstances of the respective situations, the existing criteria were applied, complemented, combined and discarded. Decisions on proposals for improvement seemed to come through a process of trial and error: two steps forward and one back (cf. Lindblom 1959). Quite often standards and objectives were left open until the end. Occasionally, they had even been defined only in retrospect. As a result, unintended side effects of problem solutions that occurred recursively could be corrected, often before the implied standards were strengthened. This was precisely the reflexive value of the instrument. However, linked to this, the seeds were sown for those retrospective legends of functionality which followed later. Thus the still existing flexible relation between the rule and its exception (cf. Ortmann 2003) characterizing the pilot project, toppled with a growing degree of institutionalization in favor of a binding classification system. As a result, the existing notions concerning normality, including the respective classifications of problems and practices of productivity measurement, remain undisputed. So as not to jeopardize the success of the procedure on its behalf, ambivalent perspectives are being transformed into a coherent discourse. As a consequence, issues which don't fit into one of the classifications that had been used until that point had remained taboo. Performed development services that tended to evade capture, analysis and valuation as a result of using the established instruments of kaizen were not being taking into account. Thus, success of the pilot project justifies the fact that promoters of change immunize themselves against falsifying points of view while introducing the dissolution of that order which has enabled them to reach this. The procedure is turning against its original sense, thereby paradoxically creating the basis of that legitimacy which would not be secured only by virtue of its reflexive potential.

In this way, the centers' methods and software solutions are believed to be »best practice« and are being transferred step-by-step (and top-down) to other profit centers. Ever since, management has been trying to construct continuity between the past and the present, the experiences made during the pilot stage and current practice. Even more seriously, the profit center's past success was being projected as an expectation for the future. It has been transformed into a powerful narrative, and a »process which has been talked smooth«, as a team-leader states. Today, this is indeed also critically viewed by the initiators themselves. They created a new reality which in the meantime has in the meantime had been transformed into a social fact. »Definite process standards — anyone who does not comply cannot be sustained in the long run«, a process manager puts clear.

Thus, what we can observe here is a (potentially reflexive) practice, since it is, in theory, fostering self-monitoring and self-criticism, but, in application turns into the opposite and leads to an »immunization« against influences from the outside and critique so that learning is inhibited. Conflicting interests and perspectives as well as deviating discourses are experienced as a threat and not as valuable input. Past experiences and »best practice« is idealized, and it is assumed that what was proven to be successful for one profit center cannot be bad for other departments within the corporate group. Rules, norms and standards which were developed during the pilot stage years ago and which were highly disputed at that time solidified into unquestionable dogmas, while the former disagreement is

retrospectively transformed into a coherent discourse. This is also expressed in the following statement by a team-leader: »Especially in former times, there was often no interest in the disclosure of the processes because no one wanted to become vulnerable […] Even executives were not entirely committed to the project. They paid no more than lip service to kaizen.« Innovation along these lines works as a kind of memory of how one had imagined oneself (see also Goffman 1959). It is all about a retrospective evaluation of organizational habits for the purpose of establishing an organizational structure as intended today. Thus, fictional meaning is added to every single step of the past change process in order to legitimize its current state.

But as much as this kind of organizational imaginary provides identity, orientation and stability and might help to succeed in marketable innovation it also leads to a counterproductive self-limitation. According to the management, whatever cannot be quantified and standardized cannot be tested and improved so that every solution which is not easily quantifiable is neglected. The (supposed) success of the pilot project and the resulting initial euphoria undermine critical discussion and the search for alternative ways to improve. Problems are being regularized and ambiguities eliminated so that the result fits into the existing structures and frames of meaning, or, as a kaizen-commissioner explains, »We still rely on what we experienced in the ›manufacturing equipment‹-profit center because it stood the test«. Past experiences thus dominate current practice and there is a switch from »in-order-to arguments« to »because arguments« (cf. Schütz and Luckmann 1973, p. 18). Contingency becomes more and more dissolved into unambiguity. But this tendency ignores the existing diversity of knowledge and the heterogeneity of organizational actors and discourses. Tools that could potentially add to the establishment of reflexive structures turn into the opposite and work in a deflexive way. As we saw, this may support an organization in stabilizing itself and building its identity, or, to find standard solutions and routines that can easily be applied. However, it inhibits learning processes and it is inadequate for the »reflection« of (growing) organizational diversity.

4 INDIVIDUAL REFLEXIVITY AS A PERSONAL COMPETENCE

One of the phenomenon's to be theoretically explained in the vast research on organizational change is why so many projects fail or fade out without notice. Of course, there is no simple explanation, no single causality. But descriptive lists of "factors", based on the idea that perfect models failure because of management mistakes, imperfect implementation or "psychological barriers" are not satisfying at best. The theory of institutional reflexivity contains an analytical framework for "systematic failure", based in the pragmatist conception of the dilemma of organization and innovation. But we need a second component where organizational designs and procedures meet with people socialized within and outside the organization. In order to study the coevolution and contradictions between reflexive procedures and people´s sensemaking of them, we also need an analytical conception for people's individual reflexivity as a competence.

As we've seen the kaizen-model was introduced as a bottom-up information system concerning internal processes to support efficient and effective optimization. In the pilot study it was quite successful. In this stage the kaizen was still being established. The criteria for relevance, the mean-end operationalization and the communication channels had not yet been fixed. Therefore, it was much more an open system for communicative exchange. This changed a lot, when kaizen was transferred to other offices/centers as a formalized concept. We understand this implementation as a transformation from an originally formal and practical reflexive instrument of organizational self-monitoring into an institution, which actually only has formal reflexive character. Therefore a reasonable application of this instrument concerning self-referential organizational development is nearly impossible or at least it would require a different and much more demanding individual approach.
What are the consequences for daily operations on the individual level? What kind of competences would be required to safeguard functionality now only formal reflexive

information instrument? From the participant`s point of view, the original instrument in the pilot stage left everyone enough freedom to interpret actual situations corresponding to the parameters of the information system so that a more or less unproblematic handling at the routine level was possible. But as a very much formalized instrument transformed into a foreign context, the application of the kaizen system required different competences (and commitment). Because of its character as a closed information system, situational appropriateness had to be reinvented through personal interpretation to a rather large extent. The new system demands a reordering of individual operations. People would need to translate their point of view in the terms of the program. Commitment to the original function of the kaizen system would maybe even ask to counteract the formal information scheme.
In addition, one main interest is to constitute a theoretical framework for individual reflexivity as personal potential. Here, reflexivity is more than a reflection (cf. Moldaschl 2010, p. 3). This can be considered as a sense of self-processes in terms such as “he is aware of himself”.
The concept of reflexivity refers to decentralization in overcoming egocentrism (cf. Piaget 2000, p. 160), recentralization as a “comprehending cognition” (cf. Raeithel 1983, p. 115) methods of self and foreign monitoring.
In routine activity, the relative active process is unconscious to the subject. The subject no longer reflects upon its action, rather just acts. Reflexive action begins with an adjournment of the practical activity and effects a realignment of practices. In the first step, the subject looks away from his activity to the structure of the realty (cf. Raeithel 1983, p. 114). It will be able to detect the situation and duty intuitive. The first level is achieved when the subject attempts to find a new orientation for his action to realize the originally objective (cf. Raeithel 1998, p. 185). The subject at this level called primal centralization or ego centered reflexivity is naively self-centered and has the position of a naive problem solver. The transition towards decentralized reflection is necessary to avoid disappointment (cf. Raeithel 1983, p. 177) and when the problem is sought after in the relationship between activity and the process of matter. The subject analyzes the functionality of the instrumentality and notes established or new differentiations (cf. Raeithel 1998, p. 154). If the subject cannot arrange an explanation, he has to justify the goal. The Subject reflects in a dialog with itself. It can either change or comply with conventional approaches. This can be described in a reinterpretation of the goal in applied procedures or in questioning the appropriateness of current processes. This level called recentralization or recentralized reflection. The return path to the practical action goes across the decentralized reflection and then out of the reflection to the act. A short-cut from decentralization to primal centralization is possible and equates to problem-solving cognition.
These three levels are not in ascending order (cf. Raeithel 1983, p. 30). They represent steps of reflexivity actions. So the subject will challenge rules and break away from routines, developing perspectives, articulate contradictions, objections and lastly detect incidental consequences.
Aspects which are aimed at cognitive skills do not describe objects, rather contents. Admittedly reflexivity is not context-free, so the potential is reflected in the organizational context. Individual reflexivity becomes manifested in the diversity of perspectives; amplification and reflexive knowledge (cf. Moldaschl 2010).

5 CONCLUSION

In this case study we saw innovation strategies conflicting with rule-based knowledge. In the studied company change was conceptualized (sense made) as clearly-defined action programs and rehearsed formats of thinking. While the complexity of rule-based knowledge continues to increase, the underlying categories of formal regularity are maintained, or are only questioned insofar as this contributes to improved efficiency – as far as this efficiency can be measured with the given instruments. In the applied engineer-like conception of change discursive processes do not have to affect main objectives, understandings, and premises. Thus, the change process is discursive and reflexive only at points where the execution of plans meets practical problems. To what amount different perspectives and

alternative interpretations of reality contribute to cooperation problems and realization is therefore systematically excluded. The organization does not make (much) use of opportunities to understand mechanisms and barriers of its own learning – a circulus vitiosus. This corresponds to a culture of management action which attempts to control potential reflexive methods by stochastic principles of local optimization. This downgrades reflexivity to an instrumental control and feasibility strategy – and thus limits on innovativeness knowledge become an idealistic management belief system which defines norms in terms of normality, legitimizing action and obligatory formats of thinking which are intended to "(re-)produce" the implementation of organizational objectives.

As we hope to have shown, the theory of Institutional Reflexivity offers an analytical framework to study and understand innovation capabilities, why the level of these capabilities differs so much and why change often fails. Of course, the approach does not claim to explain everything in that field, but offers a theory-based (not empiristic) perspective that can be compared with the performance of other approaches, like the resource-based view of the firm or neo-institutionalism. Particularly the criteria "revision of criteria and objectives", "degree of applying reflexive rules or procedures", and "self-application" proved to be helpful in reconstructing strategies and practices that enable organizations to "immunize" themselves against falsifying observations and maintain established ways of sense-making. Problems tend to be regularized and ambiguities eliminated, resulting in a minimal "risk" re-organizes the organization's way of interpreting its own practices and external challenges. But well, not to innovate these frameworks provides orientations, stability and certainty, since pure technical challenges seem to be challenging enough.

Thus, reflexivity as a generic idea to gain and maintain innovativeness is not smoothly compatible with other practitioner's interests. They prefer "best-practice"-solutions, i.e. certainty how to act. Real change appears as a risky endeavor from there:"… with insufficient knowledge, with partially conflicting interests and, hence, with wide range of uncertainty and unexpected side effects" (cf. Moldaschl and Brödner 2002, p. 188). But organizations and practitioners cannot escape the dilemma that certainties (i.e. valid rules - organization) are a necessary precondition to work on complex tasks, while people and external conditions permanently change. Each organization must find a balance between these requirements as a permanent task. Institutional Reflexivity describes organizational procedures and ideas for sensemaking that can also be used by practitioners to work on that task. And the concept of reflexivity as a personal competence offers analytics and orientations for those who want to improve personnel's abilities to cope with that, or even to inspire changes.

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