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A methodological framework for constructing generic knowledge with intended value both for academia and practice.

AVENIER Marie-José

SERIE RECHERCHE

**A METHODOLOGICAL FRAMEWORK FOR CONSTRUCTING GENERIC KNOWLEDGE
WITH INTENDED VALUE BOTH FOR ACADEMIA AND PRACTICE**

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A Methodological Framework for Constructing Generic Knowledge with Intended Value both for Academia and Practice

AVENIER Marie-José*

ABSTRACT

A Methodological Framework for Constructing Generic Knowledge

This chapter presents a methodological framework for collaborative research projects with practitioners aimed at developing knowledge from practitioners' experience, intended to be valuable both for scholars and practitioners.

It begins with an overview of the epistemological paradigm in which this framework has been developed, namely the radical constructivist paradigm. It introduces the notion of epistemic work which plays a core role in the process of knowledge legitimization in this paradigm. It also introduces the notion of generic knowledge which offers ways of overcoming the issue of generalization in this paradigm. The second part provides an overview of the main processes involved in this framework and of the various facets of epistemic work in these processes.

The discussion section offers insights on the context in which this framework was progressively conceptualized over the course of doing collaborative research. It then highlights the differing roles of practitioners and researchers in the various processes involved in the framework. Finally, it identifies where this framework stands in the action research perspective.

Keywords: radical constructivism, knowledge legitimization, epistemic work, generic knowledge, action research

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“The true is precisely what is made.”
[“*Verum esse ipsum factum.*”]
Vico G., 1710, *De Antiquissima* (English transl., 1988, *Ancient Wisdom.*)

Fieldwork reveals that members of organizations know a lot about management, strategy-making, organizational practices, and organizational commitment, to name but a few subjects. Most of this embodied knowledge (Lam 2000) can be considered as “unbeknownst” to those who have it. Indeed, most practitioners are unaware of what they know because they have never had the occasion nor the motivation to think about it, let alone the time and/or the energy to try to *remind* it (Wittgenstein 1958)—which in itself is not an easy task.

Researchers in the field of management who are aware of this phenomenon may be eager to construct academic knowledge by drawing upon practitioners’ experience and embodied practical knowledge. Despite the potential enrichment offered to both management theory and practice by such an approach, the specific issues of *developing knowledge relevant for practice from practitioner experience* that is also *considered academically valid* has not been directly dealt with in the literature, nor have the epistemological problems it poses been studied. As a consequence, management scholars seeking to adopt such an approach lack guiding frames of reference. This chapter aims to fill this methodological gap within a particular theory of knowledge, the radical constructivist epistemological paradigm (Glaserfeld 1984, 2001, 2005; Le Moigne 1995; Riegler 2001).

Our initial goal was to develop a methodological framework useable as a heuristic guide by researchers seeking to build knowledge in management sciences by drawing upon practitioner experience¹. The resulting framework was constructed and implemented in different settings (Avenier and Albert 2005; Avenier and Albert 2006; Avenier 2008) and turned out to have broader implications than initially intended. Indeed, as further discussion will reveal, this methodological framework may be used as a guide for any collaborative research project with practitioners aiming to develop knowledge intended to be valuable both for scholars and practitioners². Because a linear presentation needs to choose a particular entry point, the chapter presents this framework from the perspective of research projects aimed at constructing academic knowledge capturing practitioner knowledge.

¹ Addressing specifically and in detail, the complementary issue of how practitioners may draw upon researchers’ theories is a complex issue whose study is beyond the scope of this already long chapter.

² This framework, however, is not about designing knowledge generating mechanisms within an organization so that they continue after the researchers have left the premises.

The paper is organized into three parts. The first part begins with an overview of the epistemological paradigm in which this framework has been developed. After recalling the foundational assumptions of the radical constructivist epistemological paradigm, it focuses on the notion of epistemic work, which plays a core role in the process of knowledge legitimization in this paradigm. The notion of generic knowledge which offers ways of overcoming the issue of generalization in this paradigm is then introduced. The second part provides an overview of the framework set forth in this paper. The framework is presented from the standpoint of the researcher rather than from that of the practitioner. It focuses more on the way researchers work and elaborate knowledge in collaboration with practitioners than on the work of practitioners during such collaborative projects. The third part offers a discussion organized around three main issues: first, a reflection on the convoluted process by which the methodological framework—presented in the second part in a fairly neatly packaged form—was progressively conceptualized in the course of doing collaborative research; second, a discussion of the differing roles of practitioners and researchers in the various processes involved in the framework; finally, the third issue addresses the position of the framework in the action research perspective.

1. Knowledge Generalization and Legitimization in the Radical Constructivist Epistemological Paradigm (RCEP)

This section begins with a presentation of the constructivist epistemological paradigm in which such a methodological framework is epistemologically defensible. It then successively examines what knowledge validation and generalization may mean in such a paradigm. This leads to the introduction of the notion of generic knowledge.

1.1. The RCEP's Core Assumptions

The positivist epistemological paradigm in which most sciences, particularly the sciences of nature, have developed over the last three hundred years, as well as the so-called “scientific method” (Rosenberg 1988) associated with that paradigm, appears to be particularly ill-suited to social sciences due to several factors.³ These include human reflexivity, the inherently creative and purposeful nature of human action, and more generally, the perceived complexity of humans and organizations. Most organizational phenomena are shaped by the purposeful actions of human beings who are endowed with creative and reflective capabilities. These capabilities are not, however, unlimited. This often makes hypotheses testing unreliable in social sciences. Indeed, the human beings acting as subjects of a study are capable of

³ See for instance (Morgan and Smircich 1980; Le Moigne 1995; Mir and Watson 2000; Tsoukas 2005).

inventing unexpected behaviors to reach their own goals, goals that might not have been imagined by the researchers who designed the test. Hence, the capability of social theories to predict (and therefore prescribe) a future course of action is not as strong as mechanists seem to think it is, although it is not entirely null (Tsoukas 2005).

A constructivist theory of knowledge seems, from my perspective, better suited to the construction of knowledge in the social sciences. However, under the “constructivist” label we find theories having very different scopes—fundamental theories of knowledge construction (Glaserfeld 1984, Guba & Lincoln 1989), theories of social construction of social phenomena (Berger & Luckman 1966), or even theories of social dynamics (Giddens 1984). These various theories are not necessarily consistent with each other and thus it is crucial to specify which constructivist theory of knowledge I shall refer to in this chapter. The foundational assumptions of the chosen theory, the RCEP (Glaserfeld 1984, 2001, 2005; Le Moigne 1995, 2008; Riegler 2001) are listed below.

Phenomenological assumption A1 – Humans cannot know such a thing as an independent, objective world that stands apart from their experience of it. The existence of an objective world populated by mind-independent entities—a “world-as-is”—is neither denied nor asserted. The “world-as-experienced” by a human being is knowable.

The world-as-is designates Kant’s *noumene*, namely things as they are *in-themselves*, i.e. as they might be prior to being experienced. The world-as-experienced designates the phenomenal appearance of things.

Assumption A1 means that the RCEP is agnostic (Riegler 2001). More precisely, it considers that if a world-as-is exists, it is not known whether this world-as-is intrinsically resembles the perceptions it induces. Moreover, if the world-as-experienced by a subject happens to match a world-as-is, this subject is not able to be aware of it and is even less able to prove it. Hence, in this paradigm, making foundational ontological assumptions appears pointless⁴.

Assumption A2 – A human being expresses his/her knowledge of his/her world-as-experienced as symbolic constructions called representations.

⁴ The radical constructivists’ refusal to make foundational assumption is not yet well accepted for reasons that Glaserfeld summarizes in the following way: “From my point of view, the trouble is that most critics seem to be unwilling to accept the explicit, programmatic statement that constructivism is a theory of knowing, not of being. That a model of the construction of knowledge could be designed without making ontological claims about what is known, is apparently difficult to accept.” (Glaserfeld 2001: 10)

In the RCEP, representations are considered as interpretations of a subject's experience: it is impossible to know whether these representations match a hypothetical world-as-is. And if it happens that they do, there is no way to prove it. Hence, for radical constructivists, " 'To know' is not to possess true representations of reality, but rather to possess ways and means of acting and thinking that allow one to attain the goals one happens to have chosen." (Glaserfeld 2001: 9) In other words, the role of knowledge elaboration shifts from constructing (supposedly) *true* representations to constructing *functionally fitted* representations.

Assumption A3 – Knowledge is teleologically and recursively oriented by the deliberate cognitive action of building a representation of the phenomenon under study.

Assumption A3 means that radical constructivists consider that the knowledge constructed depends on both the purpose for which it is constructed and the context in which this construction takes place. In addition, if the purpose evolves, the representation and the knowledge constructed may evolve. Moreover, the knowledge constructed, in turn, may modify the prior knowledge that served to build it.

Consequently, in the RCEP knowledge construction is portrayed as a process of intentional construction of representations based on experience. The teleological character of knowledge construction stated in assumption A3 is also recognized by Van de Ven and Johnson (2006: 814) when they state: "Any given theory is an incomplete abstraction that cannot describe all aspects of a phenomenon. Theories are fallible constructions that model a partial aspect of reality from a particular point of view with particular interests in mind."

When knowledge is considered context and goal-dependent as in the RCEP, generalization is a crucial issue. The next section offers a way to face this issue.

1.2. Generalization in the RCEP: The Notion of Generic Knowledge

Because of knowledge's goal and context-dependence postulated in Assumption A3, in the RCEP generalization cannot purport to establish supposedly universally applicable theories. Rather it will designate a process of upward extension in conceptual generality of substantive knowledge via a process of conceptualization and de-contextualization called genericization (Avenier 2009). Genericization aims to develop so-called *generic knowledge* (Avenier 2007a). The notion of generic knowledge extends that of generic proposition developed by the

pragmatist philosopher Dewey (1938). Generic knowledge expresses knowledge about kinds of things and processes rather than about particular instances— episodes or events—or about statistical regularities. Generic knowledge can take the form of meta-models, frameworks of consistent generic propositions. It can also be expressed as “technological rules” (Van Aken 2004), and “knowledge artifacts” (Jarzabkowski and Wilson 2006) such as portfolio matrices or Porter’s five forces and generic strategy models.

So in the RCEP, knowledge does not present itself in the form of normative universal principles or predictive theories. It aims to provide scholars and practitioners with heuristic guides which need to be contextualized so that idiosyncratic circumstances of particular settings can properly be taken into account. These guides have three roles: encouraging scholars and practitioners to be reflective (Schön 1983); offering them penetrating insights on their concerns; and/or stimulating their creative action by showing them plausible ways to attain their goals.

Generic knowledge permits a kind of knowledge accumulation to take place, an essential feature of the knowledge construction process in sciences. This can occur by relating new knowledge to existing knowledge and/or suggesting novel ways of differently reconstructing existing knowledge. The way in which knowledge accumulation can be legitimized in the RECP is just one aspect of the more general issue of knowledge legitimization in the RECP that is examined in the next section.

1.3. Epistemic Work: a Central Role in Knowledge Legitimization

The question of how to establish the validity of a theory has long been settled in positivist epistemologies: an assertion or a theory is considered valid as long as it has withstood all tests performed on it (Popper 1959). This question is still, however, under debate in constructivist epistemologies. Even though Piaget (1967) offers some fundamental ideas on knowledge legitimization in the constructivist epistemologies, discussions are still ongoing.

For Piaget, legitimization work relies on a process of *rigorous epistemological critique* carried out by researchers themselves. In fact, the spirit of what Piaget calls epistemological critique is captured by what is now referred to as reflexivity (Weick 1999; Tsoukas 2005; Yanow & Schwartz-Shea 2006). However, to retain Piaget’s explicit reference to epistemological concerns, the phrase *epistemic work* will be used rather than the less precise term reflexivity. This has the advantage of emphasizing that legitimization in the RCEP rests on two legs, namely epistemic work and empirical work, which need to be recursively adapted to fit each other throughout the research project. In order to achieve this mutual

adaptation process there is ongoing integration of newly gathered information within the theorizing process. This integration occurs simultaneously with the adaptation of the current theorizing, thanks to the creation of new categories and properties to fit the newly gathered information as well as the previously collected information.

Epistemic work questions the consistency and the relevance of the successive decisions researchers make throughout the entire research process. For instance: Why adopt one particular root metaphor over another? Why take on certain theoretical references as opposed to other ones? Why abandon a current research track for another? Why choose this particular organization for fieldwork? Such a reflective approach in research is in line with Tsoukas' (2005) conception of researchers as reflective research practitioners.

Epistemic work amounts to engaging in an inquiry on the process of inquiry (Dewey 1938), or to subjecting the research process to inquiry (Mir & Watson 2000). These authors argue for transparency on *a priori* theoretical positions because theory, even default theory, influences the way research problems are defined. More precisely, all research is premised upon a variety of assumptions, which researchers need to make transparent in their work. The theoretical position held by a researcher not only guides their basic position, but also determines what gets construed as a research problem.

In order to empower epistemic work, researchers need to render explicit the information allowing them to track the cognitive process being followed, as well as the information that fuels this cognitive process. More precisely, researchers need to specify the foundational assumptions of the epistemological paradigm within which the research has been carried out and to provide a detailed report of the research. Such a report has to account for the (usually) convoluted progress of the research project. This includes elucidating the various iterations in the expression of the research question, the theoretical references that have been successively considered, as well as the empirical information gathered in the field and the continuous interplay between information gathering and processing (Strauss & Corbin 1998).

The report has to describe how the epistemic and the empirical work have been mutually adapted during the research project. It also has to give explanations for the inferences that led to the articulation of that knowledge, in particular and when relevant, the coding performed, the conceptual categories built, and the relations established between categories (Glaser & Strauss 1967). In addition, the consistency of these inferences with the assumptions of the underlying epistemological paradigm has to be shown.

Such a detailed description of how things have actually been done is usually deficient: generally researchers completely write their presence out of the research in an attempt to give

an objective character to their accounts. Readers rarely get a glimpse into the ‘messy’ part of the research, the researchers’ motivations, compromises that were made during the process, or details concerning the specific circumstances that drove the research in its unique directions (Mir & Watson 2000). Yet it is this information that permits the reader to judge and assess the scope of legitimacy of the knowledge being set forth.

Epistemic work is not simply concerned with the cognitive process. It also concerns the explicit knowledge being produced by questioning the deeper meaning of the involved notions, discussing theoretical foundations, and by showing how the new knowledge relates to the already published knowledge.

In this paradigm, knowledge is openly acknowledged as provisional. It has the status of *plausible hypothesis which fits experience*. Hence, research done within the RCEP can build upon knowledge generated within the positivist paradigm—but the converse does not hold.

Considering the crucial role of epistemic work in the methodological framework which is going to be presented, its different facets in the various processes involved in this framework will be highlighted and illustrated. To do so, I will use examples taken from a particular ongoing research project carried out using this framework as a guide.

2. A Methodological Framework for Constructing Generic Knowledge

Most articles and textbooks⁵ on qualitative research in the social sciences depict the research process as comprising a number of successive phases or steps that are iterative and tightly linked to data (Eisenhardt 1989). The number of phases may vary from four to eight according to the level of detail chosen in defining the phases. The basic phases include: research design⁶, data collection, data analysis, and reporting (Yin 1984).

Instead of representing the methodological framework set forth in this chapter in terms of a chronological sequence of *phases* or *steps*, it has been conceptualized from the standpoint of the *processes* involved. Five main processes are distinguished which, as shown in Diagram 1, can be carried out iteratively, namely:

- Conception of the research design
- Construction of local knowledge
- Construction of generic knowledge
- Communication of generic knowledge, and
- Activation of generic knowledge

⁵ See, for instance, (Yin 1984; Eisenhardt 1989; Huberman & Miles 1994; Denzin & Lincoln 2003).

⁶ Research design describes a flexible set of guidelines that connect the research question to theoretical notions, strategies of inquiry, and methods for collecting empirical materials.

----- Insert Diagram 1 about here -----

Each process involves a specific type of epistemic work. In the next sections, these five processes will be presented individually, in the order of the arrows symbolizing the specific epistemic work associated with each process in Diagram 1. However, before that, two important points have to be underscored.

First, as displayed in Diagram 1, the five processes are carried out interactively. Nonetheless, the process of conceiving the research design always comes first. Then, this process encompasses all the other four processes, in the sense that it both shapes the other processes and may evolve during the entire research project in relation to the actual unfolding of the other processes, which is a fairly common feature of action research (Eikeland 2006).

Second, the relationship between the five processes is circular, in the following sense: once the research design has been temporarily stabilized, a particular research project conceived within this framework can continue with any of the other four processes. For instance, the research project can aim at activating some available knowledge in an organization as an action research project. During this process, interaction between researchers and practitioners will enable the co-construction of further local knowledge, which can then serve to build further generic knowledge, and so on.

2.1. Conception of the Research Design

At the outset of any research project, even before starting to reflect on research design, the epistemological paradigm in which the research will be carried out needs to be specified—the RCEP in our case. The research design (see Exhibit 1 for an example) then comprises three main facets which are interrelated: 1) defining the general topic and clarifying the main research question that will be studied, 2) specifying the major theoretical references likely to be used, and 3) defining a strategy of inquiry (Denzin & Lincoln 2003) comprising the contemplated research method, the type of setting within which the empirical work will be carried out, and the tactics for collecting information.

Indeed, on the one hand, “*What we know and how we know are recursively linked. (...) The kinds of research questions asked, the objects selected for study, and the criteria for evaluating knowledge claims are all intimately connected with the underlying assumptions of what is valid knowledge and how it may be obtained.*” (Tsoukas 2005: 6, 309)

Exhibit 1: Synopsis of the research design of the project used throughout this chapter for illustration purposes

☞ **Epistemological paradigm:** The radical constructivist epistemological paradigm.

☞ **Central research question:** The overall research project aims at developing knowledge about the design of strategic management systems based on complex thinking.

Academic and practical interest: Globalization and the diffusion of new technologies contribute to increased world complexity. Considering that only complexity can help cope with complexity (Weick 1979), developing knowledge on complexly-designed strategic management systems is increasingly relevant for practice and offers challenging issues for academia.

☞ **Major theoretical references:**

- **Complex thinking** (Ashby 1960; Weick 1979; Morin 1992; Morin & Le Moigne 1999; Tsoukas 2005...)
- **Strategy** (Johnson et al. 2004; Mintzberg & Waters 1985)
- **Research methodology** (Glaser & Strauss 1967; Yin 1984; Eisenhardt 1989; Huberman & Miles 1994; Denzin & Lincoln 2003)...

☞ **Strategy of Inquiry:**

- **A longitudinal case study:** this is the most appropriate way to study processes, their design, their implementation and their evolution.
- **Organizational setting for field study:** an international medium-size network service company in the international freight transportation industry named Beauvais International (BI).
- **Reason for this decision:** as explained later in the discussion section, the BI CEO deliberately and explicitly redesigned the organizational and managerial systems of her company in reference to principles of complex thinking in 1996-1997.

☞ **Tactics of inquiry:** Interviews (CEO, top and middle managers, salesmen and other staff members); observations of how work is getting done in various offices and cross-docking areas; as many BI internal documents as possible.

The goal is to obtain as much information as possible on how the management systems have been designed and implemented, and why; as well as on how they have actually been operating, how they have evolved over the years, and why.

On the other hand, “The virtues of techniques and methods cannot be determined and categorized in the abstract, because their precise nature and significance is [sic] shaped within the context of the assumptions on which the social scientist acts. Qualitative research stands for an approach rather than a particular set of techniques, and its appropriateness—like that of quantitative research—is contingent on the nature of the phenomena to be studied.” (Morgan & Smircich 1980: 499)

Since they are recursively linked, the three topics involved in specifying the research design have to be handled jointly. The mutual consistency of the choices made in this specification needs to be justified. The identification of the three facets of research design obviously calls for epistemic work to be performed on the central research question in reference to the literature survey. Epistemic work corresponding to Arrow 1 (in Diagram 1) also involves examining the main available theoretical references relevant to the research question, as well as identifying the organization(s) in which the empirical work could take place.

Once the major theoretical references and the organization⁷ for fieldwork have been identified, defining the modes of knowing that will do justice to the phenomenon under study (Burrell & Morgan 1979) calls for further epistemic work. This work is based on answering the following questions: Which particular methods of investigation (tools or techniques) are to be chosen, why, and how should they be implemented? Which practices are to be observed⁸, how, and why? Which practitioners are to be interviewed, in what order, how⁹, on the basis of which interview guidelines, and why? Which organizational documents should researchers try to obtain (such as minutes, meeting reports), and why?

Henceforth, the methodological framework will be presented in the particular case of a project aiming to construct knowledge by drawing upon practitioners’ experience with regard to the research question studied. Throughout this chapter, it will be systematically illustrated on examples drawn from an ongoing research project which aims at developing generic knowledge on management systems’ design (Avenier 2008).

2.2. Construction of Local Knowledge

The primary aim of the progressive gathering and processing of information—these being jointly carried out tasks—is to build local knowledge (see Exhibit 2 for an example). Here the

⁷ For writing purposes, I speak of an organization and field of study in the singular, as if there were only one organization involved.

⁸ By “observations to be made”, I mean observing what people actually do (Cook and Brown 1999), and listening to what they tell each other (Samra-Fredericks 2003).

⁹ Namely, will the interviews be semi-directive interviews, elicitation interviews (Vermersch 1999; Saucedo Ramos 2003) leading to narratives of practices, narratives of experience, etc.?

term “local” (Geertz 1983) stresses the *situated* character of the knowledge built at this stage. Indeed, local knowledge’s legitimization relies on the fact that it has been elaborated at some point in time on the basis of observations, internal documents, and practitioner knowledge and experience as narrated in interviews. Hence, local knowledge depends on the particular practitioners interviewed, their particular background and location in the organization, which itself operates in a particular context, and so forth.

Exhibit 2: Examples of local knowledge at BI

- ☞ While individual empowerment of operational managers generally promotes managers’ individualism, the collective empowerment of each of BI’s operational teams, together with the fact that these empowered teams were urged to behave as learning teams, fostered mutual aid between BI agents within and across teams.
- ☞ At BI, the abolition of “management by objectives” for salesmen and of any reference to the notion of local profit centers has enabled the emergence of a European commercial network within which salesmen actively collaborate.

The epistemic work associated with this process (Arrow 2) bears on studying theoretical references relative to notions encountered in fieldwork, and the specification of the empirical work performed, and to be performed (see Exhibit 3 below). The latter is based on answering questions such as: How should the interview guidelines be progressively adapted? Are there any practitioners, other than those initially included, whom it would be relevant to interview for triangulation purposes? Does the research question resonate with the concerns and experience of the interviewed practitioners? Is the local knowledge being elaborated shared by all of the interviewees?

Exhibit 3: Example of epistemic work during the construction of local knowledge at BI

The fact that BI’s management system was based on the notions of a “learning organization” (Senge 1992) and “empowerment” (Bowen & Lawler 1992; Argyris 1998), and that this system was dedicated to the implementation of a strategy of “customer intimacy” (Traacy & Wiersema 1993), led me to also study these references.

The interview guidelines were progressively adapted to include further questions on the current functioning of certain procedures. These questions emerged during the interview process and between the interviews. For instance, in the first interviews I discovered unexpected aspects of the system, such as a procedure for the management of the salesmen called “Quarterly Global Evaluation” (QGE, presented in Appendix). When reflecting on them, I found out that I needed to obtain further information. For instance, why did a particular salesman declare in his last QGE that certain matters were important learning goals for him for the coming quarter?

Another question systematically examined at this stage is whether there is enough information for triangulation purposes. Reflecting on this question made me aware of certain limitations of the case study carried out at BI in 2003 (which are evoked in the discussion section). For instance, with a fellow researcher we had concentrated on interviewing top and middle managers and salespeople. Henceforth, I needed to interview more frontline employees.

Reflecting on the relevance of the research questions for BI managers made me realize that it was primarily the BI CEO who was interested by the research question. As evoked in the discussion, one of her main interests is to be urged to reflect upon a number of organizational routines that she would otherwise no longer think of questioning.

2.3. Construction of Generic Knowledge

The construction of generic knowledge is accomplished through conceptualization and de-contextualization of local substantive knowledge *via* the systematic study of multiple comparison groups possibly taken from other case studies (Glaser & Strauss 1967; Charmaz 2003). It proceeds by making inferences from the comparison groups being considered and, more generally, from fieldwork in relation to previously-elaborated local knowledge and all sorts of other knowledge (academic, local, generic, etc.) available on the topic.

As already mentioned, generic knowledge can take various forms such as that of meta-models, frameworks, and patterns. Patterns are built from regularities identified in the phenomenon under study. Because of the phenomenological assumption A1 above—which states that humans cannot know such a thing as an independent, objective world that stands apart from their experience of it—these regularities are not considered as the expression of ontological permanent underlying mechanisms or law-like causal relationships (as in

conventional research). Rather, they are considered as perceived temporary stable patterns, which, in management studies, may stem from recurrent behaviors associated with an organization's formal and informal systems.

Exhibit 4: Example of tentative generic knowledge relative to the design of managerial systems aimed at coping with contemporary business complexity

- ☞ Numerous managers feel that they are confronted by a multitude of bipolar phenomena such as short term and long term concerns, deliberate and emergent strategies, individual and collective matters, local and global concerns, empowerment and regulation, continuity and change.
- ☞ Handling and maintaining tension between opposite and complementary poles of bipolar phenomena can help managers better cope with business complexity.
- ☞ Processes facilitating the handling and maintaining of such tensions are not easy to design and implement nor are they comfortable to operate. On the contrary, it is easy to drift towards the relative easiness of designing, implementing or operating managerial processes attending to only one of the two opposite poles.
- ☞ Any top manager who is convinced of the relevance of implementing this kind of process in his/her firm, has to set up devices¹⁰ aimed at continually reminding himself/herself, and his/her staff as well, to continually operate in a dialogical process mode which has been designed for this purpose; and to not slip towards the relatively more comfortable position of focusing only on the easier or more pressing pole demanding attention.

The epistemic work associated with this process (Arrow 3) involves checking whether the chosen conceptual references permit to handle the information obtained, or whether certain other references would be better adapted. It also consists of clarifying the new notions introduced and of showing how they can be related to existing knowledge. This often calls for revisiting some of the literature initially studied, as well as for a further literature survey on notions that have emerged in the conceptualization process. For instance, I revisited Morin's (1992) principles of complex thinking and in particular what he means by "dialogical" process¹¹, Ashby's so-called "principle of requisite variety" (1960) and Weick's (1979) view

¹⁰ Such as posting reminders on their office walls.

¹¹ In this chapter, the term "dialogical" is taken in the following sense: a dialogical process is a process which continually maintains a tension between two opposite and complementary notions or phenomena (Morin 1992),

derived from this principle, which states that “only complexity can cope with complexity.” This also led me to study Bernard-Weil’s (1988) contributions on ago-antagonistic phenomena (which are another way of referring to bipolar phenomena, see Exhibit 5), as well as Morgan’s (1986) view on holographic organization. The congruence between the information gathered at BI and the conceptual references considered in the research project comes from the fact that epistemic work progressively addressed all the conceptual references that had been used at BI as guiding landmarks in the design and the implementation of BI systems. Epistemic work also bears on legitimizing the inferences made to build the meta-model or the generic principles and propositional statements set forth.

In order to give an understandable account of the knitting together of epistemic work with empirical work that was accomplished during the construction of the generic knowledge shown in Exhibit 4, more information on BI activity and functioning would be needed than this chapter can provide. Instead the reader will be referred to the presentation of the progressive conceptualization of the methodological framework in the discussion section. It provides an account of how epistemic work and empirical work were coupled in the conceptualization of the methodological framework.

The legitimacy of the constructed generic knowledge depends on the epistemic work that has been performed in producing it and relating it to pre-existing knowledge, as well as on its coupling with fieldwork, particularly *via* the local knowledge on which it is based. This legitimacy is not absolute, but contingent. Indeed, it depends on a number of circumstances, including the cognitive context in which it has been developed. Namely, the researchers’ culture and the information obtained in the fieldwork, as well as the knowledge, the experience, the culture, and the reflective behavior (Schön 1983) of the practitioners involved. As further developed in the discussion section, conceptualization of generic knowledge and the epistemic work that goes with it are mainly and typically performed by the researchers involved in the project. Indeed, practitioners’ regular organizational tasks do not generally leave them much time to do this work, even when they may have an interest in doing it. In fact, knowledge legitimization relying on rigorous epistemic work differentiates the generic knowledge elaborated in collaborative research from that usually developed by practitioners alone. This latter is usually based more on empirical experience than on relating the generic knowledge to diverse possible conceptual references through deep epistemic work.

such as, for instance, attending jointly—and recursively—to short term and long term concerns. This can be viewed as an extended sense from its usual meaning of “pertaining to, or characterized by dialogue.”

There are two further ways of enhancing the legitimacy of generic knowledge: its activation in concrete settings and its communication to those scholars and practitioners potentially interested in the developed knowledge.

2.4. Communication of Generic Knowledge

Communicating research findings to academic communities is a well-known requirement of scientific research. In the specific case of knowledge developed with the intention of being valuable for practice, communication to those practitioners potentially interested in the particular kind of knowledge constructed actually participates in the legitimization of this knowledge *via* its recognition by certain practitioners as potentially useful.

Exhibit 5: Example of a possible academic formulation of the generic knowledge exposed in Exhibit 4 essentially for a practitioner audience

According to Ashby's so-called "principle of requisite variety" (1960) and to the position that Weick (1999) derived from it, which states that "only complexity can cope with complexity", only complexly-designed management systems can help firms cope with the perceived complexity of the current economic and business environments.

Morin's (1992) "dialogical principle" of complex thinking unites two ago-antagonistic notions or phenomena (Bernard-Weil 1988), *i.e.* opposite and complementary notions or phenomena which, at first glance, would seem to exclude one another as, for instance, empowerment and regulation.

The dialogical principle suggests that management processes be designed and implemented so that tension between the ago-antagonist poles of the numerous bipolar phenomena managers currently face be continually maintained. For instance, combining short and long term concerns instead of jumping from the most urgent concern to the next; devising reward systems which take into account both individual and collective performance; designing processes which help stimulate innovative ideas and actions, and then integrate the most promising perspectives into the firm's deliberate strategy (Mintzberg & Waters 1985).

Such dialogical processes are not easy to conceptualize and design. An empirical study gave evidence that they are not easy to operate either (Avenier 2008). This study reports on a CEO strongly convinced of the soundness of implementing such processes in her firm. However, certain crucial management processes had not been designed in a dialogical manner. Additionally, a process that had specifically been designed to be operated dialogically was in

fact not operated in a dialogical mode. Some years later it became apparent that these oversights generated certain malfunctions in the firm as illustrated in the Appendix.

These observations can be interpreted as suggesting that one can easily drift towards the relative easiness of designing, implementing and/or operating managerial processes attending to only one of the ago-antagonistic poles.

This research project has several managerial implications... (See Exhibit 4 for examples of some of these implications).

The design of communications for scholars and practitioners usually requires further epistemic work (Arrow 4) on the knowledge to be communicated, and on ways of communicating it in order to render it readily understandable for the audience (see Exhibits 4 and 5 for examples). Adequate contextualization of the knowledge and shaping of the message in relation to the specific context of the audience also often require further epistemic work. Moreover, in the case of interactive communications, remarks, questions, or illustrations from the audience usually spawn further epistemic work—as illustrated in the discussion section—and quite often generate ideas for additional research projects. This is symbolized in Diagram 1 by the feedback arrow pointing towards the rectangle labeled “Conception of research design”.

2.5. Activation of Generic Knowledge

Putting the elaborated knowledge into practical use is both a primary purpose of generic knowledge elaboration in this framework, and a means to enhance its legitimization *via* putting it to the test of actual experience in authentic settings.

As a consequence of the assumptions of the RCEP recalled in the first part of the chapter, any available knowledge, when put into use, is to be considered as a heuristic guide whose goals are to arouse scholars’ and practitioners’ reflection, to provide them with a complementary understanding of the problem at hand, and/or to stimulate their creative action.

Putting knowledge into action requires its contextualization and interpretation according to the specifics of each setting. Considering the complexity of practice, contextualization cannot be treated as a mechanical process. So, instead of speaking of knowledge application, some authors speak of knowledge put to action (Jarzabkowski 2003) or knowledge put into use (Glaser & Strauss 1967). I prefer to speak of knowledge activation (Tenkasi et al. 2007), the

term “activation” being more specific than the terms “use” and “action”. Indeed, sometimes knowledge activation does not lead to any other action than the cognitive action of attempting to integrate it into one’s thought processes.

To say that an individual activates some knowledge in a particular situation means that he/she takes that knowledge into consideration in his/her thinking about the situation. Taking knowledge into consideration means treating it as thought-provoking or as a means to illuminate a problematic situation. It does not mean treating it as a prescriptive rule for obtaining the desired outcome. Knowledge activation can permit the appropriation of this knowledge, i.e. the integration of this knowledge into the individual’s prior knowledge. This operation can induce modifications not only to the individual’s prior knowledge, but also to his/her initial interpretation of the activated knowledge. In other words, when activation occurs, this has an impact on both the individual and the knowledge: neither is left intact. “The person who applies theory becomes, in effect, a generator of theory, and in this instance the theory is clearly seen as process: an ever-developing entity.” (Glaser & Strauss 1967: 242)

Trying to activate generic knowledge in a setting other than those settings in which it has been developed calls for further empirical work aimed at understanding the specific circumstances of the new setting. It jointly calls for further epistemic work (Arrow 6) aimed at clarifying the deeper meaning of the notions involved and investigating the legitimacy of activating this knowledge in that setting given its specific circumstances. Tenkasi et al. (2007) underscore that this contextualization benefits from being accomplished jointly by practitioners and researchers involved in the action research project. Furthermore, re-contextualization often involves reconstructing the corresponding knowledge in relation to the particular setting considered, which often generates new research questions to be studied. This is symbolized in Diagram 1 by the feedback arrow pointing towards the label “Conception of research design”.

3. Discussion

The discussion will address three issues. First, it will offer a reflection on the process by which the previously presented methodological framework has been conceptualized. This process is directly related to research projects that I have carried out at BI since 1998. Then, the respective roles of practitioners and researchers in the construction of local and generic knowledge will be examined. Finally, the place of this framework in the action research perspective is discussed.

3.1. An “*in Itinere*”¹² Conceptualization of the Methodological Framework in Relation to Research Projects Conducted at BI

Since the conceptualization of this methodological framework cannot be dissociated from the various research projects that I have carried out at BI since 1998, I shall start with briefly narrating the story of these research projects.

3.1.1 1998-2002: Informal Interchanges in Order to Get Mutually Acquainted

My long-lasting relationship with BI began in February 1998 at a conference for top managers, titled “Management and Complexity”. I was presenting a conceptualization of a generic strategy adapted to complex environments, labeled an “*in itinere* strategy”¹³ (Avenier 1999). BI’s CEO was presenting how she had designed and recently implemented a new management system for her company in reference to complex thinking (Morin 1992). This was the first time I had met a CEO who autonomously held such views on management and complex thinking. I usually have to argue strongly in an attempt to convince CEO’s of the soundness of complex thinking principles as guides in designing certain strategies or management processes for their firms.

After listening to each other’s presentations, we immediately perceived mutual interest in the other’s experiences and views. In our first interchange, she underscored that, in her company, she had recently abolished certain conventional management practices—such as salesmen management by objectives and systematically treating local units as profit centers. She was currently experimenting with various unconventional approaches, such as a strategy of customer intimacy and instituting operational teams as empowered learning teams. Furthermore, she stated that she would accept my studying her firm’s management systems.

The only way that management sciences researchers can run *in vivo* experiments is within the action research framework. However, finding an organization whose top managers are ready to engage in action research with university researchers in the area of strategy is extremely difficult, because of the high stakes involved in strategy matters. Hence, meeting this CEO who was ready to open her company’s doors to let me observe *in vivo* experiments she was carrying out in the area of strategic management appeared to me as a wonderful opportunity that was too good to pass up.

¹² The Latin phrase “*in itinere*” qualifies a process whose course is adapted during its advancement according to the evolving circumstances it encounters as it unfolds. Hence, an “*in itinere* conceptualization” means that the idea of this conceptualization did not pre-exist the research project: it emerged as a result and by doing the research. In this chapter, I shall also speak of an “*in itinere* strategy” to refer to a specific mode of strategizing. In this mode, a strategy may evolve during its enactment in order both to adapt to the evolving circumstances which the organization encounters and to integrate certain new ideas which may emerge along the way.

¹³ The expression “*in itinere* strategy” (see previous footnote) is meant to translate the French expression “*stratégie chemin faisant*”.

This is how my relationship with BI started in 1998. Between 1998 and 2002, I carried out a number of open-ended interviews with BI's CEO. The goal was to discover the company, its history since its creation in 1957 by the present CEO's father, its evolution and the newly implemented organization and managerial systems based on complex thinking and dedicated to the implementation of BI strategy. The BI CEO gave me a number of BI internal documents presenting her strategic vision. This included the customer intimacy strategy in which she had engaged her company in 1996, and which had progressively been adapted according to environmental evolutions and to new ideas which had emerged along the way. Hence, I realized that BI strategy was actually enacted as an "*in itinere* strategy" (Avenier 1999). These documents described the new organizational and managerial systems¹⁴ internally designed and implemented since 1997, as well as the rationale underlying their design.

3.1.2 Since 2003: Two Successive Formal Research Projects at BI

My first formal research project at BI started in 2003. The goal was to understand the genesis of current BI strategy and operating systems. I also wanted to do what I now call epistemic work on BI's strategic management core notions, namely "customer intimacy" (Traey & Wiersema 1993), "learning organization" (Senge 1992), and "empowerment" (Bowen & Lawler 1992; Argyris 1998). The project was carried out with a fellow researcher, with whom I wrote a longitudinal strategy case covering the time period from BI's creation in 1957 until 2003 (Avenier & Pellegrin 2004).

In this research, my colleague and I jointly interviewed 17 different BI staff members¹⁵ out of the 170 BI employees, conducted four formal interviews with the BI CEO, and maintained regular phone and e-mail contact with her during the entire research project. We examined a large number of BI internal documents such as the written documents that were prepared for all the strategic meetings that had been organized since she became CEO in 1991. We obtained copies of actual sales offers and meeting reports, as well as completed salesmen's evaluation reports. I also participated in the 2002, 2003 and 2004 strategic meetings.

When this study was completed at the end of 2003, I was eager to launch another research project on the topic that had instantly interested me when I first met this CEO in 1998, namely to develop knowledge on the design of management systems in reference to complex thinking, based on BI members' experience.

¹⁴ For instance, the form used for salesmen's quarterly evaluation is shown in the Exhibit 6 in the Appendix.

¹⁵ More precisely, we interviewed 15 of the 94 employees located at Beauvais, the main site in France. We also interviewed 2 of 11 salesmen, one from London and one from Lyon.

BI's CEO agreed to engage in such a collaborative research project under the condition that I be the only researcher interacting with the BI staff. Indeed, she considered that it could be disturbing and destabilizing for the BI staff to be observed and interviewed by several different persons wandering around the company asking questions. In this project, which started in September 2004—and is still on-going—I have conducted in-depth interviews of the BI CEO and four top managers. Overall, between September 2004 and April 2008, I have had 17 face-to-face, four-hour interviews with the BI CEO, and two one-and-a-half-hour interviews with each of the four top managers. These five people have played the most determinant roles in the design, implementation and evolution of BI formal management systems. I also had 14 interviews in various departments (operations, sales, marketing and design, accounting, etc.) mostly with frontline staff in order to update and deepen the information gathered prior to September 2004.

In addition to interviews with the BI CEO, I regularly receive copies of certain e-mails which she sends to BI staff concerning the proper use of existing procedures or the introduction of new procedures—my name being simply added to her e-mail list. In addition to this, we have regular e-mail exchanges with essentially three purposes. First, obtaining further information on a specific question on which I am doing epistemic work. In her reply, she generally illustrates her thoughts using actual examples based on completed BI forms that she attaches to her e-mail, such as sales meeting reports, salesmen wages' charts, or samples of outputs from the reporting system. The second purpose of these e-mails is to initiate collaborative reflection on generic knowledge I am conceptualizing. The third purpose is to ask her permission for publication of texts in academic journals or in professional publications, stemming from research projects at BI, which mention the name of her company. So far, not only she has always given me her permission for publishing these texts without deleting a single word, but she usually also makes additional comments which further enrich the text and/or my knowledge of BI.

3.1.3 Since 2004: The Need for a Better Adapted Methodological Framework

When I started in-depth interviewing of the CEO of BI in 2004, I felt that the main methodological frameworks available for case study research (Yin 1984; Denzin & Lincoln 2003...) did not provide me with adequate landmarks to carry out this research project. So, I started exploring more specific literature on interviewing techniques, such as elicitation interviewing (Vermersch 1994, 1999), and narratives of practices and working life experience (Saucedo Ramos 2003), and I immediately put these techniques to use as I was learning about them.

Another difficulty I encountered resulted from the radical constructivist epistemological positioning of my research since the mid 90's. Indeed, since 1985, I have been working closely with Le Moigne, a French scholar who since the beginning of the 80's has been highly involved in the "new" sciences¹⁶ epistemological critique. He contributed, and still contributes (Le Moigne 1995, 2001, 2002, 2003, 2008), to the ascertainment of the conceptualization of the RCEP, with which I have been feeling much more at ease than with the positivist or realist paradigms since the mid 90's.

As mentioned in the first part of the chapter, because of this epistemological positioning, I could not view generalization as the construction of rules or laws which would hold universally, i.e. which would be valid in any place and at any time. I had the feeling, though, that it would be *both* important *and* it could be epistemologically defensible to develop a certain kind of generalization from the local situated knowledge developed in an idiographic type of research. For instance, developing general knowledge in the spirit of Glaser & Strauss' (1967) formal grounded theory, though not from within a positivist epistemological paradigm, but rather from within a constructivist epistemological paradigm. This aspiration for developing knowledge from practice with some level of generality led me to return to the pragmatist philosophers. As a result, in Dewey's writings (1938) I found the notion of "generic propositions" which seemed to correspond fairly well to what I was looking for.

Finally, to summarize, this framework was progressively conceptualized through the knitting together of epistemic work and empirical work carried out during this research project at BI. This knitting was done at two distinct but indissociable levels—another ago-antagonist pair. On the one hand, it was accomplished at the level of the knowledge to be elaborated on the topic of management systems' design on the basis of BI members' experience. On the other hand, it took place at the level of the *in itinere* conceptualization of the methodological framework. This conceptualization took place thanks to the interplay of my readings on research methodology and pragmatist philosophy, my personal experimentation with this framework via the empirical work I was doing at BI on management systems' design, and as a result of feedback from research projects carried out by PhD students in this framework.

No BI members directly participated in the conceptualization of the framework. In fact, none of them were particularly interested in the research method I was using and even less so in reflecting on the conceptualization of the methodological framework which was guiding my research. Besides, only a few BI members are moderately interested in the local knowledge

¹⁶ For instance, quantum physics, cognitive sciences, sciences of information, sciences of communication, management sciences, sciences of decision, scientific ecology, and so on.

which was drawn from the BI experience, and only the CEO has some genuine interest in the generic knowledge.

In addition, epistemic work on the framework conceptualization was stimulated by feedback I was receiving from academic peers when presenting it in various publications (Avenier 2007a; Avenier & Schmitt 2007a, 2007b), as well as at various conferences (Avenier 2007b; Avenier & Albert 2006, 2007) and academic workshops.

For instance, the initial labeling of “putting knowledge to the test of experience” was changed to “knowledge activation in authentic settings”. Initially, the goal was to underscore that the framework suggests the possibility of “testing” knowledge’s relevance and effectiveness in various settings different from the ones where it was initially elaborated. At a particular workshop, a scholar pointed out that this labeling does not encompass what I had described as a crucial goal of the knowledge elaboration process, namely knowledge’s potential use in actual settings. This made me aware that I needed to give this process a more encompassing label. After much hesitation between various possibilities, I chose the current one which, in my view, covers the two possible goals just evoked, namely *putting knowledge to use* and *to the test of practical experience in authentic settings*.

3.2. The Differing Roles of Practitioners and Researchers in the Framework

As previously indicated, BI members did not play any direct role in the conceptualization of the methodological framework. It will now be argued that practitioners and researchers play differing roles and make different contributions in collaborative research projects carried out in this framework.

In my view, these differing roles mainly stem from the differences in their prime functions and of the related competence, experience and knowledge associated with these functions: a manager’s prime function is to manage, while an academic researcher’s prime function is to teach and do academic research. As a result, they have different goals, knowledge, experience, competencies and constraints. As a matter of fact, in certain research projects carried out with consultants, some consultants took a more active part in the conceptualization of generic knowledge than organization managers usually do, probably because knowledge construction is more directly connected to consultants’ prime professional activities.

These differences are precisely what fuel and enrich such collaborations within a research project. Both parties can find mutual interest and enrichment because collaboration facilitates the achievement of their respective professional goals and may bring practitioners a feeling of personal fulfillment associated with a public interest endeavor.

The next two sections successively examine the specific roles of researchers and practitioners during the two processes of local and generic knowledge elaboration.

3.2.1 Practitioners and Researchers' Differing Roles in the Elaboration of Local Knowledge

In my experience, during the elaboration of local knowledge most of the practitioners involved do behave as co-researchers in the sense that the questions addressed by researchers to practitioners on their experience and practices push practitioners first to build representations of their practices—in the sense of assumption A2 above—and then to reflect on these representations in unfamiliar ways, i.e. to do some kind of epistemic work on these representations. For instance, a number of BI members came to our meeting with prepared notes on what they thought important to tell me about their work at BI: the various evolutions their jobs had gone through—some have been working at BI for as long as 37 years—the difficulties they have encountered throughout these evolutions and in performing the tasks assigned to them, their current practices, what is nice at BI, what is problematic, etc.

Local knowledge born of the interactions between practitioners and researchers is typically a co-construction between them. However, these two kinds of professionals do not play the same role in this co-construction. For instance, elements of local knowledge that are elaborated in a face-to-face interaction between practitioners and researchers are subsequently shaped and written down by researchers according to their perceptions and understanding of these interactions.

Another example lies in the difference between cognitive postures: researchers address questions to practitioners in a sort of Socratic searching and inquiring dialogue, whereas practitioners ask few questions. Rather, they narrate their experience and offer representations of their knowledge. In addition, while listening to practitioners, researchers strive to make sure the answers obtained are sufficiently precise to enable satisfactory ulterior epistemic work on the described experience. This continual questioning about empirical materials needed later to progress on the epistemic front is a concern mainly, but not exclusively¹⁷, for the researchers.

In this process, both practitioners and researchers do epistemic work, but the kinds of epistemic work they do are different and have different goals. Practitioners' epistemic work

¹⁷ For instance, one day, at the end of the interview, a BI staff member asked me who I had interviewed so far, and who I was planning to interview next. After I had answered him, he expressed his surprise that I had not planned to interview "so and so". He considered that without obtaining information from this person, I would miss important information on the BI system. So, I interviewed that person too, who did give me information which indeed enriched my understanding of BI functioning.

bears mainly on their own experience and aims at expressing it in words. While, as described in the second part of the chapter, researchers' epistemic work has several facets. For instance, it involves clarifying notions used in the organization and relating them to knowledge already available. It also involves identifying what should be considered as local knowledge among all the ideas that have been expressed in the interviews and in the assembled internal documents, as well as adapting the empirical work to the knowledge that is progressively being generated.

3.2.2 Differing Roles of Practitioners and Researchers in the Elaboration of Generic Knowledge

Based on my experience at BI, practitioners and researchers' respective roles are even more different during the elaboration of generic knowledge. The conceptualization work described earlier corresponds more closely to researchers' main professional skills and duties than to those of practitioners. During this process, the collaborative interactions between them take essentially two forms: first, researchers who reconnect with practitioners to clarify some points that were not examined in a sufficiently precise manner, or not at all, during the elaboration of local knowledge; second, discussing successive versions of the generic knowledge being elaborated. In my experience, these discussions can enrich both parties, as the following example illustrates.

I recently prepared an academic text (Avenier 2008) drawing some lessons from the BI experience in designing, implementing and operating BI management systems in reference to complex thinking. The first part presented BI systems in relation to principles of complex thinking. The second part presented and discussed some tentative generic knowledge on the design of management systems aimed at coping with current business complexity. It developed, among other things, the generic knowledge summarized in Exhibit 5 above. In early February 2008, I e-mailed the BI CEO that text for two reasons: first, to ask for her permission to publish it, since it explicitly mentions the name of her company; second, to ask her specific questions in the perspective of the reflection developed in the present chapter. These questions were: In what way(s) do you find our face-to-face meetings useful? Have you found any usefulness in reading the attached paper? If yes, how so? Do you consider the statements presented in what is labeled Exhibit 4 above as potentially useful knowledge for you? Do you consider that the knowledge expressed in these statements might be useful to certain top managers who are not from BI?

To summarize briefly her answers, she states that reading the text helped her step back from the multitude of tasks which can fully occupy her days, and to reflect on her company's experience with complexly-designed management systems. Raising this question led her to

give me further information on BI's past experience and desired future evolution, which enriched my knowledge and understanding of BI. Her answers also explain in which respects Exhibit 4's statements seem useful for her, and why it would probably not be considered as such by other top managers—an important insight for feeding further epistemic work on how to communicate this kind of knowledge to top managers.

In short, practitioners and researchers play differing and complementary roles throughout a project in this framework for collaborative research. Taking advantage of these differing and complementary roles is precisely what makes collaboration likely to enrich both parties. There remains, however, one final question to be discussed, namely the place of this framework for collaborative research in the action research perspective.

3.3. Where Does this Methodological Framework Stand in the Action Research Perspective?

At first glance, as presented in this chapter, this methodological framework may not seem to lie explicitly in the action research perspective, since it is presented mainly from the standpoint of the researchers' struggle to elaborate knowledge by drawing upon practitioners' experience. However, it can be related to the action research perspective in two ways. First, it was underscored that if the conception of research design always comes first, then, once the research design has been temporarily stabilized, the research project can start with any of the other four processes. In particular, it can start with activating some existing knowledge in a concrete setting, which can be viewed as a form of action research localized between the WRI-tradition and the master-apprentice approach presented in (Eikeland 2006). The second argument is that, in this framework, *via* the various interactions between practitioners and researchers involved in the collaborative work, the research project may indirectly influence actions which practitioners launch in the organization, in the same way that peer reactions to my presentations of the framework, evoked above, influenced the way I conceptualized it. An example illustrating this phenomenon is provided in the Appendix. This second argument leads to the question of the specific reflective arenas and procedures for collaborative work in each process of the framework.

In the conception of the research design, the collaborative reflective arenas are essentially meetings with the practitioners who are in charge of the research project in the organization. The initial meetings aim at identifying the general topic of the research project, knowing that the research question itself will be progressively clarified and adapted in a collaborative manner during the research process. These meetings also serve to clarify any restrictions the

researchers may have in carrying out observations and interviews, and in obtaining information relevant to investigating the research question.

In the elaboration of local knowledge, the collaborative reflective arenas are primarily the meetings where face-to-face eliciting interviews are carried out and local knowledge in the process of being progressively built can be discussed. Even though this did not take place at BI, in some organizations there can also be collective presentations and discussions of the local knowledge with the practitioners who have participated in the project.

In the elaboration of generic knowledge, the collaborative reflective arenas are essentially meetings with the practitioners in charge of the research project in the organization, where successive drafts of generic knowledge are presented, discussed, reflected upon, and improved. At BI, this collaborative reflection takes place in a one-to-one relationship between the BI CEO¹⁸ and me, on the basis of a written document which I prepare and e-mail to her. Then she communicates the thoughts it aroused, either in a face-to-face meeting, or, most often, via an e-mail interchange with several iterations—which sometimes ends up as a dialogue by phone¹⁹. For me, these e-mail interchanges have a tremendous advantage over oral interchanges as they “naturally” constitute lasting high quality empirical materials, in the form of electronic files containing the exact words that the BI CEO used in the interchange.

In order to support our reflective collaboration, I usually send the BI CEO papers which are not written as academic texts for an academic public, because as Plummer (2001) abruptly stated: a consequence of this mode of writing is to render most such texts unreadable. Indeed, I strive to send her papers containing the essential message expressed in readily understandable language and relieved of all “ornaments” associated with usual academic conventions. Then, from a revised version of this paper integrating the fruits of our collaborative reflection, I try to develop two kinds of documents: academic ones and documents intended for practitioners, both of which express the same fundamental message, but in differing styles and words, as illustrated in Exhibits 4 and 5 above.

In the process of activating generic knowledge in a particular setting the collaborative reflective arenas are typically those of action research. In the communication process (academic or with practitioners), they are mainly meetings supported by PowerPoint

¹⁸The BI CEO has not incited other top managers at BI to get involved in reflection about the knowledge elaborated in this project because she considers that they have been too busy during the years 2007-2008 due to concerns which are far removed from the topics of the current research project.

¹⁹ The distance between our respective workplaces makes it inefficient to have more than three or four face-to-face meetings per year.

presentations prepared by the researchers and intended to stimulate collaborative reflection and discussion.

Concluding Thoughts

Like generic knowledge developed in the RCEP, this methodological framework is intended to provide heuristic guidelines for a certain kind of research practice. These guidelines aim at fostering reflection, offering insights on how researchers may proceed, and/or stimulating researchers' creative action by showing them plausible ways to achieve their aim of developing knowledge recognized as both academically valuable and as having captured practitioners' experience—which makes it more likely to be valuable for other practitioners.

The guidelines it offers cannot always be strictly adhered to in actual practice. For instance, at the beginning of the discussion section, I explained the reasons why I am doing this research at BI as a lone fieldworker, while I consider with Van de Ven & Johnson (2006) that collaborative research projects benefit from being carried out by a research team rather than by a sole researcher. Indeed, teamwork facilitates and enriches reflection and more generally epistemic work. Nevertheless, in my experience, a lone fieldworker can still do some collective epistemic work with fellow researchers from his/her research group within his/her research lab. This is particularly helpful for overcoming certain limits of individual introspection in the surfacing of researchers' implicit assumptions.

This framework originated from the desire to provide landmarks for researchers eager to develop academic knowledge attempting to capture practitioners' practical knowledge, which could be useful for other practitioners, within a radical constructivist theory of knowledge. While the legitimization of interactive and transformative research methods such as action research is problematic in a positivist or realist theory of knowledge, the radical constructivist theory of knowledge offers an explicitly-grounded epistemological paradigm which allows the legitimization of knowledge generated by interpreting and processing information obtained by means of any research method—provided that the fundamental conditions of rigor and transparency are satisfied (Le Moigne 1995).

Such a theory of knowledge raises vexing questions when it comes to defining what generalization can mean in this theory. A way to overcome this difficulty has been offered with the notion of generic knowledge, and it was argued that this constitutes a legitimate way of conceiving of generalization in this theory of knowledge.

In positivist epistemologies, knowledge construction and knowledge validation are treated as two separate consecutive processes: the first aims at building theories, while the second

purports to validate them by testing hypotheses on empirical data which are different from the data used for building the theory in the first place. In constructivist epistemologies, instead of *ex post* validation, the legitimization of generic knowledge has to be developed jointly and simultaneously with its elaboration. Hence the processes of knowledge generation and legitimization are carried out as two inseparable processes: each inference needs to be justified at the moment it is made, and not *a posteriori*, on the basis of both epistemic and empirical grounds.

Nevertheless, in research conducted from the viewpoint of positivist epistemologies, one also encounters epistemic work performed in a more or less implicit manner—generally more than less!—during the course of the two processes of theory construction and theory validation. This epistemic work takes place during the literature survey, the comparison of available theoretical references, the construction of knowledge claims and of the hypotheses to be tested, as well as when controlling the tests' technical validity.

Hence, as with Weick's (1989) view that theory cannot be improved until we improve the theorizing process, and we cannot improve the theorizing process until we describe it more explicitly and operate it more self-consciously, I consider that epistemic work is at the core of the practice of scientific research no matter what the underlying epistemological paradigm. In fact, epistemic work and empirical work need to be closely knit: they can be viewed as the two engines of the practice of scientific research that need to be mutually—and hence recursively—adapted during any research project aiming to develop knowledge relevant both for practice and academia.

Finally, if BI practitioners did not directly participate in the reflection on the process of developing knowledge from their experience or in the conceptualization of the methodological framework, the research projects carried out at BI did, however, catalyze the emergence of this framework by practicing it while conceptualizing it—through the recursive loop of “conceptualizing for practicing and practicing for conceptualizing”, which is in the spirit of pragmatist philosophy as well as Vico's more ancient view as found in the epigraph. Besides, practitioners' theories, models, concepts, and reflections about their practices contribute to shaping the generic knowledge that is developed in any research project carried out in this framework. This chapter examined the ways in which local and generic knowledge developed in research projects at BI has influenced the BI CEO's reflection and action. Identifying the way in which the collaborative work done with other BI members may have influenced their own reflection and practice is still a question that has been left for further research.

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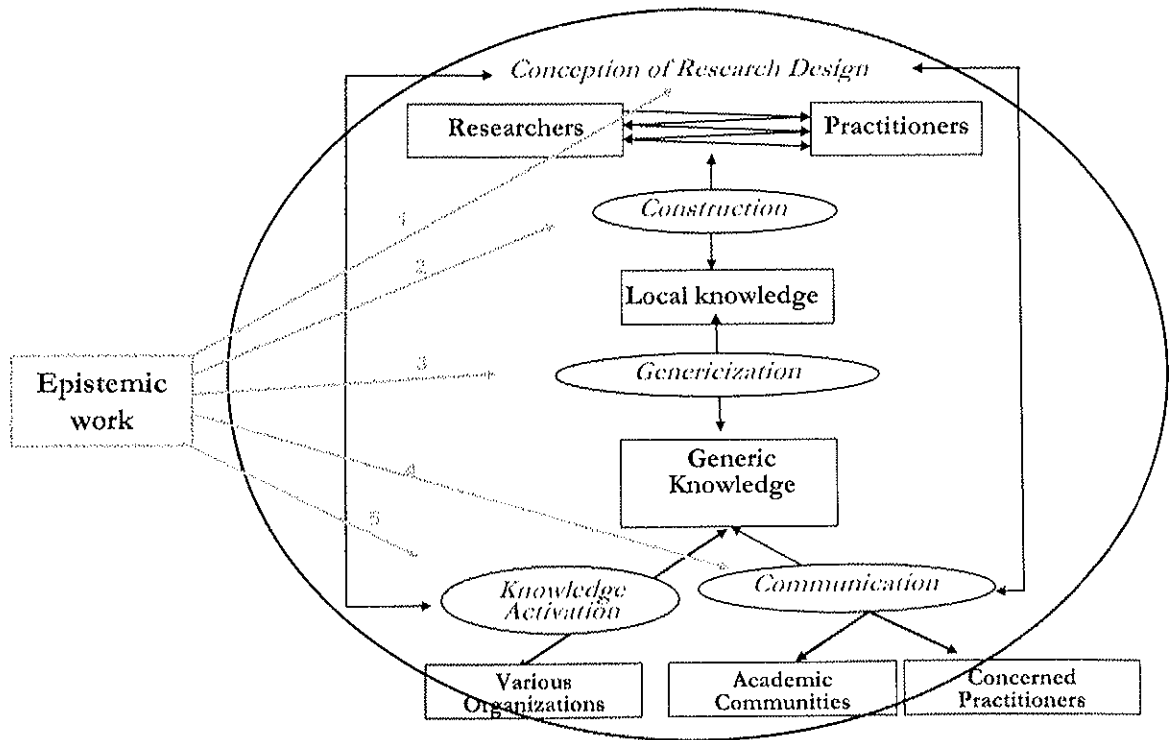
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Diagram 1: A Methodological Framework for Developing Generic Knowledge



Legend:

- Processes
- Input, destination or output of processes
- Process name

Appendix: Examples of the impact of the ongoing research project at BI on the BI CEO's reflection and actions

Exhibit 6: The six points to be addressed in BI Salesmen Quarterly Global Evaluation (QGE)

1. **Aim:** Whenever, after a meeting, you withdraw a prospect from the prospective client file explain your decision: why, finally, is this company not a potential BI target?
2. **Training:** If you wish to enlarge your knowledge of industrial matters in order to better understand a certain prospect's activities, indicate the specific training you need.
3. **Refused offer:** For every offer refused by a prospect or a customer, indicate your understanding of the reasons for this refusal.
4. **Accepted offer:** Whenever an offer is accepted, indicate why and where the BI offer made the difference over a competitor's offer.
5. **Learning satisfaction:** Describe what you have learned during the past quarter; what has brought you increased professional knowledge and comfort.
6. **Learning satisfaction goals:** Write down your *learning satisfaction* objectives for the next quarter.

The current research project at BI reveals that despite BI CEO's intent to design and implement dialogical procedures and to operate them dialogically, the salesmen management process via the QGE procedure set up in 1997—shown in Exhibit 6 above—was not dialogical (Avenier 2008). Indeed, it was focused on learning and did not mention anything about performance. In the long run, this had generated some mal-functions in the BI commercial department, such as the fact that some salesmen were not as commercially active as they were supposed to be.

This research project also reveals that the new formal system set up at the beginning of 2007 for salesmen management is still not dialogical. Indeed, it is based on figures which are immediately available through the interconnection of the newly implemented sales software with BI integrated operational software: for instance, for each salesman information includes sales details and daily numbers of calls and visits made to prospects and customers.

This can be interpreted as a swing from a focus on learning forgetful of performance, to a focus on performance forgetful of learning. This swing has been stimulated by the awareness of the mal-functioning generated by the previous formal procedure, and reinforced by the henceforth instant availability of information on salesmen's actual activity. The new formal system overcorrects, in a way, the deficiency of the previous system. In this formal system specific attention is no longer paid to the salesmen's individual and collective learning. The fact that the new system is somehow forgetful of learning makes it non dialogical with respect to the ago-antagonist pair performance/learning—while it is, nonetheless, dialogical with respect to the pair individual/collective learning. It has the additional drawback of being poorly adapted for achieving the more important goal of operating the BI commercial department as a learning network, as called for by the BI CEO.

When, in one research report (Avenier 2008), the CEO of BI read this interpretation—concerning the non-dialogical character of the new system and the misfit between ignoring learning and the philosophy of a learning European commercial network—this stimulated her reflection.

Indeed, in her reply, she wrote: *"this comment perplexes me. Why do you say that? Sales' arguments are still in the same philosophy. (...)*

Currently, we are trying to gather customers' objections to sale's offers, in order to share these possible objections in the commercial network and to point out to salesmen the variety of possible questions and answers in case of customers' objection. This is difficult to do because salesmen have trouble recalling an objection within its historical context... We have to insist on this matter, because there exists therein a source of learning as well as, more importantly, a commercial lever." (M. Bloch-Dolande, e-mail extract, January, 21st, 2008)

In my reply, I answered that the complementary information she offered in her e-mail refers to tasks which do not correspond to any item of the QGE (see Exhibit 6). In addition, these tasks do not directly impact salesmen variable wages. So, salesmen might not show much involvement in their implementation. I added that in my view, as long as individuals are not specifically pushed to reflect on what they have learned progressively in their work as well as on what they would need to learn during training in order to improve their professional skills, there is a fair chance that they will not reflect on these matters spontaneously.

Later, the BI CEO informed me of her ongoing project to set up webcams for weekly international videoconferences between salesmen and BI top managers. These videoconferences aim at experience sharing and collective learning within the commercial department together with BI top management, on the topic of answering customers'

objections—which the BI CEO views as currently being a strong lever to improve the BI sale's process. Principles of the QGE procedure could be re-invigorated in the videoconferences. Actually, the idea of reviving the QGE procedure during these videoconferences came to her upon reading my report. She had forgotten about this procedure which had been difficult to implement in 1997. At that time, the commercial department manager had to put pressure on salesmen to get them to comply with it. Since he left in early 2004 and was not replaced, no-one had taken this task back, the QGE procedure had progressively become inoperative, and she had forgotten about it.

To summarize, the interpretations offered in (Avenier 2008) stimulated her thinking around the question: “What do we do nowadays at BI to stimulate individual and collective learning, not only within the commercial network but also more generally within BI as a whole?” These interpretations also led her to launch several actions. These included accelerating the installation of webcams at each of the ten BI sites, and reviving collective reflection and learning around items that were originally in the QGE procedure. Although the QGE procedure was no longer useable in the same way that it used to be, its items still provide useful landmarks for the development of the BI commercial department as a European learning network.