THE DIALOGICAL MODEL: DEVELOPING ACADEMIC KNOWLEDGE FOR AND FROM PRACTICE

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Abstract

In accordance with EMR’s will to promote the diffusion of research findings to practice, we propose a methodological framework for developing and communicating academic knowledge relevant for practice: the dialogical model. This model of engaged scholarship comprises five activities: specifying a research question, elaborating local knowledge, developing conceptual knowledge, communicating knowledge, and activating knowledge.

The current article focuses on the early stage of research question design and presents the epistemological framework in which the model was initially developed. It also offers guidance on how to maintain academic value and practical relevance in tension throughout the research process. Examples illustrate how to construct research questions relevant both for academia and practice, and how to justify validity in pragmatic constructivism.

This model can likewise be mobilized in other epistemological frameworks, particularly for knowledge generation purposes. It enriches the researchers’ methodological toolbox by adding a new procedural tool that provides valuable guidelines from the very start of research projects.

Keywords: engaged scholarship, relevance, practice, research question design, pragmatic constructivism

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Introduction

This paper reflects on EMR’s vision of creating a community of engaged scholars providing knowledge for academic, business and political environments (Huse, 2010). This vision incites re-opening the recurrent debate about the so-called research–practice gap and this gap’s existence, its causes and remedies (Lawler et al., 1985). Indeed, some scholars consider this gap unbridgeable (Kieser and Leiner, 2009) while others consider that bridges already exist (Bartunek and Louis, 1996; Hodgkinson and Rousseau, 2009; Mohrman and Mohrman, 2011; Van de Ven, 2007). Two major reasons have been identified for these disagreements about the bridgeability/unbridgeability of the research–practice gap (Avenier and Bartunek, 2010). The first is the frequent lack of explicit indications about the epistemological frameworks in which arguments supporting the debates are developed. Since both what is considered as valid knowledge and the way to justify knowledge validity depends on the epistemological framework, not rendering explicit the arguments’ epistemological underpinnings is a source of enduring misunderstanding. The second reason is the frequent lack of explicit indications about how research questions are constructed. Scholarly engagement in addressing managerial questions, as well as practitioner engagement in research question formulation (Edmonson, 2011) and more generally in the overall research process, facilitate meeting the twin objectives of relevance for academia and for practice (Van de Ven, 2007).

Rynes (2007) presents academic ways of narrowing the research-practice gap. Her suggestions fall into three main categories: increasing the usefulness and relevance of academic research, improving ways to achieve knowledge transfer and translation, and expanding publication outlets and formats. Bartunek and Louis’ (Bartunek and Louis, 1996)
model of insider/outsider team research, Van de Ven’s (2007) diamond model of engaged scholarship, and Avenier’s (2009) methodological framework provide grounds for the first two categories. Van de Ven’s model is developed in a critical realist epistemology and the Avenier framework in a pragmatic constructivist one, while the epistemological underpinning of the Bartunek and Louis model is not specified. None of these frameworks, however, dwell on the issue of constructing research questions capable of enhancing research result relevance for practice.

This paper particularly focuses on the early stage of research question design, which is usually ignored in methodological papers. It indicates ways to specify a research question so that the resulting answer has a better chance of insightfully illuminating practice. Since answers to a research question not only depend on the question, but also on the process by which the answer to the question has been devised, research question design is discussed in the wider context of an overall methodological framework, namely Avenier’s (2009). This framework, named the dialogical model, provides guidelines for generating academic knowledge for and from practice, and for justifying its validity in the pragmatic constructivist epistemological paradigm.

**Doing academic research in the pragmatic constructivist epistemological paradigm (PCEP)**

The Pragmatic Constructivist Epistemological Paradigm (PCEP) is another name for the teleological constructivist (Avenier, 2010; Le Moigne, 2001) and the radical constructivist (Glasersfeld, 1984; 2001; 2005; Le Moigne, 1995; 2001) epistemological paradigms. The
label “pragmatic” is preferable because it highlights that, in this paradigm, knowledge is connected to action and hence readily connectable to management practice.

Schematically, the PCEP postulates the following assumptions (Avenier, 2010; Glasersfeld, 1984; 2001; Le Moigne, 1995; 2001). First, human experience is knowable. In the knowledge process, whatever stems from the studied situation is inseparably intertwined with whatever stems from the inquirer. Further, the intention of knowing influences the way the situation is experienced and, consequently, known. Finally, “to know” signifies possessing ways and means for dealing effectively with the world of experience. More precisely, the goal of the knowledge process is to build viable and functionally fitted images and understandings of our experience of the world. Built knowledge depends on the objective and context of the knowledge elaboration process. It has the status of plausible hypothesis. The truth criterion in this paradigm is Vico’s (1988/1710) verum/factum pragmatic principle: what is true is what can be done/made.

It is important to underscore that the PCEP is fundamentally different from Guba and Lincoln’s (1989; 1998) constructivist paradigm that is frequently presented in methodology textbooks. Indeed, the latter postulates “ontological relativism” which asserts the relative character of whatever exists and links it to post-modernism. PCEP takes a different view and is linked to pragmatism, refusing to make any founding pronouncement on the fundamental nature of the world—in particular it does not posit “ontological relativism” nor existence of a world-as-is independent of human attention.

In the PCEP, as in the grounded theory method (Glaser and Strauss, 1967), knowledge generation proceeds by conceptual generalization (Avenier, 2010; Glaser, 2004; Tsoukas,
2009a) from empirical material constituted with qualitative research methods (case studies, participating observations, action research…). It relies on a preliminary coding and categorization based on comparisons of diverse instances of the phenomenon studied and identification of their similarities and disparities. Conceptual generalization can then aim at identifying meta-relations between categories through inductive reasoning. It can also aim at devising, through abductive reasoning, plausible reasons for the perceived similarities and disparities between the various instances of the phenomenon studied. The constitution of comparison groups is a crucial task that needs to be performed with the same level of reflective critique as sampling in positivist epistemologies.

Next, we explain what the three fundamental components of research justification in any epistemological framework – namely internal validity, external validity, and reliability – mean specifically in the PCEP.

**How to justify research process reliability?**

As in any epistemological framework, justification of research process reliability depends on providing the reader means to follow the entire cognitive path from the research database through to the results, so that s/he can reproduce this path if wished. The researcher needs to render explicit all the operations performed, in particular, the way the coding and the categorization were done and the inferences performed based upon the available empirical material. Because of the PCEP’s epistemic assumptions, this paradigm acknowledges that data coding can yield different results depending on the scholar who does the coding. Still, the scholar must intelligibly justify the way s/he performs the coding.

**How to justify research internal validity?**
As in any epistemological framework, research internal validity relies on the internal consistency and rigor of the research process, and on the construct validity, these three components of internal validity being interdependent. What is called “construct” in positivist frameworks refers, in the PCEP, to the conceptual knowledge elaborated in the research project. Research internal consistency depends on the consistency of the research design, namely mutual consistency between the research epistemological framework, the research main goal – knowledge generation or testing – the research question, the major theoretical references considered, the research method, and the tactics for constituting and exploiting the empirical material. This consistency must be ensured not only when specifying the research design, but throughout the research process, particularly when research design evolves according to the results progressively obtained – as is often the case in research projects specifically aimed at generating new knowledge.

Since knowledge elaborated in the PCEP depends on the research process, knowledge validity depends both on the rigor and internal consistency of the research process, and on the functional fit and viability of the resulting knowledge. As for reliability, justification of rigor relies on providing the reader a detailed description of the entire research process and on showing the mutual consistency of the theories mobilized as well as their consistency with the research epistemological framework and empirical material. The rigor of the reasoning followed also has to be shown. Since it is generally difficult to recall ex post how insights actually emerged (Yanow, 2006), the researcher needs to keep a very detailed diary, particularly in the case of abductive reasoning. Finally, the last information to make available
is an account of the reflective critique the researcher has undertaken concerning the way the research process has been carried out and on the various justifications provided.

**How to justify knowledge external validity?**

As in any epistemological framework, external validity designates knowledge validity beyond the empirical basis from which it has been elaborated. In qualitative research this means beyond the particular situations studied. The justification of knowledge external validity relies on putting this knowledge to empirical tests. In the PCEP, this means examining whether this knowledge, as re-interpreted in contexts other than those where it was developed, provides landmarks to those contexts’ actors which are helpful for their understanding of the situation and viable for acting intentionally. This empirical testing is pragmatic: it is performed in relation to action rather than by means of statistical testing. It is essentially accomplished in case studies or intervention-research. This form of testing requires interpreting the knowledge to be tested according to the specificities of the new context. In the case of intervention-research it also requires a reconstruction of the meaning of the knowledge in the particular context by the actors of the situation being considered (Tenkasi *et al.*, 2007).

So, in contrast to positivist frameworks, in the PCEP, sampling does not play a central role in testing knowledge external validity. For research done in the dialogical model, the cases used for testing knowledge are identified according to their exposure to the practical concern with respect to which the knowledge was initially developed.

**The dialogical model**
Over the last ten years, various research projects conducted in the Avenier (2009) methodological framework have revealed the difficulties that researchers have in theorizing from the particularly rich empirical material that these projects permit them to gather. In our experience, if researchers do not specify a tentative scholarly question and potential theoretical contribution early in the research project, it is difficult for them to do so at a later time. Hence our intention to delve into the issue of ways for specifying research questions with high potential academic and practical value. We name the research model that integrates this view into the Avenier (2009) methodological framework “dialogical model”.

The term “dialogical” is used for two different reasons. On one hand, to refer to productive dialogues between two speech partners (Tsoukas, 2009b); indeed, such dialogues between practitioners and researchers are at the core of the method, from the initial definition of the starting practical problem through knowledge conceptualization, communication and activation. On the other hand, it is used because it refers to the “dialogical principle” conceptualized by Morin (1992) for dealing with antagonistic and yet complementary stakes. The dialogical principle proposes that the tension between these stakes be continually maintained while acting, rather than basing action on a final position that resolves the tension – such as focusing on only one stake or, as in a dialectical approach, on a synthesis of these stakes. In other words, this principle is based on a “both… and” rather than on an “either… or” mode of reasoning. The dialogical model proposes that research be carried out by actively maintaining the tension between the two stakes of developing knowledge valuable both for academia and practice throughout the entire research process. These two stakes often appear antagonistic: practitioners are particularly interested in solving their organization’s practical
problems, which are always pressing, while academic research aims at developing conceptual knowledge and progresses slowly (due to time demanding literature surveys, data collection, interviewing, coding, etc…). In our experience these two stakes can also be made complementary. This article discusses and illustrates ways for achieving this in the dialogical model.

This model, which is based on the principle of cognitive interactivity (Savall and Zardet, 1996, 2011), comprises five activities (Avenier, 2009) that are schematically represented in Figure 1. The diagram principally reads from top to bottom following an unusual vertical time-line.

1. **Construction of the research question.** We suggest using a collaborative three-step process detailed below that strongly engages practitioners because this fosters and enhances the practical relevance of research findings (Edmonson, 2011).

2. **Elaboration of local knowledge.** Local knowledge is contextualized knowledge that is essentially developed by drawing upon practitioner experience and knowledge about the research question. It serves as a basis for developing conceptual knowledge.

3. **Construction of conceptual knowledge.** The goal is to extend upward the conceptual generality of local knowledge in epistemologically justifiable ways so as to render the resulting conceptual knowledge publishable in academic journals. This is achieved by rigorously studying comparison groups and by connecting the local knowledge to extant literature.
4. Communication of knowledge. This activity is not limited to the usual communication of research findings in academic conferences and journals. It also includes communicating results to wider practitioner audiences through specialized media such as professional journals and practitioner conferences. This communication has two goals: informing practitioners’ and obtaining feedback from them.

5. Knowledge activation in various settings. Putting knowledge to practical use is both a primary purpose of knowledge elaboration in the dialogical model, and a means by which to pragmatically test its functional fit and its viability in various settings. In the PCEP, activation plays a central role in research projects specifically aimed at testing extant knowledge’s external validity, but it need not be formally carried out in research projects that principally aim at generating new knowledge.

**Interactively constructing a research question of interest for academia and practice**

The dialogical model provides an answer to Shapiro et al.’s view that to bridge the research-practice gap “academic practitioner collaboration should be continuous rather than merely event-driven, in person rather than merely virtual, in the form of two-way conversations rather than one-way presentations or translations only, and focused on research programs rather than results alone” (Shapiro et al., 2007, p. 262). The construction of a research question of interest for both academia and practice is a core aspect of the dialogical model that supplements extant models of engaged research (Avenier, 2009; Bartunek and Louis, 1996; Van de Ven, 2007).

In the diamond model (Van de Ven, 2007), the elaboration of a research question is seen as the final outcome of a process that starts by selecting an emerging human problem because
“grounding and diagnosing a problem domain typically reveals many interesting and important research issues and questions that might be studied” (Van de Ven, 2007, p. 87). Among these issues the researcher identifies a research question that can be associated with a relevant theory for promising hypotheses and conceptualizations. Formulation of the research problem and determination of the research question are done solely by researchers, without engaging practitioners.

In insider/outsider team research (Bartunek and Louis, 1996), the issue of elaborating a research question is considered as being at the nexus of researcher practitioner collaboration. Supporting the joint elaboration of research questions, these authors indicate that various ways are possible without, however, specifying particular guidelines to carry out this joint activity.

In the dialogical model, we suggest defining the research question using a collaborative three-step process, the steps of which are carried out iteratively until convergence is reached or the project is abandoned (at least temporarily). The first step consists of basing the specification of a research question upon a recurring or enduring practical problem that is jointly identified by practitioners and researchers via productive dialogues (Tsoukas, 2009b) and is perceived as having high academic interest.

Once the practical problem has been tentatively specified, the second step consists of conducting a thorough survey of the relevant academic and practitioner literature. The first aim is to identify whether there exists instrumental knowledge for addressing the problem directly or conceptual knowledge that can help provoke thinking about the problem in new, broader and insightful ways. The survey is usually accomplished by the academic researcher
since literature surveys are a classic and fundamental aspect of academic research. Nonetheless, nothing prevents practitioners who wish to do so, from participating – if they can find the time. In our experience, certain practitioners are interested in examining certain references, but not in doing the thorough and systematic literature survey which rigorous academic research requires. They usually rely on the researcher for this task.

The third step consists of examining whether the reviewed literature offers insights that sufficiently illuminate the practical problem to then help practitioners design a promising way to deal with the problem. The specificity of the dialogical model is to engage practitioners in this task because it demands sense making and self-design by the practitioners who will use the knowledge (Tenkasi et al., 2007). If this evaluation reveals that certain published knowledge provides sufficient insight on the practical problem at hand, the research project’s goal can then become testing the corresponding knowledge validity against actual experience in the particular setting under consideration (activity 5 of the dialogical model). If the concerned practitioners consider that none of the published knowledge provides sufficient insight for dealing satisfactorily with the practical problem, this collaborative confrontation of insights offered by the literature on the practical problem reveals a theoretical gap, i.e. a failure of the literature to satisfactorily illuminate the practical problem being considered. In this case, the research project’s goal will be to generate new knowledge aimed at contributing to filling the gap that has been interactively identified by the researcher and practitioners.

Once a research question of potential academic and practical interest has been tentatively built, the challenge is to keep holding the goals of academic and practical relevance in dialogical tension throughout the research project. When doing research in the dialogical
model practical relevance is fostered by regular dialogues between researchers and practitioners. Hence the main challenge for researchers is to remain focused on their academic goal. The main pitfall is that dialogues between researchers and practitioners can remain focused on pressing practical problems that emerge during the project and on developing local knowledge associated with them, distracting the researcher from building conceptual knowledge.

**Ways for maintaining academic value and practical relevance in tension**

Having an academic research project materialized by a clearly identified theoretical gap and an explicit research question helps keep achievement of the academic project as a central goal for the researcher – and differentiates doing research in the dialogical model from a consultants’ work. Besides, the dialogical model explicitly comprises an activity devoted to building conceptual knowledge publishable in academic journals – because it is elaborated in ways respectful of the validity principles that hold in the research epistemological framework.

These characteristics of the dialogical model are not sufficient, however, to ensure that the researcher’s work is academically valuable. Dialogues with practitioners often tend to drift towards exchanges about new pressing practical problems that keep emerging during the research project, rather than remaining concerned with the development of knowledge of higher conceptual generality about the agreed upon research question. Knowledge conceptualization is a demanding and time-consuming activity. In the field, one is often tempted to postpone knowledge conceptualization due to pressure from the seemingly more urgent task of reflecting with practitioners on regularly arising practical problems.
Complementary means can be devised to encourage the researcher to work on knowledge conceptualization like periodically distancing oneself from the field by working at the research center, or by participating in workshops organized with other scholars (Savall and Zardet, 2011). Establishment of a supervisory body ("instance de contrôle", Girin, 2011/1990) representing the research institution can also help the researcher step back from the field and its practical concerns. In large projects involving scholars from various research centers, the supervisory instance can be composed of scientific personalities that periodically audit project advancement. In small projects, research center seminars where each scholar regularly presents their research project advancement can play the role of supervisory body. Indeed, presentations in such seminars which impose writing a paper urge researchers to do scholarly work on their research question. They also enable inter-scholar discussion about research design, content and justification of the knowledge developed, which can help the researcher refocus and progress on their academic project.

In the case of doctoral research, various institutionalized supervisory instances aim to encourage the doctoral student to pursue their scholarly project, including seminars within the doctoral program, doctoral seminars within the research center, doctoral schools, collective inter-institutional mentoring, and individual meetings with thesis advisers (Savall and Zardet, 2011). In collective inter-institutional mentoring, doctoral students obtain complementary insights from experienced researchers with diverse backgrounds helping them exert a reflective critique on their research. The thesis advisor is the ultimate support and gatekeeper who helps the doctoral student focus and progress on their academic project.
After completing their PhDs scholars no longer have these institutional gatekeepers, but other imperatives that structure their career development, like publishing in academic journals, encourage them to pursue scholarly projects.

**Illustrative examples**

Table 1 summarizes five examples of research projects that illustrate various ways of activating the dialogical model, and particularly of defining a research question. In these projects, the academic researchers’ engagement with practitioners extends over periods of three to fourteen years and corresponds to various levels of researcher immersion in the organizations studied. In two research projects, academic researchers acted as practitioners, doing research about their own practice. Two other projects were carried out by former practitioners who had quit their practice to become academics and were preparing PhDs. The fifth example is an on-going research project carried out by two senior academic researchers who act as outsiders in Bartunek and Louis’ (1996) terminology.

----------Insert Table 1 about here----------

Project 1 (Souchon, 2010) illustrates how the idea of engaging in an academic research project can originate from a practitioner’s reflection on how to improve certain practices. This doctoral project was launched by an experienced security manager of Seveso sites who was feeling that security practices were controlled by certain implicit models which were fooling practitioners because these models remained most often unnoticed. He became convinced that the development of sounder tools and rules in the area of security management required an explicit anchoring in a theory of knowledge that would be solidly-grounded and apt to capture industrial security’s complexity. After various rounds of literature reviews and dialogues with
his research advisor, his PhD research question was formulated as follows: among extant solidly-conceptualized epistemological frameworks are there ones that appear more enlightening for understanding security issues, integrating knowledge on these issues stemming from various scientific disciplines, and developing sound practices? Pierre Souchon carried out his doctoral research while being a full-time practitioner.

Project 2 (Parmentier Cajaiba, 2010a) illustrates a situation where the formulation of the research question takes place jointly with the development of practical knowledge and experience. This doctoral research was carried out in a French cifre institutional framework that is similar to the European Industrial Doctorates\(^2\), aimed at encouraging firms to do research in fields of interest to them. The firm receives a grant for hiring a PhD student who works part-time in the firm and part-time on a doctoral research project that is related to the work done in the firm. In this case the researcher had little knowledge of the topic of approval regulation when she started. Her understanding of the practical problem developed through systematic information searches, as well as recurrent in-depth exchanges with a former senior registration manager in a highly regulated industry. The research question emerged progressively thanks to meetings with the firms’ managers aimed at confronting the insights stemming from the literature survey with the practical concern. These confrontations permitted the surfacing of two interesting ideas and identification of a theoretical gap. On the one hand, little existed in the academic literature for helping practitioners deal with the

\(^2\)CIFRE: Conventions Industrielles de Formation par la Recherche

http://www.anrt.asso.fr/fr/espac_cifre/accueil.jsp

European Industrial Doctorates are part of the EU-Framework Programme for Research and Technological Development set up by the European Commission

particular practical concern of developing the intangible asset of being able to efficiently cope with regulatory demands. The researcher had a compelling reason to continue drawing upon the knowledge and experience of expert registration practitioners to develop academic knowledge relevant to this concern. On the other hand, there was an academic need for field studies about the process of internal resource accumulation. Academic knowledge developed about such a process could be enlightening (in the future) for those dealing with practical issues similar to those raised by the firm’s top manager concerning acquisition of a particular asset. The theoretical gap that surfaced through this process was formulated as follows: understanding how a small firm with very limited resources can internally develop intangible assets rendering it capable of efficiently dealing with newly-enforced regulations regulatory demands. The research question aimed to contribute to fill this gap.

Inside the company, Aura Parmentier Cajaiba was generally identified as a practitioner. Because the company’s need was to understand a strategic issue, at the beginning of the project the practical concern was more important than the academic one. This constraint momentarily moved her away from the academic project. Various gatekeepers later helped her refocus on the academic project. First, the imperative of a deadline for obtaining her PhD helped her keep in mind the necessity of defining a research project that could satisfy academic standards. She was regularly reminded of this deadline by her doctoral supervisor who provided counsel, thus helping keep her on the academic track. Secondly, while she was under contract, she physically spent the majority of her time at the research center, only going to the company a few days per month. Hence, she was constantly surrounded by scholars and PhD students and benefited from an academic ambiance, thus helping her distance herself
from her practice. Still, she found it difficult to simultaneously develop local knowledge and conceptualize from it. Ultimately, she did the conceptualization work while writing her dissertation, after the end of her contract with the company, over a period of 18 months. Indeed, rigorous conceptualization work takes time and requires self-distancing from the field.

Projects 3 and 4 both relied on previous experience of practitioners who were engaging in doctoral research to achieve a career reorientation towards academia. In these examples, the research questions emerged on the basis of prior experience, new insights gathered during fieldwork and literature surveys. In project 3 (Albert, 2007), the originating practical concern, namely organizational commitment, is not specific to an industry. Still, to take advantage of her prior knowledge of one particular industry, fieldwork was carried out in another company of the same industry. The research question was progressively defined on the basis of interactions with her doctoral supervisor and with various members of this company, particularly the manager of one of the stores, as well as with the literature survey the researcher was concurrently doing. Why this particular manager? Because he was behaving as a reflective practitioner (Schön, 1983), and because in the management of his store, he succeeded in combining two opposite types of procedures, namely procedures comparable to those described in the literature about hypermarket management with management modes more typical to a family business. These interactions led the researcher to specify the research question of her dissertation as follows: what novel insights can the study of internal and external commitment through the lens of Mead’s (Mead, 1934) notion of self, bring to the issue of organizational commitment?
In contrast with Project 3, the practical concern at the origin of Project 4 (Gialdini, 2012) is specific to an industry, and fieldwork was carried out in various organizations that operate in this industry rather than in just one organization. By the year 2000, as a broker on the French Euronext Stock Market, Laurence Gialdini started having the diffuse feeling that brokerage activities were undergoing a crisis, not so much in terms of financial results as in terms of organization and mission. She wondered whether this was a sign of the end of a certain business model, and how to justify brokerage activity in the new institutional and technological context. In a study carried out on these questions in 2004-2005, discussions with various financial market practitioners (brokers, financial analysts, traders, institutional investors, etc.) revealed that the elaboration of a new business model for brokerage companies had indeed become a vexing preoccupation in these companies. Then, integrating insights from literature surveys in further exchanges with these practitioners suggested that developing an adequate business model required understanding the way strategizing was performed both at the firm and at the individual actor levels, in the specific context of the strongly institutionalized and regulated financial markets. This became the research question of her dissertation.

Project 5 (author 1 and Colombo, in preparation) is an on-going research project conducted by two full-time scholars acting as outsiders in Bartunek and Louis’ (1996) sense. The research question was defined in productive dialogues (Tsoukas, 2009b) with various practitioners who behave as reflective practitioners (Schön, 1983). This research project started with consultants in the mid ‘90s. An important concern for them was their perceived lack of guidelines for designing management systems adapted to business complexity. They
considered the insights stemming from the literature survey as too abstract to devise workable guidelines, and the project was put on stand-by. It was re-activated in 2010 because of the confluence of three circumstances: a sustained academic interest for the topics of ambidexterity and complex business models; the will of another researcher specialized in these topics to engage in the project; and access to studying a company that has 15-years of experience operating a complex business model, where the first author had been conducting a longitudinal field study since 1998. The literature survey done in 2010 revealed a lack of discussion concerning potential obstacles in operating complex business models. The company’s long experience in operating such a business model offered potentially valuable insights on this topic. Its top management appeared interested in obtaining clues on how to overcome persisting encountered difficulties, and particularly in getting all employees to behave dialogically in their daily work. Agreement was rapidly reached on the following research question: identifying and understanding potential advantages and obstacles in operating complex business models.

The experience of the longitudinal study based on focused dialogues with members of this company showed the first author that doing research in close interaction with practitioners is source both of important richness and high danger. The richness stems from the flow of exciting research questions that keep emerging along the way and from vast practitioner experience. The danger stems from temporality differences between management practices and academic research. These temporality differences make maintaining dialogical tension

3 This means being capable of appropriately carrying out activities having antagonistic, and yet complementary stakes such as ensuring service operational quality to keeping existing clients and energizing the commercial dynamics of their accounts —rather than focusing solely on one stake.
between generating local knowledge and rigorously developing conceptual knowledge difficult. No longer being a PhD student, the first author does not benefit from doctoral institutional support (doctoral program structure, defense deadlines) to urge her to devote time and effort to the conceptualization activity, nor did she benefit from scholarly feedback of a research advisor. To create a context favorable to carrying out the conceptualization activity, she considered it important to join forces with another scholar who is expert on the topic and does not participate directly in fieldwork. Their aim is to jointly publish a paper, by a particular date, in a precisely targeted academic journal. This association appears mutually beneficial to the two scholars indeed it helps one scholar self-distance from the field and remain focused on the conceptualization activity while helping the other feed the research project with particularly rich empirical material; their interactions help them progress on the research question more steadily and with richer material.

Taken together, these examples show that possibilities for interactively constructing a research question that satisfies academic and practitioner stakeholders and for conducting research in the dialogical model are quite varied. Despite this variety, the different projects have one important feature in common: they all represent an explicit academic project with at least one principal investigator responsible for making the academic research progress and for not letting the dialogues with practitioners drift toward solely building local knowledge. Besides, these researchers all share a strong interest in doing research connected to practical problems and recognize the value of practical knowledge and experience that practitioners have developed in their practice and, hence, are different from so-called “one-minute researchers” (Van de Ven, 2011).
**Justification in practice**

These research projects have all been developed in the PCEP. To further flesh out the fairly abstract presentation of reliability and validity justification made in the first part of the paper, we will now illustrate how these justifications were performed in a specific context, namely Project 2 (Parmentier Cajaiba, 2010a).

**Reliability: discipline in thoroughly describing the entire research process**

Reliability justification will first be illustrated related to progressive specification of the research question. The research question is traditionally developed in reference to a literature review and by pointing out a possible gap that the research will contribute to filling. In the dialogical model, it is essential to first detail the context in which the starting practical problem is being raised, and to precisely describe the iterations between the successive formulation of the practical concern and the literature reviews done to get theoretical insights on that concern.

In Project 2, Aura Parmentier Cajaiba followed these steps and then stated a theoretical problem and a research question she considered as having high academic potential and practical value that was also acknowledged by the firm’s CEO.

Once the research question has been determined and the study has started, it is crucial to provide a detailed description of the method used and a justification of the various methodological decisions made. This justification is based on dedicated reflexive work. Since Aura Parmentier Cajaiba prepared her dissertation as a part-time practitioner on the topic of her practice, in her case it was essential to also precisely describe her roles within the company. Generally speaking, among the methodological decisions that need to be precisely
described and justified, the following are classically cited: choice of the various sources of empirical data used for the coding process, the reasons for using those sources, how the research database was created out of them. Aura Parmentier Cajaiba thoroughly detailed why she decided to carry out certain interviews, who she decided to interview, and how the interviews unfolded. She carefully explained the way she iteratively coded the 847 pages of empirical material gathered, detailed the kind of coding performed and the order chosen to do it. In appendices, she provided further information on the N Vivo coding steps and on the process of verifying the consistency of the final thematic tree. Each time she felt it useful for the reader, she punctuated her writing with tables, schemes and/or exhibits to both stimulate the readers’ attention and to provide a visual understanding of her discourse. To enable the reader to closely follow what her cognitive path toward the creation of a thematic tree had been, she also provided a thorough description of the analysis she had conducted on the database. To consolidate this part, appendices offer descriptions of the elaboration of the thematic tree and how she interpreted it.

**Internal validity: linking items consistently and communicating on it**

Justification of internal validity relies on systematically ensuring and regularly pointing out mutual consistency between the various elements mobilized throughout the entire research project, in particular consistency with the founding assumptions of the epistemological framework in which the research is carried out. Internal consistency needs to be frequently demonstrated by showing the reader the why and how of theoretical and/or methodological decisions and inferences made. Aura Parmentier Cajaiba sprinkled her dissertation with many
elements aimed at demonstrating her continual attention to internal consistency and the reflexive work done to justify it.

Building and demonstrating consistency are usually achieved through argumentation, like contending that collaborative research is consistent with the PCEP’s founding assumptions, or that the conceptual resources mobilized in a research project are consistent with these assumptions. It can also be supported by methodological tools such as diaries and visual tools.

Aura Parmentier Cajaiba used a diary to keep track of both her work experience within the firm and of the evolution of her doctoral research. By systematically and daily writing down her understanding of the situation, the work she was doing and what she felt about it, she could more easily identify ex post the major incidents (Van de Ven, 2007) and inflections in the research process. The diary provided valuable elements to retrace what happened in a systematic and structured way. Besides, she developed a visual tool (Parmentier Cajaiba, 2010b) that helped her get a synthetic picture of the entire research process and communicate with others about her research. She used it to step back and try to identify links and phases in the process she was studying. She also used it when she was coding the empirical material to quickly situate an event in its wider context. This innovative tool helped her build, verify and demonstrate consistency in the knowledge developed in the research. The use of these various methodological tools helped her link the various elements of the research design: practical problem, concepts, empirical material, and research results. In her dissertation, the results for both practice and academia are summarized in the form of nine theoretical and nine practical propositions.

*External validity: showing knowledge functional fit and viability in other contexts*
External validity refers to knowledge validity beyond the context where it was developed. Justifying it in the PECP relies on justifying the functional fit and viability of activating that knowledge in other contexts than those where it was developed.

The external validity of the knowledge developed about the design of artifacts dedicated to supporting the creation and enactment of a registration competence in a regulated industry was justified in several ways. One example was acknowledgment by both regulatory and scientific experts (recognized by regulatory institutions) that these artifacts were adequate and useful. As a consequence, (and which provides further grounds for external validity justification), Aura Parmentier Cajaiba was invited to share her views and experience in a professional workshop organized by small European bio-control firms for reflecting on possible ways to obtain product approval. Another justification, which had not been originally envisioned, comes from the action of two former employees who left the company to become consultants specialized in the issue of registration. In their new activity they adopted the artifacts that were initially developed during the research project and consider them particularly useful.

Discussion

*Eligibility for knowledge generation in most epistemological frameworks*

Even though the dialogical model was initially conceptualized in the pragmatic constructivist epistemological paradigm (Avenier, 2009) it can be used to generate new
knowledge in most of the currently mobilized epistemological frameworks\textsuperscript{4}. Indeed, in any epistemological framework, the argumentation of research internal validity and reliability is based upon the generic notions of internal consistency, rigor, construct validity, and on providing the reader the means to retrace the cognitive path initially followed. Research following the dialogical model can be conducted both according to and in agreement with the specific meanings these notions take in the epistemological framework of the research project.

The dialogical model can also be used in the PCEP to (pragmatically) test knowledge external validity. This property does not hold in all epistemological frameworks though. For instance, the dialogical model is not adapted to test knowledge external validity in a scientific realist framework since this is mainly performed using hypothesis statistical testing (Hunt, 1992).

\textit{Surfacing of novel theoretical questions}

The process for constructing research questions in the dialogical model permits the surfacing of theoretically interesting questions that researchers would not perceive solely through literature surveys. This was the case in Projects 1, 2, 4 and 5 (see Table 1). The research questions emerged from the confrontation of various possible theoretical insights for illuminating a practical issue that no one but practitioners directly concerned with this type of issue would have thought to raise. In the literature for instance, the question of understanding the difficulty one may have to behave dialogically when faced with antagonistic, yet complementary stakes or goals, has only been raised in the context of ambidextrous

\textsuperscript{4} The main exception is the constructivist epistemological paradigm conceptualized by Guba and Lincoln (1989, 1998) because this paradigm’s hypothesis of relativist ontology precludes any form of generalization, whereas conceptual generalization is at the core of the dialogical model.
leadership. Project 5 permitted perceiving the pervasiveness of this issue throughout the organization under study, as well as in the practice of research following the dialogical model, particularly when it comes to holding the tension between developing local knowledge and proceeding to conceptual generalization.

**Intertwining rather than sequential activities**

In practice, not only local and conceptual knowledge generation can interweave, so can the five activities of the dialogical model. It can, in fact, prove beneficial to not carry out the activities in the fundamentally sequential order presented in Figure 1. For instance, the diagram suggests that the process of elaborating knowledge aimed at answering the research question only starts once the research question is tentatively stabilized. This is rarely the case. In Project 2 elicitation of practitioner’s knowledge started before precisely specifying the research question and this actually helped define a research question of interest for both academia and practice. Indeed, at the beginning, Aura Parmentier Cajaiba worked in close contact with a senior practitioner who helped her precisely understand the overall regulation constraints in this newly regulated industry. Once this knowledge had been assimilated, she went forward and adapted it to the specific need of the company. The research question was finally defined by linking practical knowledge acquired to academic knowledge investigated. Similarly, in Project 3, the research question evolved almost until the end of the project in connection with the reflective critique exercised by the researcher over the research process as it was unfolding. Concerning the other activities, in Project 2 communication within the company of the local knowledge as it was progressively elicited fostered further elicitation of
this knowledge. The early activation of local knowledge played a decisive role in the elaboration of conceptual knowledge.

*Maintaining academic and practical value in tension*

The above examples show that such intertwining is a source of richness, but also of difficulties. Maintaining the goals of academic value and practical relevance in dialogical tension throughout a research project is not easy. To facilitate this, in the dialogical model it is suggested to explicitly specify an academic project based on a research question addressing a precisely identified theoretical gap, with one principal investigator in charge of the project. The examples of Projects 2 and 5 highlight that there is a risk that the principal investigator will get trapped in relentlessly developing local knowledge without taking time to carry out the scholarly activity of conceptual generalization. These examples also highlight that certain contexts help overcome this difficulty, such as having a clear and non-negotiable time-frame and benefiting from scholarly support from a third party who is not directly involved in the fieldwork. This makes the dialogical model a methodological framework particularly well suited for doing European Industrial Doctorate research but not limited to this research context, as illustrated in this paper.

These examples also show the importance of means suggested by Girin (2011/1990), and Savall and Zardet (1996, 2011), such as periodically distancing oneself from the field. In addition to that, it seems important to plan for and put aside enough time for the scholarly activity of building conceptual knowledge. As noted above, this took 18 months in Project 2, including the writing of the thesis. It is important to withdraw from the field to perform this
activity, going back to the field only for discussing matters directly related to the knowledge being elaborated, and particularly its practical relevance.

**Research questions beyond immediate practical interest**

These examples also illustrate that the research question need not always be of immediate interest to the practitioner. For instance, in Project 5, the first dialogues with the company CEO started in 1998 around a shared interest about the issue of “Management and Complexity” which led this CEO and the first author to meet at a practitioner conference on this theme. The longitudinal research project in this company started then as an exemplar case study of how to design and implement a complex management system to deal with business complexity. Most often though, the first researcher interactions with practitioners concern a problem that practitioners do not know how to address and they are aware that they need assistance to solve. In the process of specifying the research question, the situation can evolve towards a more theoretical question like “the role of the ‘self’ in organizational commitment”, or “potential advantages and obstacles in operating a complex business model”. The answers to these questions do not have direct applications in the organizations where they were studied. Still, the concerned practitioners found an interest in participating in these wider research projects because the projects helped them look at and reflect on their initial problem differently.

To sum up, in our experience, it is usually easier to start interactions with practitioners with a question of direct interest to them, which concerns a practical problem they have more or less identified and that they feel they do not know how to address properly. The process of defining the research question then consists of enlarging or reframing the question to turn it
into a question of academic interest that is also judged interesting by these practitioners. In this process, practitioner interest can evolve from getting fairly direct guidance to address their problem (which is what they usually get from consultants), to having the opportunity to engage in a wider reflection on the subject matter that can help them develop new ideas or anticipate potential problems and engage proactively to avoid them. Changes in an organization can then be encouraged in a variety of ways: oral communication at a practitioner conference, oral and written communication with certain managers, and knowledge activation in an organization.

**Conclusion**

The dialogical model restores close interactions and tight coupling between the worlds of research and practice which reigned in the early days of academic management disciplines and whose renaissance Pfeffer (2009) calls for. He also calls for more replication to increase confidence in findings. In contrast with positivist and realist epistemological frameworks where replication usually relies on hypothesis statistical testing, in the PCEP replication is performed in qualitative research where the knowledge under test is compared with actual practices or put to the test of empirical action in actual settings. These two ways of testing knowledge suppose that the knowledge concerned is relevant for practice. Consequently, because of the pragmatic orientation of this epistemological framework, doing research in the PCEP encourages developing knowledge relevant for practice.

Still, adherence to an epistemological paradigm is not a matter of cost-benefit analysis, but of intimate, informed beliefs concerning what is knowledge. It might, therefore, be
worthwhile for researchers to reflect upon their philosophies concerning knowledge before launching a research project, because

“We all have our philosophies, whether or not we are aware of this fact, and our philosophies are not worth very much. But the impact of our philosophies upon our actions and our lives is often devastating. This makes it necessary to try to improve our philosophies by criticism.”


References


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5 To avoid lengthening the already long reference list we have not included the references that are cited solely for illustration purposes in the examples of research projects carried out in the dialogical model. We have only listed those that are linked to the main argument of the current paper.


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