FQS FORUM: QUALITATIVE SOCIAL RESEARCH SOZIALFORSCHUNG

Volume 11, No. 1, Art. 14
January 2010

Procedurality as Methodological Paradigm. Or: Methods as Procedures

Stephan Lorenz

Key words: procedurality; methodology; procedures; reconstruction; transdisciplinarity; Habermas; Latour; Luhmann

Abstract: The term procedure is often used synonymously with method. In this article I ask two questions: 1. Why is it justified to use both terms in the same way? 2. What are the consequences of understanding methods as procedures? I begin the paper by considering influential theories in the fields of law and politics (LUHMANN, HABERMAS) because concepts of procedures have been most thoroughly reflected upon in these fields. The focus is on legitimacy of legal and political norms and procedural decisions. Contrasting other kinds of procedures, e.g. economic and scientific ones, it should be possible to identify further dimensions beyond legitimacy, namely constitution and knowledge. This makes it possible to develop a general model that joins basic functions and structural characteristics of procedures. The "political" experimental procedure, developed by Bruno LATOUR, will be discussed as it exemplifies the general model. Specifying and expanding upon LATOUR's conception allows us to derive consequences for the procedurality of scientific work; for a procedural methodology, which is associated with terms such as relationality, positivity, reconstruction, and transdisciplinarity. Moreover, this may clear an interesting path toward negotiating the divide between quantitative versus qualitative research. Eventually a procedural based method offers critical potential because it enables consideration of the observance or non-observance of procedures.

Table of Contents

Many attempts have been made to determine what "qualitative" means in qualitative research. This normally occurs in opposition to quantitative research although other terms are sometimes preferred. In this text, a specific understanding of qualitative research will also be proposed. It not only places the emphasis on the differences to quantitative research. Rather, it offers a more general understanding of science, on the basis of which it is possible to methodologically justify distinctions. The commonality is the procedural form of scientific work. [1]

It is quite normal in research to use the terms procedure and method interchangeably, e.g. qualitative methods/ procedures. However, what does it mean when we think of methods as procedures? It must be acknowledged that

the nature of procedures *as* procedures has been most thoroughly reflected upon in the areas of law and politics, while little systematic consideration has been given to the procedural nature of methods. This is not only surprising because the terms are used as synonyms. Rather, following the historical perspective of HABERMAS, procedural rationality developed in the fields of law, politics, and science simultaneously. For HABERMAS, the term procedure has been valid for methods from the beginning. He writes (1992, p.35, italics in orig.):

> "In contrast, both modern empirical science and autonomous morality place their confidence solely in the rationality of their own approaches and their *procedures*—namely, in the method of scientific knowledge or in the abstract point of view under which moral insights are possible. Rationality (*Rationalität*) is reduced to something formal insofar as the rationality (*Vernünftigkeit*) of content evaporates into the validity of results. The latter depends upon the rationality of the procedures one uses in trying to solve problems—empirical and theoretical problems for the community of inquirers and for the organized scientific enterprise, and moral-practical problems for the community of citizens of a democratic state and for the system of law." [2]

Thus it is appropriate to recognize the equal importance of considering *methods as procedures* like it is naturally the case for law making or legal processes. [3]

Sociologically, the term "procedure" first brings up connotations of legally based procedures in law and politics. In this sense, LUHMANN (1997, p.11)[1] wanted to present a "theory of all legally based procedures." The idea of a comprehensive theory that is claimed by "all" is at the same time strongly limited by the qualification "legally based" since there are quite simply a host of other procedures. If one would like to make procedurality methodologically applicable, as stated in the title, then there is still much that can be learned from the theoretical work about legally based procedures. From this vantage point it will be easier to understand what procedurality means to scientific work and methods. Therefore, I will begin with a familiar theme in the sociology of law: the emergence of positive law (Section 1). Procedures offer the possibility of coming to and at the same time legitimizing decisions. What is described as the development toward positive law in law and politics, however, merely depicts things in these specific areas that are otherwise considered as modernization and detraditionalization with regard to society as a whole, also including the sciences; here, too, there are no ultimate foundations of truth anymore. From a structural perspective, it is therefore little surprising that procedural operations are employed to reach decisions or gain knowledge in those areas as well. In the second step, I will thus describe different types of procedures, the comparison of which will allow to derive criteria for defining a general model of procedures (Section 2). Subsequently, general structural properties and the functions of procedures will be analyzed, on the basis of which the main features of a general model of procedures will be outlined (Section 3). Once I have climbed this peak of abstraction, I will turn to Bruno LATOUR's "political" concept of procedure (2004) as an exemplary case of a procedure that conforms to this model (Section 4). In

1 Since LUHMANN (1997) has not been translated into English, the phrases cited have been translated from German for this article.

the next step, I will consider some of the methodological consequences that follow from the general model (Section 5). Finally, I will close with a summary of the proposed line of thought and the results of these considerations (Section 6). [4]

1. The Emergence of Positive Law and the Questions to Which Legal Procedures Are the Answer

The emergence of positive law is a historical process that marks a break with the idea that legal norms can be based on some ultimate truth as grounds for justification. Neither tradition, nor religion/God, metaphysical reason, or natural order provide a reliable bedrock of truth for anchoring a legally codified social order. Legislation must rely on posttraditional, postreligious, and postmetaphysical means. However, once acts of deriving law from a fixed set of ultimate norms by some uncontested authority are no longer convincing, there are also no longer any binding restrictions anymore. While this undoubtedly creates new and greater scope for shaping social relations, it can lead to random developments that can be either of a chaotic or arbitrary nature. In a world where "God is dead," anything seems possible and nothing impossible. While lacking steadfast normative foundations, society today increasingly faces structural differentiation and cultural pluralization—a mixture to which the problems of "risk society" are added (BECK, 1992; RENN, SCHWEIZER, DREIER & KLINKE, 2007), the latter requiring that society learns to cope with scientific-technological risks and uncertainty concerning the projected future of the environment.[2] The major challenge facing law and politics, in dealing with which procedures (will) play a crucial role, is how we can nevertheless come to binding rules that at the same time are open to revision. According to HABERMAS (1996), this was the historical constellation that demanded a new, namely a procedural legal paradigm. [5]

The question as to the binding force of law brings issues of legitimacy to the forefront. Power alone would be incapable of securing the effectiveness of law. For this reason, some degree of acceptance is required—be it explicit or implicit. Who can be expected to be willing to comply with which political or legal decisions? No matter whether one subscribes to a routinized, conventional conception of legitimacy[3], such as LUHMANN (1997), or to a normatively more demanding one, as proposed by HABERMAS (1996), the conditions for the existence of positive law preclude any form of transcendental legitimation. Whereas in LUHMANN's view the boundaries are fluid between habitual consent

2 Across all theoretical boundaries, most analyses of contemporary social trends agree that increasing complexity and greater indeterminacy are defining features of contemporary social development; it is a topic across a variety of discourses in social theory, ranging from discussions of systemic self-governance to debates revolving around an increase in options versus a sense of uncertainty infiltrating action orientations. Emphasis is placed on different aspects and consequences, and there are more and also less optimistic interpretations of this development (cf. LORENZ, 2007). The postmodern reading of this development peaks in the "liquefaction" of modern social relations (BAUMAN, 2000). And even in cases where scholars are on the lookout for new concepts to describe those structures, the concept of network as a maximally flexible type of structure seems to prevail (cf. CASTELLS, 2000; BOLTANSKI & CHIAPELLO, 2005).

3 In the sense of conventional morality as proposed in KOHLBERG's developmental psychology (cf. GIEGEL, 1997).

based on tradition and silent acquiescence, HABERMAS claims the presence of at least some form of weak transcendence, a "transcendence from within" (1996, p.17ff.).[4] In either case, both authors resort to procedures. [6]

LUHMANN (1997, pp.30f.) writes: "Procedures find a kind of general acceptance that is independent of the level of satisfaction with any individual decision, and this recognition brings with it acquiescence to and compliance with binding decisions." His aim is to separate such recognition from individual motives since the plurality of motives under conditions of modernity would render a consensus very unlikely.

> "This complexity of modern societies is only possible based on a generalized recognition of decisions. It is less a matter of motivated convictions than a matter of acceptance that is given irrespective of particular motivations and independent of the idiosyncrasies of individual personalities and that can typically be reckoned with in absence of much detailed information" (LUHMANN, 1997, p.32). [7]

Whereas more optimistic minds assume that the emergence of positive law has liberated individuals from the confines of traditional, dogmatic constraints and has enabled learning processes geared toward liberal social relations, LUHMANN believes that precisely the new plurality of personal beliefs demands an impersonal mode of functioning, which leads him to formulate a greatly limited, quasi "automatized" conception of learning: "In case of successful learning, the expectations that are modified by decisions are automatically observed, as it were, from within, and are treated as a (welcome or unwelcome) matter of fact" (LUHMANN, 1997, p.34). Thus, LUHMANN does not approach the question of legitimacy from the angle of how consent might be justified in the absence of ultimate reasons. The question he is concerned about is rather why the erosion of ultimate reasons does not seem to create much profound irritation, except possibly on the part of some philosophers. The (condensed) answer is that the routine employment of procedures serves to maintain functional relations by not questioning them. [8]

In this way, the problem of legitimation is more likely to be suspended rather than solved. In contrast, HABERMAS is convinced that there are various alternative modes of functioning, that people's demands for more equitable social relations is an empirical reality, and that normatively superior relations can actually be described if we hold onto a justifiable conception of legitimacy. The primary concern is not the reduction of complexity, as in LUHMANN's work, but rather maintaining complexity—in the form of reference to potentially superior social arrangements. Democratic procedures play a crucial role in this respect. As legally codified procedures, they are constituted through and rely on the medium of law while, in turn, they are also a source of law via legislation. The medium of language performs a specific function for social interaction, namely securing the

4 "A set of unavoidable idealizations forms the counterfactual basis of an actual practice of reaching understanding, a practice that can critically turn against its own results and thus transcend itself. (…) only in the light of this innerworldly transcendence can learning processes take place at all" (HABERMAS, 1996, pp.4f.).

coordination of action based on validity claims (or at least the implication is that, in case of conflict, such coordination can be potentially based on validity claims). In the same manner, the medium of law, as HABERMAS argues, can provide the same function for society as a whole beyond situations of face-to-face interaction. "The web of legal communication is even capable of embracing complex societies as a whole" (HABERMAS, 1996, p.437). Language would not be able to accomplish this on its own in a structurally differentiated, culturally pluralistic, and, in terms of its potential development, open society. However, with law, in HABERMAS view, there exists a structurally similar medium inasmuch as it is also oriented by validity claims that can be called upon while it is capable of raising and addressing the question of superior, normatively appropriate decisions in complex societies as well. Procedures, he argues, thus provide the means for enabling processes of learning in a demanding sense: an open search for better legal arrangements to provide the framework for social life in the future. [9]

LUHMANN thus inquires into what functions procedures actually perform[5] and precisely for this reason leaves participants' individual motives behind. Instead, he directs his attention to the motives that the procedures themselves generate in order to legitimize their own mode of operation. HABERMAS, in contrast, perceives procedures as (empirically identifiable) modes of enabling normatively appropriate decisions. In this view, procedures on their own are not necessarily able to provide actors with the necessary motives for accepting or participating in procedures—otherwise actors would be determined by procedures, and this would leave little room to speak of democratic liberty and the like. In both cases, procedures are a response to the emergence of positive law. They define structural standards for processes of norm- and decision-making without determining them *a priori* and hence without deriving them from ultimate norms. Procedures lead to determinations without prescribing concrete outcomes: although a politician is elected, it is not predetermined which one; the court reaches a verdict, but which one is determined in the course of the legal proceedings; the same holds true for legislation. [10]

In these considerations, the common focus on questions of legitimacy moves to the forefront while issues of constitution and knowledge are neglected. Procedures and the resulting decisions not only provide legitimacy, they invariably also constitute a legally codified social order that has to be taken into consideration in future action. By ordering things in specific ways, they also create new social relations. Even if one fails to comply with the law, or precisely for that reason, one has to reckon with consequences, thus action orientations must incorporate such decisions. In this sense, procedures invariably involve new knowledge, new interpretations, and controversy. For instance, new equal opportunity provisions that disturb traditional routines of job appointment at the very least force the participants to realize that the old ways cannot simply be continued. Although all dimensions are typically of equal significance, the constitutive, cognitive, or legitimatory dimension can be of special significance

5 For a paradigmatic discussion, see LUHMANN (1997, p.156): "Why are things like this and not otherwise?"

depending on the procedure in question. This will be illustrated in the following discussion of different types of procedures. [11]

2. Types of Procedures and Requirements on a General Model of Procedures

When we speak of procedures in the context of law and politics, we are usually referring to legally codified procedures. Of course, we speak of procedures just as naturally in other contexts as well. There are, for instance, technical procedures in manufacturing or, of special interest in our context, scientific procedures, i.e. the use of scientific methods. [12]

All of these procedures have characteristic features. The procedures employed in production processes aim at creating products from raw materials or components; in this case, the aspect of constitution is the dominant one. To the extent that these procedures, by their very nature, are geared toward yielding a tangible output, namely in the form of products, and in this sense are strongly results-oriented, they are of a fairly closed kind. Any deviation from the expected result represents a flaw and thus a loss of quality. Quality control therefore makes sure that deviation from the norm occurs as little as possible in the production process. On first glance, research procedures are designed for achieving completely different objectives. In this case, it is crucial that the result is not determined in advance. The goal precisely is to unearth new, unexpected insights. For this reason, they must be much more flexible and of an open nature. Legally codified procedures are neither determined to the same degree as technical procedures since they do not "produce" anything in the narrow sense nor can they afford to operate as "unreliably" as research procedures, which are free to question everything and do not set collectively binding rules. [13]

However, if we take a closer look at these types, we can see that the distinction along the lines of open versus closed is much too simple. There is in fact a considerable range of variation within the single types in terms of openness, or in LUHMANN's words, in terms of the extent to which they are capable of processing complexity. To characterize this difference, we can again use a distinction employed by LUHMANN (1997). He refers to legal procedures also as *programmed* procedures. Courts and administrations are required to base their decisions on the already existing foundations for decision-making and are indeed able to do so. On the other hand, there are *programming* procedures that must first create such foundations and therefore must first determine who is to decide (political election) or what is to be decided upon (legislation). Obviously, similar distinctions can also be applied to technical production procedures or scientific procedures. [14]

The aspects concerning production procedures mentioned above especially apply to mass production. In this case, the objective is to continuously produce the same things without deviating from production norms and thus without any loss of quality. The situation is different in the case of craft production. It requires sustained periods of routine practice and experience to develop the skills and

command of the manufacturing procedures that lead to the product, and this is precisely the necessary prerequisite for achieving a level of proficiency that allows to deliberately deviate from the norm in order to create a unique or otherwise innovative product. In his book "The Craftsman" (2008), but also in earlier work, SENNETT has developed this aspect in much detail.[6] Moreover, he analyzes craftsmanship with an eye to its affinity to artistic action. For instance, applying a unique technique in painting a picture requires many years of practical experience with artistic "production procedures." Research procedures can also be distinguished in a similar manner. As a matter of course, academic research also involves standardized operating procedures, which are regularly employed in a routine fashion, for instance, in conducting election polls. On the other hand, there also exist exploratory procedures that are characterized by a maximum openness toward the object of research. This leads to the following types of procedures:

Procedures	**Scientific procedures (methods)**	**Legally codified procedures**	**Technical production procedures**
(Emphasis on …)	**(knowledge)**	**(legitimation)**	**(constitution)**
Programmed procedures	Standardized operating procedures	Application of law	Industrial mass production
Programming procedures	Exploratory approach	Democratic politics	Craftsmanship

Table 1: Types of procedures [15]

In summary, we may hold that, although legally codified procedures are the only ones that sociology has theoretically conceptualized, there are nevertheless completely different types of procedures. They can be distinguished according to the level of complexity processed—a distinction that cuts across the types of procedures referred to above. If one seeks to get a better grasp on the general purpose of procedures and determine the defining factors as comprehensively as possible, this requires turning to those procedures that have the greatest potential and pose the greatest challenges. This refers to procedures that are devoted to handling the highest level of complexity or indeterminacy, which in LUHMANN's terminology are "programming procedures," i.e., procedures that establish legitimate new legal provisions, constitute "unique" products, and, of special interest in this context, create new knowledge. This directs attention from a focus on aspects of legitimation only to issues of knowledge and constitution. [16]

6 Cf. SENNETT (1998). For an empirical example from another context, see BAIER, BENNHOLDT-THOMSEN, and HOLZER (2005, p.203, translated from German): "The junior supervisor and master craftswoman in the field of interior design draws the following dividing line between craft and mass production in her area of work: 'Many claim that such a small business cannot keep up with the competition. I really don't seek to keep up. Home improvement stores are not our competitors. They offer a very different quality. Our strength is the unique. And this is precisely what makes this so much fun.'"

3. Functions and Structural Features: A General Model of Procedures

The general function of procedures has already become clear by now. Their purpose is to convert indeterminacy into determinacy—whether this involves transforming raw materials into products or research questions into knowledge. The most demanding ("programming") types must be able to function in situations marked by complex openness lacking ultimate points of reference. They hence face a task that is contradictory in two ways: On the one hand, they must shape the transition of indeterminacy into determinacy, however, without completely eliminating indeterminacy by establishing a new bedrock of truth; their purpose is to enable dealing with uncertainty without abolishing it. On the other hand, they must provide structure without determining outcome; they must *allow* concrete outcomes without forcing specific ones. They offer a script for achieving an outcome but do not determine what that outcome precisely will be. Procedures must therefore be structured in ways that allow to process and successively narrow down indeterminacy. Precisely for this reason, procedures can tolerate the fact that much is left open at the outset. It requires a modus operandi that defines a set of tasks that have to be accomplished, one after another, as the procedure progresses. This describes the most important tasks of a procedure, which are illustrated in the following outline of a general model of procedures:

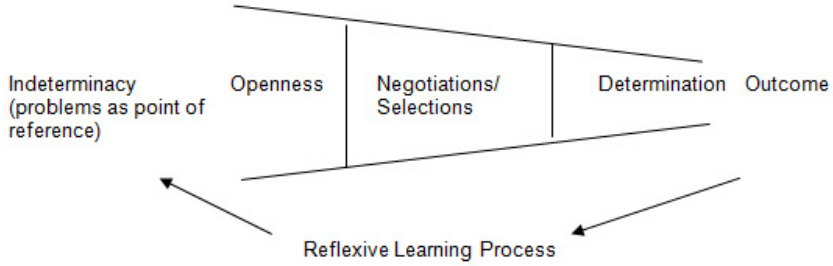

Figure 1: General model of procedures [17]

The first task is, generally speaking, allowing for indeterminacy and being open to the new. The (for the time being) last task is the opposite of the first one, namely determining an outcome; a procedure must lead to some kind of outcome (a decision, the constitution of something, or knowledge). In between the first and the last task, processes of negotiation, selection, and verification have to take place, step by step. In the end, procedures cannot and are not supposed to abolish all openness for complexity, rather they must be able to maintain it. For this reason, the fourth task is to ensure that the determined outcome feeds back into the initial state of indeterminacy. Only by initiating such a dynamic is recursive learning possible, i.e., only such a process gives the opportunity for determining an alternative outcome at a later point in time: a court decisions can be appealed, politicians face periodical reelection, laws can be enacted or abolished, and scientific knowledge can be subject to verification. The outcomes are always preliminary results—*in principle* since, in reality, the preliminary nature of such outcomes can turn out to be extremely long-lasting. Scientific paradigms are a case in point. [18]

Before I go on to draw methodological conclusions from the general model of procedures proposed here, I will introduce a concept of procedures that, to an exceptional degree, satisfies the criteria developed so far in the reconstruction of this conception of procedures. [19]

4. Bruno LATOUR's "Political" Model of Procedures

In "Politics of Nature,"[7] LATOUR's (2004) theory of science and society, in my view, has reached its most convincing form. Political procedures combine constitutive, legitimatory, and cognitive aspects by which the "parliament of things" satisfies the conditions introduced to define the comprehensive model of procedures. The "collective," the "common world"[8] populated by "human and non-human beings" is "assembled" in accordance with the procedure (aspect of constitution), and, to the extent that the procedure is observed, this is done in a "democratic" manner (aspect of legitimation). LATOUR understands the procedural approach as an experimental process of learning similar to scientific experimentation (aspect of knowledge). His considerations in this respect offer interesting connecting points to the strands of theory discussed above (LUHMANN, HABERMAS). In spite of his diction of "amodernity" (LATOUR, 1993), LATOUR's experimental-political concept of procedures can further be placed in the longstanding tradition of modern political theory.[9] [20]

LATOUR provides a more differentiated account of the four general tasks of procedures. He identifies a total of seven tasks—they are perplexity, consultation, hierarchy, institution, separation of powers, scenarization, and follow-up. [21]

Perplexity: The term refers to what has been called openness in the general model. LATOUR (2004, pp.111ff.) discusses this with reference to the BSE crisis and the changed protein structures (prions) that are perceived to cause the "mad cow disease." They caused turmoil, not only in the media or in society but, in LATOUR's view, also among the cattle (and sheep) "going mad." Openness is not to be conceived solely in a passive sense in terms of surprising events evoking irritation. Openness is also actively created in that, for instance, science gives rise to new perceptions by introducing new instruments. [22]

7 The title of the German translation is "Das Parlament der Dinge" (The Parliament of Things"). It more strongly reflects the procedural thrust of the theory and the democratic ambitions involved than the English title "Politics of Nature."

8 One could also speak of the actor network—provided that LATOUR is to be presented as an actor-network theorist. In "Politics of Nature," however, this terminology is actually not used at all, which is another reason why I believe that this is an especially good piece of work by LATOUR. While actor-network theory employs a dualistic concept of network, namely positing network formation in a "networked world," the "parliament of things" is concerned with "assembling collectives" in a world conceived as a networked or relational one (in this respect, also see LORENZ, 2008, p.584).

9 Cf. BRUNKHORST (1998, p.7); referring to DEWEY, BRUNKHORST introduces the volume, of which he is the editor, with the following words: "Modern democracy is of an experimental nature. Modernity has perceived itself as an open-ended experiment—the longer it has lasted, the more so." (translated from German). In this sense, LATOUR contributes more to advancing the perspective of modernity than to questioning let alone overcoming it. LATOUR himself directly refers to DEWEY in his (later) work.

Consultation: In essence, this refers to a close examination of the new for its properties and potential responses; LATOUR speaks of "requirement of relevance." The new is examined from different perspectives: Who can help understand it? This leads us to the second aspect of the general model of procedures, which involves negotiation, verification, and selection. LATOUR's conception divides this aspect into two tasks as we shall see below. [23]

Hierarchy: Another task in this context is hierarchy, which refers to establishing a publicly visible rank order based on relevance. One might say that, in contrast to consultation, the new is not examined in isolation, as something new, but rather in terms of its relation to the familiar, established order and to the world as it had been perceived prior to the emergence of the new. What significance is attributed to it? What role is it supposed to play? How does it change the existing setting? [24]

Institution: The negotiations and selection processes result in closure. Although BSE, to take up the example again, has come into the world, the alarm has calmed; explanations have been found as well as routines in dealing with it. The arrangements work and give no reason to question them. In terms of the general model of procedures, this amounts to having determined an outcome. [25]

Separation of powers: LATOUR draws another instructive distinction between the first two tasks (perplexity, consultation), which form the "power to take into account," and the following two (hierarchy, institution), which constitute the "power to arrange in rank order" (LATOUR, 2004, pp.108ff.). A dividing line, which must be strictly observed, thus runs right through the middle of the negotiations and selection processes. The purpose of this division is to clearly separate the new, the irritations, and the openness toward the undetermined from the existing order, from the determinations and outcomes that are accepted because of already having stood the test of time. If both powers are to be able to unfold their potential, then we must grant both of them a sphere of their own where they are allowed to have an impact. Although the purpose of procedures is to determine (in the realm of) the undetermined, they must not confuse the two dimensions. If that which is determined is permanently questioned, it would neither be a determination nor could it serve as such. If the undetermined were to become closed off as a result of final determinations, there would no longer be any openness toward the new. As has been argued above, procedures must therefore accomplish both: transform the undetermined into the determined, and in so doing, maintain and do justice to both the undetermined and the determined. [26]

Szenarization: Describing the sixth task, LATOUR speaks of a "scenarization of the totality." The course of each individual procedure is therefore always part of a more comprehensive context and must be viewed accordingly. There is not only one single procedure, rather the assembly is constituted by a number of courses that a procedure may take at different levels. LATOUR's world is one that is constituted by way of procedures in every respect. If we consider gains in scientific knowledge, they can always be perceived as part of a more comprehensive field of research or as associated with a theoretical paradigm and

in this way can be perceived in terms of a "scenario." In the end, the sciences produce "great narratives" and, in LATOUR's view, are expected to multiply them. It is hence not a matter of "one single" scenario but of imagining the assembly or the collective in terms of various different scenarios or, if you will, of depicting potential "environments." [27]

Follow-up: The final task is concerned with making sure that the procedure is observed and documenting it. Documentation ensures that the steps of a procedure are observed and it can be verified whether the procedure has accomplished its tasks. This allows assessing whether the results have been "assembled" in legitimate ways. Moreover, it is documented which negotiations were conducted, which verifications were performed, what choices were made in order to arrive at the accepted preliminary results. That is the only way by which newly initiated procedures can be expected to enable processes of learning. Without documenting the course of an ongoing procedure, the openness toward indeterminacy would collapse into *complete* indeterminacy each time anew and learning would not take place. This corresponds with the fourth task of the above-described general model of procedures, i.e., reflexive feedback. [28]

I conclude that LATOUR's model of procedures satisfies the criteria defining the general model of procedures in a distinct way. As a Social Studies of Science scholar, his orientation toward scientific experimentation comes at little surprise. The analogy to "parliamentarian" procedures, such as the procedures of issuing democratic legislation, accords with the fact that both are instances of "programming" procedures. However, LATOUR goes a step further by naming other "professions" that also contribute to the assembly as defined by the procedure and provide their specific skills for this purpose. Apart from scientists and politicians, he also mentions economists, moral philosophers, jurists, and artists (cf. 2004, pp.136f., 273). In so doing, he encourages thinking about other types of procedures that may share the procedural form while they each have their own specific mode of functioning. [29]

From a methodological point of view, this indicates transdisciplinary potential. It is further enhanced by postulating the indiscriminate inclusion of humans and non-humans. "Things" enter the various negotiations and participate in collective assembly and articulation. Questioning the sharp distinction between nature and society must lead to the collapse of the boundaries between the natural and social sciences. To be sure, there have been several attempts to this end in the past (cf. BRUNZEL & JETZKOWITZ, 2004). Whereas they have far too often sought the presumed smallest common denominator and have reduced sociality to quasi-physical or quasi-organismic relations, LATOUR takes the opposite path. "Things" can speak, act, and negotiate as well.[10] This is made possible by a

10 For the purpose of the argument presented here, we do not have to deal with the question as to what extent LATOUR and actor-network theory actually make good on that promise or whether they are also guilty of employing a reduced concept of speaking and acting. For a discussion of the strategy of choosing alternative "third" concepts to replace common dichotomies, also see LORENZ (2008), referring to BOLTANSKI and CHIAPELLO (2005), who pursue a similar path. At any rate, one has to be willing to think along the lines of the peculiar meanings given the terms of action, speech, things, etc.—even though LATOUR's rhetoric may not seem inviting to

theory of science that is primarily conceived as a methodology (LATOUR, 1999) that posits a complete relationality, i.e., not just of a social-constructivist but of a real-constructivist kind, and is able to name procedural steps for constituting and reconstructing networks, chains[11], and assemblies on this basis and ultimately can do without the micro-macro divide[12]. [30]

This leads me back to the question of what we can expect from a general model of procedures for a methodology that is conceived as a procedural one, that is to say, a methodology that provides a framework for the procedurality of scientific work. [31]

5. Methodological Consequences of Procedurality

The meaning of the term procedurality implies more than the process nature of a sequence of events, it refers to the procedural form of such a sequence. One must thus identify the steps of a general procedure, without claiming that all them are observed each and every time. Hence, if we ask about the meaning of procedurality in methodological terms, we first require an as comprehensive as possible understanding of procedures. For this purpose, I have proposed a general model of procedures. In the light of the above considerations on the emergence of positive law and Bruno LATOUR's research agenda, it has become clear that procedures are understood as a response to complete relationality. Where there is no ultimate bedrock of truth or fixed point of reference, procedures offer non-deterministic paths toward constitution, legitimation, and knowledge. They provide a means of safeguarding against randomness and arbitrariness without having to resort to any kind of ultimate foundations that are assumed to be beyond doubt, be it an ultimate form of being, an ultimate good, or an ultimate truth. Law is statutory law, LATOUR's collective is an assembly. Employing law as an analogy, we can also speak of the emergence of positive knowledge creation, which yields an interesting notion of positive science and

---

everyone—and cannot simply criticize them based on their conventional meanings. LATOUR's —as so often, polemical—response goes like this (2005, pp.255f.): "To be 'treated like things,' as we understand it now, is not to be 'reduced' to mere matters of fact, but allowed to live a life as multifarious as that of matters of concern. (…) If only humans in the hands of critical sociologists could be treated *as well as* whales in zoology, genes in biochemistry, baboons in primatology, soils in pedology, tumors in cancerology, or gas in thermodynamics! Their complex metaphysics would at least be respected, their recalcitrance recognized, their objections deployed, their multiplicity accepted. Please, treat humans as things, offer them at least the degree of realism you are ready to grant humble matters of concern, materialize them and, yes, *reify* them as much as possible!"

11 For a discussion of LATOUR's thinking in terms of chains of operations and, accordingly, in terms of an "ontology of linkages," see SCHÜTTPELZ (2008—translation from German). Chain, network, and assembly are probably the images most frequently referred to by actor-network theory. Chain/linkage emphasizes (in a one-dimensional manner, so to speak) the sequential nature and chronological order of events. Network/networking is more likely to evoke images of a synchronous and horizontal connectedness of diversity—although this precisely is not supposed to be the focus of actor-network theory since such a perspective fails to disclose the constitutive dynamics of such linkages (cf. LATOUR, 1999; CALLON, 1986). Although I occasionally use the in various contexts well-established network terminology for reasons of comprehensibility, I nevertheless consider "assembly" to be the most suitable term, which also incorporates the (multi-dimensional) aspects of linkages and networks.

12 In the case of actor-network theory, BELLIGER and KRIEGER (2006, pp.43f.) speak of a fractal model.

research that in no way contradicts qualitative research. Accordingly, positive knowledge is of a procedural kind, i.e. it is *methodically determined* knowledge. [32]

The objects of research must then be conceived as diachronically and synchronically assembled ones, i.e., they stand in a relationship to other objects and are the result of prior "chains" of events. Not everything is part of a procedure, but procedurality is the generating principle through which everything else is viewed (in terms of constitution, legitimation, and knowledge). This is the foundation for a reconstructive methodology. Such a methodology must involve an idea of how construction processes (might) proceed in order to offer suitable methods for *re*constructing those constructions. Drawing on LATOUR (which I refer to in this discussion and who exemplifies this whole line of research), one can go beyond the familiar types of social constructivism (cf. MEUSER, 2006). In his view, there is no given, non-constructed natural world, on the one hand, as opposed to a constructed social world, on the other. As a Social Studies of Science scholar, he abandoned the idea in the 1980s (LATOUR & WOOLGAR, 1986) that the findings of the natural sciences obtained in the laboratory could be effectively criticized from the vantage point of social constructivism. Instead, he turned his attention to how "the world" is gradually created in manifold, small-scale, and never-ending processes of construction and networking that go on between the object of research (thing) and the researcher. Complete relationality, in this perspective, is not only an epistemological principle for approaching "the world" but also a principle for the construction of collective realities that are at the same time an assembly of things and humans, of constitution and knowledge. If we grasp "constructions of reality" in terms of procedures, as LATOUR does in "Politics of Nature," then procedurality represents the underlying methodological principle. In this sense, I propose the general model of procedurality outlined above. [33]

Precisely because the aim has been a general model that is supposed to be as comprehensive as possible, the epistemological value at this level of abstraction is low. Where everything can be incorporated, distinctions are lost. The purpose of the model is, therefore, not to give up the above determined distinctions but to create a common framework that allows for the variation of those distinctions as the situation requires. We can distinguish very different types of procedures that all share the commonality of being procedures and, as such, can be described in terms of a general model of procedures. Such types became apparent in the discussion of LATOUR's "parliamentarian" procedure ("professions") and were introduced above as technical, legally codified, and scientific procedures. [34]

We can also further differentiate scientific procedures. The versions designed to address specific issues will be employed to account for the distinction between qualitative and quantitative methods in more detail. Occasionally, it can be useful to emphasize this distinction. If we direct attention to the fact that they represent different "games," just as chess and soccer do,[13] it becomes obvious that we

13 I am referring to an illustration that Stefan HIRSCHAUER employed during the joint session of the sections "Methods of Empirical Social Research" and "Methods of Qualitative Social Research" of the German Sociological Association on April 17-18, 2009 in Marburg, Germany.

cannot simply apply the same yardstick to assess their achievements: Just as we do not expect chess players to score goals, it does not make much sense to expect structural pattern analyses of general to satisfy criteria of statistical representativity (or *vice versa*). From the perspective of a theory of procedures, it is also interesting to ask what it means that both are playing or are working methodically. In this case, the general model of procedures provides the common point of reference; on this basis, the distinctions can be varied as the situation demands. Depending on the issue at hand, it may be more appropriate to distinguish games (to stick with the metaphor) according to whether they are played indoors or outside, at the beach, in water, or on turf, whether it is supposed to be a board game, a team game, or a game between individual players or whether it involves cards or dice. Whatever the case may be, chess and soccer still are different games. Yet, this may not always be the most important insight, just as the question whether mathematical calculations are useful or not may not always be the first and most important issue. This is due to the fact that both figures and structural patterns may be of interest: For instance, if we study political reform, knowledge of the structural foundations of interests can be expected to be just as significant as the question of how many are or are not participating. Or there may be other issues that need to be clarified first in order to determine the appropriate methodical approach: for instance, whether one or several disciplines are involved (and which ones), whether we are studying ephemeral or long-lasting phenomena, whether they are of a limited or more extensive range (e.g., small groups or globalization), or whether and, if so, which research is already available. [35]

Nevertheless, the model of procedures provides an opportunity for establishing a fundamental distinction that, in a specific sense, is close to the common distinction between qualitative and quantitative methods while having the advantage of being based on a methodological distinction of research work. One of the insights following from the above considerations is certainly that the foundations of a *reconstructive* methodology logically precedes such a distinction. Re-construction is therefore not a characteristic feature specific to qualitative research.[14] LUHMANN's programming and programmed procedures are particularly instructive for the distinction I have in mind. The general model of procedures provides the common methodological point of reference so that the distinction appears as an ideal-type distinction from the outset and not as one of an absolute kind. Even attempts at combining qualitative and quantitative methods tend to insist more on a fundamental difference between them than that they effectively integrate them. Programming versus programmed, on the other hand, describes a relative distinction. On first glance, it stands to reason that qualitative methods are programming procedures because, by design, they

14 And, as shown above, not even of *social* research. Even physics is unable to identify any "ultimate things" anymore and employs constructivism in theorizing about its subject matter (HALFMANN, 2003). While this does not render the characterization of the social sciences as constructivist incorrect, it is no longer sufficient to mark the difference to the natural sciences. The question as to how useful the distinction meaning/non-meaning is is of course another issue. In LATOUR's case, it remains unclear whether he has completely abandoned this distinction in favor of something else or whether he has a gradual shift between two distinct entities in mind, a kind of "hybridization."

proceed in an exploratory manner and adopt an as open as possible approach toward the object of research. However, this is not automatically the case. If, for example, as occasionally happens, a quantitative typology is presented that is spelled out in greater detail using qualitative methods, we would be mistaken to describe the role of qualitative methods in this scenario in terms of "programming" since they already are "programmed"—even if one and the same method performs programming functions in another context. Quantitative research can be expected to provide important "programming impulses" in cases where determining volumes and quantities serves to provide more objective grounds for assessing the relevance and urgency of controversies. Qualitative researchers also occasionally resort to quantification to get a grasp on structural patterns; dyadic or triadic structures are cases in point. The key aspect for classifying procedures into the programmed or programming type is thus not whether figures or mathematical calculations come into play or not, but rather to what extent we can rely on proven knowledge or whether we are conducting research to explore uncharted territory. Hence, choice of method is not a matter of principle but of situational adequacy. In case of legally codified procedures, this is obvious. No one would assume that court procedures (programmed) could replace legislative procedures (programming) or *vice versa*. In view of the respective task at hand, the only question is what type of procedure is appropriate and which one is not—whatever the case may be, it still is a matter of procedures. [36]

In terms of a theory of procedures, programming versus programmed can also be cast in the more familiar terminology of standardized versus exploratory (also see the table above in Section 2). However, this distinction now has a methodologically clearly defined meaning and ought not be confused with other distinctions, such as qualitative/quantitative, standardized/qualitative, quantitative/reconstructive, and others more, that are commonly used in everyday research but suffer from a lack precision. [37]

A procedural methodology has its foundations in a general model of procedures with integrative potential. It provides a framework for a host of methods and research approaches. We cannot do without specifying procedures. Such specifications enhance the usefulness of the abstract model (a) by adding proven methods and (b) by providing opportunities for inquiring into a wide range of different subject matters and fields of research. [38]

The former (a) has been demonstrated by combining LATOUR's model of procedures with proven case-reconstructive methods (LORENZ, 2009). This allows to qualify especially the research principle "follow the actors" advocated by actor-network theory (cf. DEGELE, 2002; SIMMS, 2004). This maxim tends to simply *trace* the procedural paths (networks) of the object of research, i.e., there is too little difference between research and object. Although I do not conceive the research task of assembling, as in (case-) reconstructive methods, as being a completely different one *in principle*, it is a different one *to some degree*. This

relative detachment enables to disclose the specific selectivity[15] involved in the research object, i.e., the potential paths of alternative developments, instead of merely "following the actors." [39]

(b) The methodology supports transdisciplinary research[16] in two ways: it transcends disciplinary boundaries, even claims connections between the social and natural sciences (LATOUR), and is suitable for research (by way of reconstructive methodology) focused on specific (practical) problems and therefore stands in close relation to important questions concerning the constitution of society (e.g., political ecology). The methodology thus lays the foundations for cooperation between academic research and other actors in addressing problems.[17] [40]

6. Conclusion

The aim of this discussion was to reflect on and methodologically underpin the procedural nature of methods. This required an inquiry into a conception of procedures that is not limited to legally codified procedures but learns from analyzing them in order to draw methodological conclusions. Therefore, I first examined the role of legally codified procedures against the background of the historical emergence of positive law. For this purpose, I contrasted the approaches of LUHMANN (1997) and HABERMAS (1996) in the fields of sociology of law and theory of democracy. While both primarily focus on issues of legitimation, the additional inclusion of ideal-type technical production procedures and scientific procedures shows that the aspects of constitution and knowledge are just as significant for a comprehensive conception of procedures. This led to suggesting a general model of procedures based on four basic tasks that procedures must accomplish: (1) openness toward indeterminacy is followed by (2) processes of negotiation, verification, and selection, which lead to (3) closure and determinations but (4) must nevertheless allow to refer back to indeterminacy. Precisely because these abstract tasks apply to every procedure, we must distinguish specific procedures and specify tasks for every procedure or reconstruct them accordingly. This was done in an exemplary fashion for the concept of procedures developed by LATOUR (2004) in "Politics of Nature." LATOUR develops a much more fine-grained model (seven tasks), combines constitutive, legitimatory, and cognitive aspects, distinguishes a number of typical procedures (professions), and, finally, suggests a methodological interpretation since his conception is modeled after experimental research. This allowed drawing a number of methodological conclusions. They included the assumption of complete relationality, a corresponding notion of positive science as a mode of determining knowledge by way of methods, and the distinction between

15 In the sense of OEVERMANN (2000).

16 For a more extensive discussion of a procedural conception of transdisciplinarity referring to the debate about climate change as an example, see LORENZ (2010).

17 BAECKER (2004) also draws on LATOUR's "parliament of things" in order to propose a new role for universities based on cooperation between actors within and outside of academia in addressing problems.

programming and programmed procedures as an alternative to the one between qualitative versus quantitative methods. [41]

Procedurality as a methodological paradigm, it was argued, lays the foundations for a reconstructive methodology: it operates in procedural form and perceives the objects of research as procedurally constituted. Against this background, it can be shown at what points procedural tasks are not fulfilled or where they are insufficiently performed, blocked, or circumvented because of configurations of interest and power. From this follows a critical potential inherent to the procedural methodology as it allows raising a number of questions: Are the procedures observed, and are the tasks appropriately met? Has the assembly—whatever its make-up—been constituted in a "democratic" fashion, and what does this mean specifically? In detail: 1. To what extent is a procedure an open one, and is something/someone being excluded? 2. What means of verification are employed, what negotiations are conducted, and what selections are made? Are they appropriate, sufficient? 3. Does this lead to making determinations? How? 4. To what extent are determinations a starting point for or part of a reflexive process of learning? [42]

A procedural methodology modeled after the general concept of procedures provides an integrative framework for a host of methods and research approaches. It not only allows to analyze legally codified procedures but is also suited for reconstructing objects of research of any kind in the same manner. This appears to be a promising path for a sociological approach toward developing the methodological foundations of transdisciplinary research. In this way, a requirement of transdisciplinarity is met in the form of a methodology that transcends not only the individual disciplines but also the boundaries of science by permitting cooperation with actors outside of academia. [43]

I was only able to briefly touch upon some aspects that require further clarification. Specifically, this applies to two of the key relationships referred to, namely between constitution and legitimation and between the natural and social world. In this respect, I have referred to LATOUR, yet without claiming that he already has satisfactory answers to all the questions that might arise in this context. There is definitely a need for further research along these lines. [44]

References

Baecker, Dirk (2004). Der Kulturdialog. Was leisten die (Kultur-) Wissenschaften und worin besteht die mögliche Rolle der Universitäten? *Berliner Debatte Initial*, *15*(2), 96-104.

Baier, Andrea; Bennholdt-Thomsen, Veronika & Holzer, Brigitte (2005). *Ohne Menschen keine Wirtschaft. Oder: Wie gesellschaftlicher Reichtum entsteht. Berichte aus einer ländlichen Region in Ostwestfalen*. Munich: Oekom.

Bauman, Zygmunt (2000). *Liquid modernity*. Cambridge. Polity Press.

Beck, Ulrich (1992/1986). *Risk society. Towards a new modernity.* London: Sage.

Belliger, Andréa & Krieger, David J. (2006). Einführung in die Akteur-Netzwerk-Theorie. In Andréa Belliger & David J. Krieger (Eds.), *ANThology. Ein einführendes Handbuch zur Akteur-Netzwerk-Theorie* (pp.13-50). Bielefeld: Transcript.

Boltanski, Luc & Chiapello, Ève (2005/1999). *The new spirit of capitalism*. London: Verso.

Brunkhorst, Hauke (1998). Demokratischer Experimentalismus. In Hauke Brunkhorst (Ed.), *Demokratischer Experimentalismus. Politik in der komplexen Gesellschaft* (pp.7-12). Frankfurt/M.: Suhrkamp.

Brunzel, Stefan & Jetzkowitz, Jens (2004). Transdisziplinäre Umweltforschung als methodologische Aufgabe. Reflexionen einer Forschungskooperation von Biologie und Soziologie. Technikfolgenabschätzung. *Theorie und Praxis*, *13*, 61-70.

Callon, Michel (1986). Some elements of a sociology of translation: Domestication of the scallops and the fishermen of St Brieuc Bay. In John Law (Ed.), *Power, action and belief: A new sociology of knowledge? (pp.196-233) London: Routledge.*

Castells, Manuel (2000). Materials for an exploratory theory of the network society. *British Journal of Sociology*, *51 (1)*, 5-24.

Degele, Nina (2002). *Einführung in die Techniksoziologie*. Munich: UTB.

Giegel, Hans-Joachim (1997). Moral und funktionale Differenzierung. *Soziale Systeme*, *3*(2), 327-350.

Habermas, Jürgen (1992/1988). *Postmetaphysical thinking. Philosophical Essays.* Cambridge: Polity Press.

Habermas, Jürgen (1996/1992). *Between facts and norms. Contributions to discourse theory of law and democracy.* Cambridge/ Mass.: MIT Press.

Halfmann, Jost (2003). Die Vielfalt der Naturen in der modernen Gesellschaft. Zur Differenz der Naturvorstellungen in der Physik und der Ökologiebewegung. In Margarete Maurer & Otmar Höll (Eds.), *"Natur" als Politikum* (pp.487-506). Vienna: RLI-Verlag.

Latour, Bruno (1993/1991). *We have never been modern*. New York: Harvester Wheatsheaf.

Latour, Bruno (1999). On recalling ANT. In John Law & John Hassard (Eds.), *Actor network theory and after* (pp.15-25). Oxford: Blackwell.

Latour, Bruno (2004). *Politics of nature. How to bring the sciences into democracy*. Cambridge: Harvard University Press.

Latour, Bruno (2005). *Reassembling the social. An introduction to actor-network-theory.* Oxford: Oxford University Press.

Latour, Bruno & Woolgar, Steve (1986). *Laboratory life. The construction of scientific facts. With a new postscript and index.* Princeton: Princeton Univ. Press.

Lorenz, Stephan (2007). Unsicherheit und Entscheidung – Vier grundlegende Orientierungsmuster am Beispiel des Biokonsums. *Schweizerische Zeitschrift für Soziologie*, *33*, 213-235.

Lorenz, Stephan (2008). Von der Akteur-Netzwerk-Theorie zur prozeduralen Methodologie: Kleidung im Überfluss. In Christian Stegbauer (Ed.), *Netzwerkanalyse und Netzwerktheorie. Ein neues Paradigma in den Sozialwissenschaften* (pp.579-588). Wiesbaden: VS Verlag.

Lorenz, Stephan (2009). Case reconstruction, network research and perspectives of a procedural methodology. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *9*(1), Art. 10, http://nbn-resolving.de/urn:nbn:de:0114-fqs0801105.

Lorenz, Stephan (2010). Das Klima erkennen, verhandeln, prozessieren. Ein Einblick und Vorschlag zur transdisziplinären Diskussion. In Martin Voss (Ed.), *Der Klimawandel – Sozialwissenschaftliche Perspektiven* (pp.61-73). Wiesbaden: VS Verlag.

Luhmann, Niklas (1997/1969). *Legitimation durch Verfahren*. Frankfurt/M.: Suhrkamp.

Meuser, Michael (2006). Rekonstruktive Sozialforschung. In Ralf Bohnsack, Winfried Marotzki & Michael Meuser (Eds.), *Hauptbegriffe Qualitativer Sozialforschung* (2nd ed., pp.140-142). Opladen: B.Budrich.

Oevermann, Ulrich (2000). Die Methode der Fallrekonstruktion in der Grundlagenforschung sowie der klinischen und pädagogischen Praxis. In Klaus Kraimer (Ed.), *Die Fallrekonstruktion. Sinnverstehen in der sozialwissenschaftlichen Forschung* (pp.58-148). Frankfurt/M.: Suhrkamp.

Renn, Ortwin; Schweizer, Pia J.; Dreyer, Marion & Klinke, Andreas (2007). *Risiko. Über den gesellschaftlichen Umgang mit Unsicherheit*. Munich: Oekom.

Schüttpelz, Erhard (2008). Der Punkt des Archimedes. Einige Schwierigkeiten des Denkens in Operationsketten. In Georg Kneer, Markus Schroer & Erhard Schüttpelz (Eds.), *Bruno Latours Kollektive. Kontroversen zur Entgrenzung des Sozialen* (pp.234-258). Frankfurt/M.: Suhrkamp.

Sennett, Richard (1998). *The corrosion of character*. New York: W.W. Norton.

Sennett, Richard (2008). *The craftsman*. New Haven: Yale University Press.

Simms, Timothy (2004). Soziologie der Hybridisierung: Bruno Latour. In Stephan Moebius & Lothar Peter (Eds.), *Französische Soziologie der Gegenwart* (pp.379-393). Constance: UVK.

Author

Stephan LORENZ, Dr. phil., MA in sociology, is principal investigator in a research project at the Institute of Sociology in Jena that is funded by the German Research Foundation (DFG). In addition to qualitative methods, his other main research interests are affluence, consumption, sustainability and environmental issues, cultural sociology and social theory.

Contact:

Stephan Lorenz

Friedrich-Schiller-Universität Jena
Institut für Soziologie
Carl-Zeiss-Str. 2
07743 Jena, Germany

Tel.: +49/(0)3641/945509
Fax: +49 (0)3641/945512

E-Mail: Stephan.Lorenz@uni-jena.de
URL: http://www.soziologie.uni-jena.de/StephanLorenz.html

Citation

Lorenz, Stephan (2010). Procedurality as Methodological Paradigm. Or: Methods as Procedures [44 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *11*(1), Art. 14, http://nbn-resolving.de/urn:nbn:de:0114-fqs1001142.