Non-dualizing Philosophy and Empirical Research

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► Purpose – Explaining the relationship between theory and empirical research within the research process. The main motivation is to show that non-dualizing epistemology and constructivism have approximately the same ideas to explain this relationship.

► Problem – Josef Mitterer criticizes constructivism as a dualizing epistemology and “overlooks” that non-dualizing philosophy and constructivist perspectives are similar with regard to the relationship between theory and empirical research.

► Methodology – (1) Reconstruction of non-dualizing argumentation, (2) non-dualizing implications for the description of the relationship between theory and empirical research, (3) comparison of non-dualizing implications for the relationship between theory and empirical research with constructivist implications for this relationship.

► Solution – Finding a position on the description of the relationship between theory and empirical research that fits both epistemologies, i.e. non-dualizing philosophy and constructivism. If we discard the critical rationalist idea to falsify theory with the help of empirical research (which reflects reality), we better conceive the relationship between theory and empirical research as a permanent and mutual refinement, stabilization and irritation.

► Implications – With the help of non-dualizing argumentation, constructivists have to clarify their position towards the relationship between theory and empirical research, particularly towards the choice of methods and the interpretation of the results; and non-dualizing epistemology can profit from constructivist second-order argumentation.

► Keywords – theory, empirical research, second-order observation, epistemology, methodology, methods.

Introduction

Empirical methodology in social sciences not only consists of methodological rules but is also based on epistemological premises, although these premises are usually not reflected in practical empirical research. It is Karl R. Popper’s “Critical Rationalism” that can be regarded as the most influential philosophical approach to modern empirical social research. This analytical (and normative) approach combines epistemological realism with the prescription of methodological rules and standards, which are still common sense in social sciences. One of the most striking features of critical rationalism is a double dualism resulting from epistemological realism and from the methodological relationship between theory and empirical research. Both sides of scientific knowledge are restricted to clear-cut rules: theory has to be explanatory and rational in the sense that only empirically observable statements about reality are allowed within science. Empirical research follows methodological rules and serves as realistic test for scientific theory, which means that empirical methodology is used to reflect the real world in contrast to scientific laws, which derive from theory.

A non-dualizing philosophy cannot agree with this double dualism and has to challenge both the epistemological realism and the dualism of theory and empirical observation. As a consequence, non-dualizing philosophy has to define the status of empirical research within science. What is the relevance of empirical research for theory testing and theory building if empirical research and empirical observation cannot be considered to be an indicator of the real world but are discourse-related and discourse-dependent? The problem is striking, as a simple circular relationship between theory and empirical research is not an adequate description of how scientific knowledge develops. The philosophical solution to this problem can only be to distinguish between theoretical and empirical observation without considering both sides as opposite or dual entities.

This article aims to show the consequences that non-dualizing modelling of the relationship between theoretical and empirical observation has on the development of scientific knowledge. Therefore, (1) I critically reconstruct the contribution of non-dualizing philosophy to the relationship between theory and empirical research. (2) Arguing from a constructivist point of view, I will challenge Mitterer’s equidistant attitude towards both epistemological realism and constructivism. This critique is based on the argument that the constructivist and the non-dualizing perspectives do not differ substantially with regard to the relationship between theory and empirical research. (3) In a third step, I will show the consequences of non-dualizing philosophy for empirical research, which Stefan Weber has worked out with the help of Josef Mitterer’s non-dualizing approach. (4) Additionally, I will present some constructivist thoughts on this relationship, which I think are reasonable within non-dualizing philosophy as well as constructivist frameworks.

Some remarks on constructivism as a way of thinking

In this article I will treat (radical) constructivism as a system of epistemological ideas and arguments or as an epistemological discourse rather than as different authors’ positions and perspectives. Unfortunately, constructivist discourse sometimes seems confusing because many labels are used to distinguish between several sub-discourses, such as radical constructivism, social (or cultural) con-
Critical reconstruction of non-dualizing philosophy

In the preface of his major book, Josef Mitterer expresses the main aims of his philosophy. He is not interested in questions such as “What is the case?” or “How are we able to know?” or “How are we able to know?” (Mitterer 1993, p. 13), but in questions about the pragmatic, practical, communicative, argumentative, or power-related consequences of a dualizing way of speaking, particularly in the case of argumentative conflicts (pp. 14f).

Mitterer’s position is that of a critique of language or the use of language, particularly of the dualizing way of speaking. His philosophy takes no account of differences between language and other bases of interpretation of the world and abandons differences such as theory/language or reality/world completely (pp. 42f).

Non-dualizing philosophy can be (not must be) interpreted within three dimensions, which Mitterer himself does not use in his text but which can help to better understand his philosophy and its consequences for the relationship between theory and empirical research (cf. for the following interpretation Mitterer 1993, §§25–28). The main aspect of his approach is the dimension of time. Every description of an object is a description so far, which can be continued as (further) descriptions from now on. The second aspect is that of the inherent logic. The object of the description and the description of the object must not be separated in order to avoid the dualization of description and object. As I understand Mitterer, he does not talk about a dialectical relationship between knowledge (description) and matter of fact (object) or any other relationship (e.g. construction, reflection, etc.). A third aspect is the social dimension: describing objects occurs within discourses, and the identity and background of the participants in the discourse are relevant to the outcome of controversial or consensual descriptions.

In the following I will try to reconstruct Mitterer’s position towards the relationship between theory and empirical research (cf. Mitterer 1993, §§32–50). The common basis for a (scientific) discourse is not neutral (or object-related) but “neutralistic,” which means that there is a consensus about the descriptions so far (§37). From now on, there may be differences in (further) descriptions of the object, but the common sense so far cannot be declared an arbiter, whether descriptions from now on are true or not (§§38–40), because the description(s) so far fit(s) different and even controversial descriptions from now on (§44). The decision of whether a description of an object is true or not implies a certain theory of truth (§§42–43). If a participant in (scientific) discourse claims the failure of a description that is opposite to his own description, he cannot only state the difference between both descriptions but also has to give reasons why his description is better, truer, and more adequate than the opposite description (§45).

Within scientific discourse the researcher legitimates his position, or the truth or correctness of his description, with the help of (scientific) procedures that must be common sense within the scientific community (Mitterer 1993, §46). According to a dualizing epistemology, the procedure of science itself proves whether the description fits (corresponds to) the object or not (§47). In a non-dualizing sense the test of a description cannot be carried out with the help of the object (itself), but starts from the object of the descriptions so far (§48). The failure of a description of an object is neither caused by the object itself (and its attributes) nor by given descriptions so far because they do not go back to descriptions that exist already but anticipate new ones. These new descriptions do not fit the so-called failed description. Instead, they must have been developed together, must fit description A, and cannot fit the alternative or opposite description B (§50). To declare a description false does not ultimately require reference to an external reality but “occurs” within the discourse of

As a consequence, I am interested in the potential of the constructivist epistemology as a whole rather than in specific positions held by certain constructivist authors and in constructivist subdiscourses. Therefore, the following elaborations reflect my interpretations of the constructivist epistemology and its consequences for empirical research. Although this point of view is abstract and reductionist with respect to the various, different constructivist positions and approaches, it should be suitable for presenting fundamental reflections on the topic. Within this strategy of argumentation I interpret Josef Mitterer’s non-dualizing approach as a necessary correction of constructivist inconsistencies rather than as a completely different epistemology. This is also how Schmidt (2003) treats non-dualizing ideas: if constructivism aims to be radical and to give weight to its arguments, it should be non-dualizing or at least incorporate non-dualizing suggestions. Therefore it is necessary first to reconstruct non-dualizing arguments about the relationship between theory and empirical research.
propositions over deviations, which are with reality, objects or with a given system of epistemology implies a preference for cor-

From a non-dualizing perspective, it is not possible to approximate a description towards an object. Even basic or rudimentary descriptions of objects are not “closer” to the objects themselves than evolved or theoretical descriptions, because all kinds of different descriptions are world outside of the discourse (Mitterer 1993, §63). Therefore, Popper’s assumption that (basic) empirical or protocol propositions are approximately correct descriptions of objects must be rejected.

The non-dualizing alternative is this: a rudimentary common-sense description (“indication”) of an object can be seen as a neutralistic (not neutral!) basis of descriptions so far for further descriptions to be developed and continued from now on. Neither neutralistic descriptions so far nor new descriptions from now on are related to the “same” object. There is no difference between object and description(s); there are only different descriptions and therefore different objects of descriptions (Mitterer 1993, §§69, 72). If the rudimentary descriptions of an object are seen as adequate descriptions within a discourse, they constitute the object of descriptions. As long as this primary description is successful, it is the basis for new, further descriptions. The relationship between the rudimentary descriptions or indications of an object and the following descriptions are dynamic and depend on the process of the (specific) discourse (§72). If there is no consensus about the rudimentary descriptions, the discourse itself changes into a meta-discourse, a reflective discourse, etc. (§73). This is a relevant clarification, as both theory and empirical research are based on neutralistic descriptions so far (and not on objects with an identification of their own).

Striving for knowledge or truth in dualizing epistemology implies a preference for correspondence of propositions or descriptions with reality, objects or with a given system of propositions over deviations, which are treated as false descriptions (Mitterer 1993, §94). In a non-dualizing way of speaking, correspondence or coherence cannot be a criterion for truth. Instead of a pursuit of truth (that results in invariance, standstill and maintenance of the status quo), non-dualizing philosophy prefers a pursuit of change (§97).

“Reality in a non-dualizing way of speaking is the ‘way things are at the moment’, the achieved positions in discourse, the descriptions so far which cannot be continued, changed or developed (yet). The consistence of reality is determined by the course of descriptions” (Mitterer 1993, §98, my translation).
Mitterer’s denial of truth as a trial to find evidence outside (scientific) discourse follows the same logic as Heinz von Foerster’s argumentation: “Truth is the invention of a liar,” is the title of his long interview with Bernhard Pörksen (von Foerster & Pörksen 2004). Like Mitterer, von Foerster denies any notion of truth, either as correspondence with reality or as consistency within scientific theory. Von Foerster’s aim is to diminish truth completely, as it separates human beings into those who are right and those who are wrong and this separation is a lie itself (cf. von Foerster & Pörksen 2004, p. 29).

Similar to Mitterer, von Foerster primarily looks at the consequences that claims of truth have. Both insist on the position that claiming the truth leads to fatal consequences including even war (cf. von Foerster & Pörksen 2004, pp. 30ff).

Mitterer’s argumentation seems to suggest an identity between the use of language and its meaning, which may cause a reification of language. Mitterer criticizes constructivists’ use of “reality” and “viability” as dualist remainders of constructivism. But perhaps “reality” in a constructivist sense does not mean the same or is not used the same way as it does/is in a realistic sense. Of course Mitterer would or could assume another dualism here—caused by dualizing the use of language and its substantial meaning. However, the difference between different usages of the same semantic (here, “reality”) can also be modelled within a non-dualizing pragmatic framework because different usages (of the same linguistic expression) indicate different communicative claims within (epistemological) discourse.

For a realist, reality or objects are the arbiters of whether our theory is true or not. From a constructivist perspective, reality is a construction deriving either from a computation by our nervous system (biological or psychological reality) or by communicative processes within a (scientific, religious, economical or public) discourse (social reality). Mitterer reconstructs the constructivist position as a two-step epistemology: first, descriptions constitute the object, then, after the constitution of the object, this object can be interpreted in different ways (cf. Mitterer 1993, §71). I do not agree with Mitterer’s assertion that constructivism (he uses the term idealism in this thesis) fundamentally distinguishes between constitution and interpretation. A radical constructivist perspective can be called radical because it is process-oriented, which means that every constitution is a construction (interpretation) and vice versa. Otherwise, we would be better to call this position reconstructivism, which is a moderate kind of realism rather than (radical) constructivism. With regard to the scientific value of “reality,” a constructivist argumentation would not even agree that the “constructed reality” has the power to decide whether a theory is true or not. Instead, constructivists talk of a second-order observation because participants of a discourse have come to the conclusion that they have achieved a consensus about theory-driven first-order observations. Mitterer’s technique of observing (scientific) discourses corresponds with the constructivist concept of second-order observation.

Mitterer’s main practical goal seems to be to show the hidden assumptions of dualizing discourse and the power mechanisms working within dualizing discourses (cf. Mitterer 1999, §13). If I am right, a constructivist second-order observation and a constructivist epistemology have the same goal. As a consequence, the difference between non-dualizing philosophy and constructivism seems to be overestimated, at least in a practical sense, when doing empirical research. Either radical constructivists are non-dualists themselves or they follow a dualizing argumentation of a kind that does not have the same fatal consequences that a realistic dualization has. In the latter case, Mitterer’s argument that there is a fundamental difference between dualizing and non-dualizing philosophy should be toned down because the differences within dualizing philosophy are too big to ignore (as Mitterer does). These differences within dualizing philosophy interfere with the main difference between non-dualizing and dualizing philosophy so it would be better to gradualize the differences between dualizing and non-dualizing philosophy and not dichotomize them.

As a consequence, I want to show that both non-dualizing philosophy and constructivism come to the same conclusions about the pragmatics of empirical research. Mitterer’s strong argument that philosophy cannot escape arbitrariness is “true” in a logic sense. From a socio-logical perspective, both society and science can theoretically be modelled as social systems and thus try to reduce arbitrariness with the help of rules and norms. In the following paragraphs I want to show how this mechanism works in the case of the relationship between theory and empirical research. Mitterer’s non-dualizing epistemology is very helpful for this argumentation but a constructivist epistemology is helpful too (unlike a realistic perspective).

The relationship between theory and empirical research in non-dualizing philosophy

It is to Stefan Weber’s merit that he draws conclusions from non-dualizing philosophy for the practice of empirical research. Instead of the usual dichotomies of theory vs. practice, theory vs. empirical research or theory vs. method(ology), Weber (2000, pp. 71ff) suggests a mutual constituency of four scientific components: theory, method(ology), empirical research and practice. Although he follows constructivist definitions of the four components, he maintains distance from both realism and constructivism with regard to the relationships between these four components. Scientific reality emerges from the circular, process-related, dynamic and contingent relationship of theory, methodology, empirical research and practice.12 Weber’s main suggestion for practical empirical research is to separate fundamental empirical propositions (such as “reality is constructed by observers”) from empirical hypotheses on trends. Dichotomous concepts such as self-reference vs. external reference, autoepoiesis vs. heteropoiesis, autonomy vs. heteronomy, etc., result in binary ontological schemes and should be replaced by gradualized empirical concepts. Gradualization does not neglect dualization but replaces fixed descriptions so far (“mass media construct a reality of their own,” “social systems are autoepoietic,” etc.) with empirical descriptions from now on (“mass media descriptions of reality are more or less constructed or authentic,” “social systems are more or less autopoietic or heteropoietic,” etc.). Gradualization can also be understood in a time-related sense: autopoietic systems have not always

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been autopoietic but have emerged from society in a historical process (cf. Weber 2000, pp. 79–88; Weber 2005, pp. 333ff).

These replacements decrease the gap between abstract and logic-driven theory and empirical research because theoretical hypotheses including gradualized concepts better match empirical research than abstract or logic concepts, which cannot be tested. As a consequence, the revised understanding of theory (which, by the way, comes very close to Popper’s understanding of rational hypotheses) cancels the dualism between theory and empirical research and guaranties equality for both modes of description. This distinction between a philosophy of thinking and empirical practice of observation is suggested not only for constructivism but also for non-dualizing philosophy (cf. Weber 2005, p. 338, p. 343).

Practical goals of a non-dualizing science would be a de-dualization or de-dichotomization of binary positions in many scientific discourses. Although even non-dualizing philosophy includes the logic of distinctions, these distinctions do not reinforce dualisms in the sense of dichotomies (cf. Weber 2005, pp. 351ff).

Although I agree with Weber’s attempt to build a bridge between (abstract) theory and (concrete) empirical research, I am afraid that Weber’s solution leads to a new problem because there is now a new gap between abstract or logic-driven theories (such as philosophy or theories of society) and empirical hypotheses. Should we, therefore, abandon constructivist logic?

Some of the abstract and logical concepts, such as self-reference, autopoiesis, autonomy, etc., can be considered a starting point for empirical observation. If I want to observe a social system, I have to assume that this system can be observed as a system. Therefore, I will observe it from the starting assumption of autopoiesis (unless I observe an object that cannot be considered a system but that might be any other kind of object).13 When carrying out empirical research I may come to the conclusion that the autopoiesis of the system observed is not a strict one but one that has to be gradualized because the structure of the system is determined by many internal and external factors. My suggestion comes down to a dual use of the concepts “autopoiesis,” “self-reference,” etc., and I think this is not very far from Weber’s concept of gradualization (cf. Loosen, Scholl & Woelke 2002).

However, there are terms or concepts that cannot be used in an empirical sense. One of these terms is “construction.” Mitterer and Weber criticize that the way of speaking of “construction” is just “a façon de parler” because everything is a construction. They ignore the constructivist distinction between first-order observation and second-order observation. In everyday life we are realists and do not doubt that our observations represent the object/world/reality observed as it is. It is only second-order observation that observes that an observer has observed the object/world/reality. Only from this perspective do we consider an observation construction. But the term or concept of construction is not the opposite of (correct) representation because all representation does strictly relate to an observer. It is not possible to state a proposition about correct or false representation.

### The relationship between theory and empirical research in constructivism

In the following I will try to explain my understanding of constructivist epistemology with regard to the relationship between theory and empirical research. These elaborations base on the position Schmidt (1998) has developed.

First, theory is not conceived of as narrow, as it is in critical rationalism. From a critical rationalist’s point of view, theory has to be rational before it can be tested with the help of empirical research. Rationality of a theory means that all hypotheses derived from theory can be tested empirically. As a researcher I have to legitimate the rationality of my hypotheses in advance. From a constructivist perspective, the rationality of a theory or of hypotheses is a product of scientific discourse and not its presupposition because the relationship between theory and empirical research is contingent. Maybe a theory cannot be tested empirically so far, but it is possible that either theory or empirical methods will be developed in a way that this theory can be tested from now on.

Empirical research operates with facts (objects made) rather than with data (objects given). It stabilizes scientific observation by depending on methods and methodological rules that are valid (so far) and accepted within the scientific community (cf. Schmidt 1998, pp. 124ff). Stabilization also includes reduction of complexity and trivialization (sensu Heinz von Foerster) (cf. Schmidt 1998, pp. 125ff, pp. 140f). Probably Mitterer would suspect a kind of dualism behind the notions “complexity” and “trivialization”, a kind of substratum of reality. In fact, complexity and trivialization do not relate to a real world outside the (scientific) discourse, but characterize the comparison of two descriptions: a scientific description resulting from empirical research and a non-scientific description resulting from interviewees in an interview or from a text in a text-analysis. As both interviewees’ responses in an interview and textual interpretations in text analyses or content analyses are contingent, a specific scientific interpretation is only one possible interpretation from many other possibilities. If a constructivist uses the terms “complexity,” “reduction” or “trivialization,” he need not refer to an object as a substratum (surrogate) of the “real world” but to the comparison of several possible descriptions. Scientific description is just one of these and is determined by methodological rules that are, as abstract rules, consensus in scientific community.

Introducing theory into the process of scientific knowledge makes the argumentation even more complex. According to Schmidt, who characterizes theory and empirical research as two sides of a coin or two aspects of a complex totality, there is no theory without elements of empirical evidence and no empirical evidence without a theoretical framework. Indeed, it is only theory that makes empirical observations possible. Theory consists of more abstract propositions following certain rules (e.g. rules on how hypotheses have to be formulated or established). Empirical research consists of descriptions that are much more detailed and concrete (less abstract), although they follow certain rules (e.g. methodological rules written down in textbooks or known from scientific experience). Both theory and empirical research result in (different kinds of) description of an “object,” which in sci-
ence is a subject or topic rather than an object.

In critical-rationalist philosophy, empirical research is an arbiter of theory (of propositions in the form of hypotheses). This view presupposes that empirical research refers to an object itself. Although even realists do not think that empirical observations immediately reflect reality or objects in reality they suppose that rudimentary descriptions of an object are “closer” to the object itself than advanced, theoretical, abstract descriptions. Mitterer criticizes that this assumption cannot be founded but only be presupposed as given. Consequently, empirical observations or descriptions are also descriptions of an object (although different kinds of descriptions rather than theoretical descriptions) and therefore cannot be used for falsification. Despite Mitterer’s sceptical attitude towards constructivism, his philosophical position fits the constructivist position with regard to the relationship between theory and empirical research.

I will try to work out this argument. Accepting a theory or hypothesis is a question of consensus within the scientific community. This consensus includes several elements. First, the researchers have to refer to the same tools, methodological rules and their applications. Then, the researchers have to refer to the same subject or matter of interest. Furthermore (and probably not finally), they have to accept that the theoretical hypothesis raised matches empirical research on this hypothesis. Disagreement may occur if the method used is controversial, if the hypothesis is not accepted as a rational proposition, or if the method used is supposed to be unsuitable to test the hypothesis under question, etc. In sum, scientific consensus is related to the relationship between theory and empirical research and may include both verification and falsification of the hypothesis by empirical results. There is no need for correspondence or coherence in a logical or ontological sense because consensus is a matter of the social procedure of doing scientific research. Schmidt (1998, pp. 152ff) has pointed out this “action-related” understanding of (doing) empirical research is from a constructivist point of view, which I think entirely fits the non-dualizing position because it avoids referring to a world beyond (scientific) discourse. It would be a misleading interpretation if an action or discourse approach was assumed to prefer consensus and standstill to disagreement and change. Both results are possible.

We have to go one step further to describe an alternative understanding of the relationship between theory and empirical research to the classical understanding, which attributes to empirical research the role of an arbiter of whether a theory is true or false. The critical rationalist’s understanding of the relationship between theory and empirical research is characterized by the preference of logical deduction to logical induction. We start with a hypothesis and try to find out (with the help of empirical research) whether it is true (provisionally or so far, definitely and not for ever) or false. Qualitative methodologists have often challenged this view as only half of the “truth” and as not typical or even not relevant for actual research procedures. They prefer an inductive (or abductive) logic, which does not start with explicit but with vague hypotheses that will become more detailed, more complex and better adapted to the data in the course of empirical research. In this view the research process is not linear but can be described as a spiral leading to better understanding of the phenomenon (subject, object, topic, problem etc.) under study. This seems to be a typical constructivist view of research and scientific discourse. But there is a danger of dualization within this argumentation, too. Again, the data (empirical descriptions) are characterized to be closer to reality (beyond scientific discourse). The term often used for that is “authenticity.” Interviewees’ responses to open questions (within in-depth interviews rather than standardized interviews) or text interpretations (within hermeneutical text analysis or qualitative content analysis) seem to be more realistic, more valid, or nearer to the meaning constructed by the interviewee or by the text.

From a constructivist perspective, this argumentation is misleading, as we do not know if there is an original perspective (description) of the interviewee, the text, etc. or if we can reconstruct it. What we do know is that we include interviewees and texts into the process of empirical research to gain (further) scientific knowledge and discourse. Siegfried J. Schmidt (1998, pp. 155f) characterizes the scientific discourse as a self-explanation including external references. Thus the term “external references” does not mean the assumption of a world outside and beyond the discourse but the self-referential and self-perturbing mechanisms. Self-referentiality and external referentiality are two sides of a coin, two kinds of strategy for carrying out descriptions of objects (within scientific discourse).

The practical difference between qualitative and quantitative methodology is the observer’s visibility within the research process: a qualitative methodologist (in his/her role as interviewer, text-analysist, participant observer, etc.) is gradually more visible than a quantitative methodologist (cf. Pörksen 2006, p. 107). Pörksen argues that the observer’s status can neither be eliminated from a research procedure nor from research process as a whole. Thus, particularly quantitative methodologists who rely on a realistic epistemology are wrong with regard to their role within empirical research. The introduction of an observer to the process of empirical research seems to be an ontological decision in itself. From a non-dualizing perspective, we better express this matter of fact like this: The (self-) description of a qualitative or constructivist methodologist as a visible observer corresponds to and defines the observer’s role in the research process as more subject-related. As a consequence, the quantitative or realist methodologist is right when he neglects his (active) role as an observer in his (self-) description but constitutes this role as subject-independent with the help of his (self-) description. Scientific discourse itself decides whether the observer’s role in the process of empirical research is an issue of relevance for the validation and interpretation of the empirical results or not.14

What are the consequences for a constructivist understanding of methodology and methods, then? Bernhard Pörksen (2006, pp. 105–118) asks some important questions a constructivist has to answer when doing empirical research and discusses different answers to these questions: (1) Do methods and methodological tools have to be changed according to the epistemology or methodology preferred? (2) Do the results of empirical research have to be interpreted in different ways according to the epistemology or methodology? (3) Can methods of different epistemological and methodological origins and bases be combined?
Although the answers to these questions are debated controversially, I prefer a position that I think is closer to the non-dualizing epistemology than the opposite position. As the relationship not only between theory and empirical research but also between theory and methods or methodology is contingent, it is not possible and not necessary to draw strict conclusions from epistemological standpoints for the use of methods and methodological tools. On the other hand, this relationship is not an arbitrary one. The answers to the questions raised above are no-yes-it depends: (1) Constructivists do not have to develop their own methods and tools of methodology. Of course, they can apply methods that are developed from the perspective of a realistic epistemology if (2) they keep this realistic origin in mind and interpret the empirical results obtained from these methods within the constructivist epistemology. However, it is reasonable to evolve methods that were established within a realistic epistemology towards constructivism.13 3) Qualitative methodology seems to fit constructivism, quantitative methodology seems to fit realism. A combination is possible if the epistemological differences are ignored pragmatically or if the results of this combination are interpreted within constructivist epistemology (cf. Loosen, Scholl & Woelke 2002; Scholl 2008a, 2008b).

In sum, the debate of the epistemological origins of and consequences for methodology and methods is a second-order debate, which in practical empirical research does not play a role unless there is a methodological debate about the application of methods or the interpretation of the empirical results. From a non-dualizing perspective, this debate can be delegated to a meta-discourse within science. This meta-discourse regulates the relationship between theory and empirical research and between theory and methods. An interpretation of these relationships that satisfies both non-dualizing epistemology and constructivism can be the description of what is going on (and not what should be going on) in the research process.

Specifying empirical research by differentiating between qualitative or open research methodology and quantitative or standardized research methodology reflects the process of refining. Following a qualitative access to research practice implies keeping as much complexity of the phenomenon observed as possible to the first stages of the research process (data inquiry) and reducing complexity in the later stages of the research process (data analysis). Within the framework of a constructivist epistemology, this openness to the phenomenon under study is often misunderstood as a more authentic approach, although it only means a higher degree of complexity and refinement at the beginning of the research process, but one that will be reduced and abstracted at the end of the research process (cf. Scholl 2008a).

Following a quantitative access to research implies reducing the complexity of observation immediately at the beginning of the research process by standardizing the methodological rules and tools of methods, which leads to a less refined mode of observation. In the analytical stages of the research process, complexity is refined by the use of complex statistical tools. Standardizing methods is often misunderstood as a necessary and sufficient condition for comparison between research objects, e.g. respondents within surveys or observation units within observational methods (cf. Scholl 2008b).

Conclusion

Non-dualizing epistemology is a challenge for both of the opposing epistemologies, constructivism and realism. However, I have argued in this article that most of the non-dualizing criticism of these epistemologies is relevant for realistic epistemology because constructivism and non-dualizing philosophy have more in common than non-dualizing philosophy and realism or constructivism and realism. Thus, I challenge the claim of the equidistance of non-dualizing philosophy from constructivism and realism. Reconstructing Mitterer’s argumentation, particularly his position towards the research process and the relationship between theory and empirical research, shows that non-dualizing philosophy should not only be used as a critique of constructivism but can also be used to clarify constructivist positions. Mitterer’s “exaggerations” of the difference between non-dualizing philosophy and constructivism are probably caused by the variety of constructivist approaches, including lots of internal differences.

The general idea of this article is that empirical observation refines and adjusts theoretical observation. Doing empirical research in comparison with theoretical statements implies a permanent check and balance between abstraction and concretion. The mutual relationship between theory and empirical research is characterized by stabilization and by irritation or perturbation. This should be consistent with non-dualizing and with constructivist considerations.

In sum, we can learn from non-dualizing philosophy that the relationship between theory and empirical research is not a kind of mutual validation to get better knowledge of a world outside but the relationship could better be characterized as refining observation and balancing abstraction and concretion of scientific observation. The gradualization of complexity best describes this relationship.
Notes

1. It should be mentioned that in a non-dualizing way of speaking the notion of falsification cannot claim the same logical status as it does in critical rationalism, although in the case of controversial descriptions of an object, it is almost inevitable to talk of “true” and “false” statements within a discourse. The attributes “true” and “false” should not be understood in a strict logical sense, as they are products of a discourse or debate and not the result of necessary qualifications of a (theoretical) statement with the help of criteria beyond this discourse (such as object, reality, etc.).

2. According to Mitterer, this criticism does not only concern realistic philosophy but also constructivist or idealistic philosophy because it does not matter whether the object is given before its description or is produced by language (cf. Mitterer 1993, §66).

3. Mitterer’s position, in this case, resembles a theory of autopoietic social systems, which assumes that the scientific system (or discourse) is autonomous and self-referential. The system’s relationship to objects of its environment is characterized by a system-determined construction of the objects in its environments (cf. Luhmann 1990). According to Mitterer the objects have no independent identity but are already (so far) described with the help of the system’s language.


5. There is only one exception: with regard to the analysis and problematization of dualistic presuppositions, Mitterer labels himself a constructivist (cf. Mitterer 1999, §21).

6. However, I entirely agree with Mitterer’s critique of Maturana’s principles of scientific explanation (cf. Mitterer 1993, pp. 131ff). Maturana’s criteria fail to distinguish between scientific and non-scientific explanations. They only show that science is a kind of social system (according to Niklas Luhmann’s theory of social systems) with its own code for deciding which explanations can be called scientific and which cannot. Obviously such systems are self-referential, and the border between the scientific system and its environment is a matter of social processes, including mechanisms of social influences, power, etc. (cf. Luhmann 1990).

7. In his critique of constructivism even Mitterer (1993, pp. 146f) admits that the change of perspective from the object of knowledge to the process of developing knowledge is much closer to a non-dualizing epistemology than to a realistic position. I do not know whether Mitterer accepts Schmidt’s turn to a new constructivism that tries to react to non-dualizing objections and to integrate non-dualizing argumentation (cf. Schmidt 2003). It is Weber (2005, pp. 231ff, pp. 298ff) who still detects passages in Schmidt’s book that he considers as ontological remainders in Schmidt’s argumentation. Obviously, Schmidt’s constructivist philosophy and Mitterer’s non-dualizing philosophy do not merge entirely.

8. Weber (2005, pp. 266, footnote 7) argues that it is almost impossible to develop a non-dualizing way of speaking without inventing an artificial language (examples are presented on p. 293, footnote 22). If a participant in a discourse uses words like “probable” or “presumable” (instead of “obvious” and “evident”), is he then a non-dualist? Or the other way around: are words such as “evident”, “obvious” etc. really (necessary or sufficient) indicators for a dualizing way of argumentation or are they simply habitually used words? Does communication (pragmatic aspect) merge into language (semantic aspect)?

9. Pörksen (2006, p. 101, footnote 235) offers a didactic explanation for a sometimes inconsequent use of language: Maturana’s aim is to make people who are not used to thinking in such unusual terms and concepts understand the constructivist position.

10. Weber (2005, p. 284) supports Mitterer’s thesis of a fundamental difference between non-dualizing philosophy and constructivism when he points out that viability is a criterion used to decide whether a (new) description fits a constructed reality, whereas non-dualizing philosophy compares or confronts old and new descriptions. New descriptions of an object result in new objects described; they are not mere constructs. If we understand viability as a communicative criterion it only means that discourse participants agree with their constructions. Thus, constructed reality in a constructivist sense is a described/discussed reality, which comes very close to non-dualizing descriptions of objects. Furthermore, viability significantly differs from truth, as two (or even more) different perspectives may both (all) be viable constructions. Eventually, viability, in contrast to the criterion of truth, does not necessarily serve as a strict criterion for excluding other perspectives than those already accepted as viable.

11. However, Weber (2005, p. 267) insists on the difference between the constructivist concept of second-order observation or the logic of a blind spot and Mitterer’s concept of suspicion of a false observation (“Falschwahrnehmungsverdacht”), which means that every new observation is suspected to be false or illusionary. Weber prefers Mitterer’s concept to the constructivist concept of the blind spot because it is entirely free of ontological presuppositions. But is this argument suitable for a fundamental critique of constructivism or is it just a way of using language differently?

12. Again, Weber’s concept of an auto-constitutive relationship is similar and comparable with a constructivist or a system-theoretic position, although Weber postulates a difference.

13. Weber (2000, pp. 82f) denies that starting assumptions, like definitions, should imply autopoiesis because whether a system can be characterized as autopoietic or not should be open to empirical research. Avoiding circular argumentation is necessary within critical rationalism, which describes the process of research as linear. But Weber himself conceives empirical research as an auto-constitutive process. Theory and empirical research cannot strictly be separated. Weber’s solution of starting with the assumption that a social system can be defined as a “form” within a “medium” just shifts the problem of fo-
cussing the observation: What are the borders of a form? What do I observe if I observe the form (of what)?

14. Methodological arguments about the adequacy of either quantitative or qualitative methodology within empirical research often start with the subject-object relationship. This dualism need not be restricted to subject vs. object but can also be referred to different cultures (researchers’ cultural background vs. research object’s cultural background) or to the difference between a scientific system and its focussed environment, etc.

15. I cannot elaborate this argument here as developing methodological tools in detail is a practical matter (cf. Görke 2006; Moser 2004).

References


Suhrkamp: Frankfurt am Main.