Research Design – Composition, Configuration and Interdependencies

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In this essay I will present an integrative view on research design. I will introduce what I take to be the skeleton components of any research design within the social sciences, i.e. the elements of research question, philosophy of science, methodology, method and data. With this as my point of departure I will go on to focus on a presentation, a discussion and an evaluation of a new appreciation of the interdependencies of the elements in the research design. An appreciation that favors a relational rather than an atomistic outlook and which gives rise to an ecological conceptualization of research design. A research design, in other words, which promotes plasticity and fluidity over adherence to static protocol. And which, at the same time, does not relinquish control over project-relevant, multifaceted decision-making processes – and their respective interdependencies – but which deliberates each and every one of them. The aim of the paper is twofold. At a more abstract level, it aims at paving the way for establishing a reflexive approach to research design which, in turn, would be in tune with the tenets of the field of Organizational Knowledge Communication (e.g. Kastberg, 2014). At a more concrete level, it aims at presenting an idea of research design which would – hopefully – be an inspiration to (young) scholars.

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1 RESEARCH DESIGN: TOPOGRAPHY AND COMPASS[1]

In an essay about research design it seems quite appropriate to begin by answering the question why we – students and faculty alike – need to establish and to adhere to a research design when conducting our research. This done, I have levelled the playing field, so to speak, before I proceed to present and discuss the composition of the elements of the research design as well as the relationships between these elements. In order to do so, I begin by taking a step back to 1912 when Bertrand Russell, philosopher, mathematician and Nobel Prize laurate in Literature, posed a seemingly simple question:

> *Is there any knowledge in the world which is so certain that no reasonable man could doubt it?*(Russell, 1912: n.p.)

As it turns out, the answer is a resounding 'no'[2]. Russell demonstrates this by pondering the 'reality' of the/a table, a seemingly inconspicuous everyday object. The table is, in fact, many things, e.g. contingent on the person sensing it, the sense(s) employed in sensing it, the situation in which person and table are put, the context in which the table is used, etc. In what may count as a follow up – i.e. in his 1926 Encyclopedia Britannica entry "Theory of Knowledge" –, he polemically, as it turns out, proposes this definition of certain knowledge: "Knowledge might be defined as belief which is in agreement with the facts". This definition, however, is then immediately followed by the concession that:

> *The trouble is that no one knows what a belief is, no one knows what a fact is, and no one knows what sort of agreement between them would make a belief true.*(Russell, 1926: n.p.).

If a primary *raison d'être* of conducting research is the production of (specialized) knowledge – and to me it is – then Russell's "trouble" is a problem for all research and all researchers. From his insight, in essence, spring two things: Firstly, it hints at the core elements of a research design (and the relations between them); secondly, it points to the reason why we need to consider a research design. I will address both on the following pages. If we paint with a very broad brush, then, to some researchers – and to some branches of research – knowledge (be it labelled scientific, valid, sound, founded, warranted, true, etc.) is a matter of whether or not one's theory represents, corresponds to or is in agreement with facts "out there" (Law, 2004). To other researchers – and to other branches of research – knowledge does not come about as the result of representation/correspondence/agreement but as a result of, say, "viability" (Glasersfeld, 1998 et passim). To researchers of this persuasion any conceptual structure, or even a theory, is considered "viable" as long as it is useful in accomplishing a task or in achieving a goal that one has set for oneself. (Glasersfeld, 1998: 23)

Despite obviously promoting radically different ideas about knowledge per se and the relationship which would produce it, both groups of researchers, both branches of research, unquestionably produce what they would call (scientific, valid, sound, founded, warranted, true, etc.) knowledge. Paradoxically, that does by no means imply that they necessarily recognize, let alone accept, the respective other's knowledge, nor necessarily the respective other's approach to producing knowledge. Apart from the observation that research branch-internal truisms rarely travel, the heart of the matter is that there are differences (I will return to some of these differences at a later stage). If there were an algorithm, which would produce "knowledge … so certain that no reasonable man could doubt it", an algorithm all researchers and all branches of research could accept and adhere to, then we would not experience "troubles" of Russell's kind. Or, put differently, if all researchers were in agreement about what constitutes (scientific, valid, sound, founded, warranted, true, etc.) knowledge and how to produce it, then it would not make much

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[1] I would like to extend my warm thanks to my colleague, Mia Thyregod Rasmussen, for invaluable comments to an earlier version of this essay.

[2] Two things should be added here: First of all that Russell's example of the table naturally alludes to Plato's allegory of the cave in the sense that the issue at stake here is that of appearance vs./and/or reality, of perception vs./and/or conception. Secondly, that Russell was or became convinced that (his form of) logical positivism would provide not only the answer to this question but indeed answers to all (in his view: legitimate) philosophical questions. In his magnum opus "History of Western Philosophy" from 1946, logical positivism to him does in a sense become a sort of "the end of philosophy" much akin to Francis Fukuyama's "The End of History" (1992).

sense to talk about research design at all, because there would be only one – and in this case one would mean none.

But since that is not the case, we generally have to justify our 'certain knowledge' and the way in which we produce it. Even if it may sound somewhat defensive, a research design is a cornerstone of one's discourse of justification as a researcher. Regardless of what branch of research, discipline or epistemic community one has been socialized into, this academic socialization leaves a deposit – in a Deweyan sense. For the purpose of this essay, the deposit we are looking for is that of how to do good research. Whether it has been implicitly understood or explicitly communicated, researchers and their research adhere to an idea or a collation of ideas sketching out what it means to do good research. In my view, the research design is fundamentally an institutionalized and sanctioned version of this idea or this collation of ideas. As such, it serves a variety of purposes; the primary one, as I see it and as hinted at above, is that of justifying. Acts of justifying (e.g. our choices, our claims, conclusions, methods, etc.) not only permeate but indeed structure much of the academic discourse. Let us look at three core examples. Research-internally, i.e. in one's own research community (be it at a department, in a discipline or paradigm, etc.), adhering to a conventional research design, i.e. literally a research design that lives up to the conventions of the community in question, is testimony to the fact that a researcher counts him- or herself among the scientific orthodoxy (and, needless to say, for most scholars – not merely young scholars – belonging to a research community is pivotal). As recognition implies re-cognition, adhering to research design conventions, in turn, allows the community to re-cognize the research as legitimate. Research-externally, i.e. outside of the confines (and the safety) of one's own research community, a research design also has an important role to play. Here it plays the role of a sort of common denominator. Even if scholars from other fields of research do not re-cognize one's research content or even if they find one's research agenda uninteresting, they do – mutatis mutandis – re-cognize the format of the research design. The reason behind this being that even if research may be carried out differently – indeed, even if the notion of what constitutes interesting or relevant research may differ radically – the idea that research progresses along a conventional line of thought is probably axiomatic. The recognizable, generic format of the research design being that of "the action plan or blueprint" (Kuada 2012:57). Last but certainly not least, for the individual researcher having a (re-cognized) research design is highly supportive in the process of actually conducting research. In that capacity the research design is both topography and compass. As topography it displays all major features of the research project as well as sketch out their internal configuration. As a compass it gives directions as to the directionality of the research to be carried out; and in doing so also situates and positions the researcher. Both qualities (as topography and as compass) in turn serve the higher purposes of consistency and control. Before the research process begins, the research design is a promise, during the research process the research design is a guideline, after the research process has ended the research design is a reminder of what was done, how and why.

1.1 A Necessary Digression – Academic Socialization

The above-mentioned Russell once asked the question "what is natural?" and – true to form – gave the answer himself: "Roughly speaking, anything to which the speaker was accustomed in childhood" (Russell, 1996[1925]:39). What Russell is referring to here is that how one appraises something as being 'natural' – or not – is a function of one's socialization. If we translate this idea of what is 'natural' to us as researchers, then 'natural' hinges on the academic frame of reference we have been socialized into – be it in terms of philosophy of science, theory, methodology, method or data. Turning to disciplinary socialization, i.e. traditions, culture, dos and taboos, etc., of the discipline in question, talking about how we appraise what is 'natural' (e.g. what is 'right' or 'wrong') spurs the insight that there is no standard outside of the disciplinary frame of reference with which to gauge the 'rightness' or 'wrongness' of said discipline's doxa (in a Bourdieuian sense) – whatever shape that doxa may come in. Lacking an Archimedean Point, in other words, and thus acknowledging (as Luhmann famously put it) that there is no external observer, implies that we cannot take for granted that neither the processes of academic appraisal nor the academic values adhered to are super-disciplinary (let alone universal). Distancing

myself from a super-disciplinary or universal standard echoes Berlin's critique of (classical) Positivism and its search for:

> … *one complete and all-encompassing pyramid of scientific knowledge; one method; one truth; one rational, 'scientific' value scale. This naïve quest for unity and symmetry at the expense of experience is something we still struggle with"*. (Berlin, 2005: 55)[3]

This general acceptance, however, of local doxa does not echo with provincialism, neither does it give rise to rampant randomness (or postmodern paralysis) when evaluating instances of research, it merely states two things. That a) academic appraisal is relative to whatever criteria we impose on it, and that b) we tend to adopt a certain set of values into our academic identity (as a by-product of our academic socialization). Especially the latter may serve us as a caveat when it comes to trying to exhume and reflect on our own blind spots – be they of a more general academic nature or project-related.

2 COMPOSITION AND CONFIGURATION

In this section of my essay I will first present and discuss what I consider to be the core elements of any (social sciences) research design. As I hinted at above, the quote by Russell entails a sort of proto-research design; by that I mean that he lists crucial elements of research, i.e. knowledge, belief and fact, as well as the condition that between them some sort of relationship must exist or be made to exist in order for the elements to produce knowledge (be it labelled scientific, valid, sound, founded, warranted, true, etc.). In line with the current, dominant view (e.g. Grix, 2002, Robson, 2002, Blaikie, 2010, Vogt et al., 2012, and others), the skeleton structure of any (social sciences) research design is made up of five components[4]: Research question, philosophy of science, methodology, method and data. I will proceed to present and discuss each element (sections 2.1 to 2.5); I will address their (inter-)relationships as I progress and sum them up in section 3.

2.1 Research Question

John Dewey is famous for having coined the phrase that we only think when we are confronted with a problem. What he refers to here is thinking of a special kind, namely reflective thinking, which I will come back to, but before that it is important to come to terms with Dewey's notion of a problem. For Dewey a problem – sometimes he talks about a question instead – is basically anything that "perplexes and challenges the mind" (Dewey, 1933: 12-13). It is only once this perplexity, this challenge is consciously acknowledged that reflective thinking can begin. Dewey goes on to say that:

> … *reflective thinking … involves (1) a state of doubt, hesitation, perplexity, mental difficulty, in which thinking originates, and (2) an act of searching, hunting, inquiring, to find material that will resolve the doubt, settle and dispose of the perplexity.* (Dewey, 1933: 12)

Reflective thinking, then, begins with "doubt, hesitation, perplexity, mental difficulty" and ends – at least provisionally – at a place where the doubt etc. has been settled. In essence, reflective thinking – as contrasted to other forms of thinking – is explicitly goal-oriented; in the sense that it aims at closure or conclusion – or, at any rate, an acceptable degree of saturation. In sum, it appears that what Dewey calls a problem (or a question), is very much in line with what we would call a research question[5], and that reflective thinking is very much in line with a systematic way of answering said question[6]. The research

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[3] My translation of the Danish: "… én fuldstændig og altomfattende pyramide af videnskabelig viden; én metode; én sandhed; en rationel, 'videnskabelig' værdiskala. Denne higen efter enhed og symmetri på erfaringens bekostning døjer vi stadig med" (Berlin, 2005: 55).

[4] The roots of which may be traced back to Russell's proto-design (above).

[5] Under the label "research question" I subsume any utterance that serve as impetus for conducting research, whether it be called research question, hypothesis, problem statement, agenda or the like. For good presentations of the differences etc., see for instance Cresswell, 2014, and Alvesson and Sandberg, 2013.

[6] For Dewey, ever the pragmatist, the undercurrent to this is a problem-solution logic.

question's status of being both the Alpha and the Omega of any research project is accentuated in one of the many slogan-like statements which Heinz von Förster, one of the founders or 2nd order cybernetics, was renowned for producing, namely that the way in which a question is asked, determines the way in which an answer may be found. Blaikie elaborates congenially on the same idea when he states that:

> It is only through the use of such [research] questions that choices about the focus and direction of research can be made, that its boundaries can be clearly delimited, that manageability can be achieved and that a successful outcome can be anticipated. Establishing research questions also makes it possible to select research strategies and methods of data collection with confidence. In other words, a research project is built on the foundation of its research questions. (Blaikie, 2010:57)

My own, admittedly rather laconic, point of departure is this: If there is no goal to one's research, there can be no plan – and vice versa[7]. One determines the other. However, this does not mean that one's goal and/or plan cannot change as one goes along; obviously neither is set in stone. As one reads up on relevant literature, if access to data is unexpectedly barred, if new insights and theories deem it necessary, etc., one's point of departure may very well change. Returning to my earlier allegory of topography and compass, it is quite clear that the research question constitutes true north; and – consequently – that once the compass needle points due north, other corners of the research topography fall into place.

2.2 Philosophy of Science – Ontology and Epistemology

At least since Karl Popper (e.g. Popper, 2005[1956]), having a philosophy of science is a standard requirement in order to do research. Philosophy of science is not philosophy proper, or more to the point: It only concerns itself with select aspects of philosophy proper. Furthermore, the aspects in question, i.e. ontology and epistemology[8], are put to use in the service of (a particular) science; i.e. not in the service of philosophy proper nor for the sake of philosophy proper. In its capacity of being in the service of a science it serves as an instrument and being instrumentalized means that it has been designed specifically to cope with certain problems. As a problem-solving instrument philosophy of science is not the entire toolbox, so to speak, but neither does it claim to be. Staying within this image, establishing and maintaining the entire toolbox is a matter for philosophy proper, or – at any rate – for the philosophies and philosophers so inclined[9]. What philosophy of science is called upon to provide, is the philosophical underpinnings of a science (e.g. Duberley et al., 2012). To a researcher this means that his or her research is not subject to an infinite philosophical regress, so to speak. On the contrary, his or her philosophy of science is a sort of last stand or – put more positively – a philosophical safe haven. For the individual researcher – when conducting research – his or her philosophy of science is the ur-point of departure; it is who the researcher 'is' as a researcher. (In lieu of this, a philosophy of science is in many ways akin to the "belief", which Russell mentions above). Who we 'are' as researchers does not come from nowhere, it is part and parcel – even if subconscious – of our academic socialization (cf. section 1.1).

From an analytical perspective, a philosophy of science – as briefly mentioned above – evolves around two generic elements: ontology and epistemology. When we talk about ontology we talk about what the world is to us, how we perceive of the world, i.e. what to us exists. When we talk about epistemology we talk about what we can know about the world and how we can come to know. Let us first have a look at them individually and afterwards in their integration, in their synthesis, i.e. as a philosophy of science. Etymologically speaking ontology has to do with what exists in the world, with what we commonly refer to as what is "out there" (Law, 2004). For philosophy of science[10] this was traditionally understood

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[7] Or even more frustration perhaps: If there is no goal, then all plans are equally good – or equally bad.
[8] Some textbooks add aspects such as, say, axiology, but as I aim for skeleton elements, I refrain from adding any further aspects.

[9] To mind come the grand philosophical edifices of, say, Hegel and Kant.
[10] As well as philosophy proper.

as having to do with facts; but with reference to Russell (above), and an abundance of other scholars, that term, and what it stands for, is highly problematic. So let us begin by saying that ontology typically pertains to tangible and/or observable entities in the world. It could for instance be cars, houses, bees and books. Much research from within the realm of both the natural and the social sciences is dealing with these kinds of entities. But ontology can also be seen to encompass another quality of entities, i.e. intangible and/or inferable entities. For when we say that ontology deals with what the world is to us, we must concede that the world is more than cars, houses, bees and books and the like to us. Let us take a couple of mundane examples. Most of us have probably learned in biology class that humans may be divided into two distinct genders: male and female. That distinction is in essence an ontological one. Most of us have probably also learned that, in real life, apparently this is not – or: no longer – the case. Or at any rate no longer sufficient. When setting up a Gmail account, for instance, you do not only have two choices as far as registering your gender is concerned, but three: male, female and other. That, in turn, is another but equally ontological distinction. The same goes for what Durkheim would probably call social facts. Are social classes, for instance, (still) 'a thing'? To Victorian and Edwardian Britons, to Karl Marx and others they certainly were. Even if democratic welfare states of a Western persuasion may claim to have done away with social classes, according to Savage (2015) distinct social classes do in fact exist (albeit they may not be the same as in earlier times); his investigations has revealed the existence of currently no less than seven social classes in Britain.

Turning to the other component of philosophy of science, namely epistemology, we are talking about knowing, i.e. what we can know about the world. Derived from that very "can", it is also about what status, in terms of certainty, knowledge has or can possibly obtain. To some researchers and some branches of research true, universal and observer-independent knowledge is obtainable – a quality of knowledge which in turn is also the ideal. To other researchers and other branches of research true, universal and observer-independent knowledge is unobtainable – but neither would this be the quality of knowledge striven for in the first place. From these elaborations it goes without saying that whereas there is, generally speaking, an agreement as to the necessity of having a philosophical underpinning to one's research, the ontological and epistemological nature of that underpinning is highly contested. Speaking allegorically, philosophies of science form an arena, the sands of which are virtually littered with the debris of ontological and epistemological hand to hand combat. Evoking a less martial discourse, Presskorn-Thygesen (2013) talks about ontology and epistemology respectively as being continua, and that each continuum exhibits poles. On the ontological continuum the poles may be described like this: To some researchers – to some philosophies of science –, sometimes referred to as ontological realists, there is one observer-independent, real world. To other researchers – to other philosophies of science –, sometimes referred to as ontological relativists, that is not the case. Here ontology is contingent on or relative to an(y) observer's point of view, etc.

The reason why Grix, 2002, Kuada, 2012, and virtually all others place and introduce ontology before epistemology in their descriptions of the elements constituting a research design, is probably rooted in an idea of personal perspectivism (e.g. Ortega y Gasset 1961[1923]: 90) (even if that may not be explicitly stated). The above mentioned ur-point of departure, i.e. who the researcher 'is' as a researcher, has everything to do with said researcher's understanding of and relationship to the world in which s/he lives. For, regardless of whatever else the researcher is, s/he is also always a being-in-the-world (e.g. Heidegger, 1962), or – if you will – an embodied subjectivity in the sense of Danish philosopher and proto-existentialist Søren Kierkegaard.

To some researchers – to some philosophies of science – research can yield true and objective knowledge about the world. Needless to say, this has been – and to a certain degree still is – the ideal of the branches of science which Wilhelm Windelband would originally refer to as nomothetic (e.g. Makkreel, 2016[11]), i.e. sciences where law-like formulae would be the ultimate crowning of the research endeavors. Among the more well-known examples count Sir Isaac Newton's law of universal gravitation and Albert

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[11] For a relative recent and a relative in-depth discussion of the nomothetic vs. ideographic dispute, for which there is no room in this essay, and which has progressed significantly since the days of Windelband, see, for instance, the above-mentioned Makkreel.

Einstein's mass-energy equivalence equation. This algebraic ideal, in turn, is closely linked to an idea of correspondence:

> *Science is not just a collection of laws, a catalogue of facts. It is a creation of the human mind, with its freely invented ideas and concepts. Physical theories try to form a picture of reality and to establish its connections with the wide world of sense impressions. Thus the only justification for our mental structures is whether and in what way our theories form such a link.* (Einstein and Infeld, 1971[1938]:294)

Today, almost a century after this programmatic statement, the quest for linking reality to theory and – more specifically – for linking it in ways that are ever 'truer' and ever more 'objective' (e.g. Popper, 2005[1956]) has lost none of its allure in theoretical physics:

> *Our knowledge, then, mirrors the world. It does so more or less adequately, but it does mirror the world we are living in.*[12] (Rovelli, 2016:68)

In stark contrast to the sciences that Windelband would originally call nomothetic, we find – at the opposite end of the epistemological continuum – what he would call ideographic sciences), i.e. sciences in which contingencies (personal, perspectival, contextual, cultural, historical, etc.) are inextricably linked to both the research per se, the researcher and the research results, in effect rendering obsolete any idea(l) of a law-like, universal knowledge from the get-go[13]. In the words of von Glasersfeld, one of the founders of Radical Constructivism, knowledge of anything is the "subjective constructs of the cognizing agent" (von Glasersfeld, 1990b: n.p.). Evoking Maturana's credo that "everything that is said is said by an observer to another observer who may be him or herself" (Maturana, 1978:31), it becomes evident that the observer or the cognizing agent, in casu: the researcher, takes center stage at this end of the epistemological continuum. From this point of view, the researcher is – and inescapably so – his or her own primary, epistemological instrument. Among other things this implies that correspondence (in the above sense) cannot be the sole arbiter of truth. Von Glasersfeld puts it like this:

> *The test of knowledge, therefore, is not whether or not it accurately matches the world as it might be "in itself" – a match which, as sceptics have reiterated, we could never check out – but whether or not it fits the pursuit of our goals, which are always goals within the confines of our own experiential world.* (von Glasersfeld, 1990b: n.p.)

The knowledge envisioned at this epistemological pole is in tune with exploring the uniqueness of a "thick description" (Geertz, 1973); in turn giving up on claims to law-like universality. It can therefore come as no surprise that, from the point of view of ideographic sciences, truth (as well as objectivity) holds a radically different position than in the nomothetic disciplines. From the point of view of philosophical hermeneutics (Gadamer, 1972), which also situates itself towards the pole of epistemological subjectivism, the notion of truth is boiled down to this:

> *Truth is a property of sentences, and sentences are parts of human language. Since human languages are human creations, so is truth.* (Arnold and Fischer, 1994:65)

In order to embed these relatively abstract notions of ontological and epistemological continua in relatively concrete philosophies of science, a couple of examples are in order. The point of departure for exemplifying reads that the differences of opinion with regards to ontology and epistemology go hand in hand with the fact that there are different philosophies of science. A caveat should be issued here: The philosophies of science that I refer to for demonstration purposes must be understood as prototypes (Kleiber, 1993). In that capacity they do not – in all probability – overlap 100 per cent with what an individual researcher, an individual research programme (e.g. Lakatos, 1978) would subscribe to, even if they were to call it by the same label. All 'lived' philosophies of science probably feature modifications

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[12] My translation from the Danish: "Vores viden afspejler altså verden. Den gør det mere eller mindre godt, men den afspejler den verden, vi lever i" (Rovelli, 2016:68).

[13] Also within sciences that Windelband would probably label ideographic the occasional formulae do pop up. Sociologist Kurt Lewin, for instance, would produce an equation $B = f(P, E)$ which states that behavior is a function of the person and the person's environment (1936). NB the equation presented may, truth be told, be more heuristic than algebraic in nature.

of different kinds. As may be inferred from the above elaborations, the two opposing philosophies of science[14], which we typically would label positivism[15] and constructivism[16] respectively, served as templates for the opposite poles in both of the above continua. To a prototypical positivist the world is real and observer-independent, and researchers have an unmediated access to their objects of study, rendering objective (research-based) knowledge about the world both possible and desirable. To the prototypical constructivist the world is relative to the observer (cf. above), and consequently researchers' access to their object of study is mediated by the observer's perceptual and conceptual interface, in turn rendering both the observer-constructed objects of study and the (research-based) knowledge about the world subjective.

If we designate these two prototypes to inhabit each their extreme end on the two continua, what, then, may be said to inhabit the middle ranges? Hermeneutics, according to Presskorn-Thygesen (2013), could be said to inhabit a sort of ontological middle position. In that sense, hermeneutics, again prototypically, feature what he calls a limited realist ontology. On the one hand the hermeneutic researcher does not have unmediated access to the object of study, say a written text, – access takes place through an interpreter (with what that entails in terms of prior understanding, etc.) – but, on the other hand, the object of study is not a fully-fledged construction (on the part of the researcher). Epistemologically speaking, classical hermeneutics (e.g. in the same vein as Schleiermacher) would strive for "re-experience, re-cognize, and re-think (Verstehen) what the other originally felt or thought" (Arnold/Fischer, 1994:56), the idea being that the researcher could and should enter into the hermeneutic circle of the 'other', in casu: the author, and, based on that, produce research-based knowledge which would resemble some kind of correspondence (cf. above). Contrary to this, hermeneutics of a more current persuasion, adhering to the philosophical hermeneutics of Gadamer (1975), claim that since the researcher – along with everyone else – actually does not enter into the hermeneutic circle, but rather 'lives' in the hermeneutic circle already, s/he can (only) produce subjective, research-based knowledge. Let us end the applications section by taking a quick look at critical theory, too. According to Presskorn-Thygesen (2013) critical theory, prototypically, also holds a limited realist position, but not for the same reasons as hermeneutics. In critical theory there is an observer-independent, real world but the realism is limited due to the fact that one's access to the world is marred by ideology, power and oppression. Epistemologically speaking critical theory harbors an ideal that we may call limited objective knowledge. Again it does so from a radically different point of view than positivism. On the one hand there are real and oppressive forces at play in the world, and the researcher wants to expose (and possibly change) these forces, on the other hand s/he acknowledges that totally value neutral research-based knowledge is an illusion.

2.2.1   Two necessary Digressions – Ontological Reality and Solipsism

Before we venture on, it is important to briefly pause in order to allow for a refutation of what is in fact a strawman argument, namely the notion that to a constructivist the world, i.e. an ontological reality, does not exist. But of course the world, ontological reality, the 'out there' exists to a constructivist! What separates the constructivist's ontological viewpoint from most ontological viewpoints of a more 'realist' persuasion is that, to a constructivist, access to the ontological reality is not immediate or unmediated. Access to the ontological reality is always mediated access, i.e. via the perceptional and conceptual interface of the individual in question. In German, for instance, this idea is mirrored in the existence of two different lexical entities designating two different concepts, i.e. "ontologische Realität" and "Wirklichkeit" (von Glasersfeld, 1990a); both of which are often – and unfortunately – translated into one and the same lexical entity in English, namely "reality". But to a constructivist the former pertains to "ontological reality" the latter to "constructed or lived reality". This does not alter the fact that what is 'out there' (also) exists to a constructivist[17], it is rather the case that discerning between the two 'realities'

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[14] They are, in fact, two rather prolific families of philosophies of science.

[15] Going back to the works of Auguste Comte.

[16] Going back to works of Immanuel Kant.

[17] Speaking of which: We may safely assume that any current constructivist worth his or her salt would concur wholeheartedly with Johnson's (in)famous refutation of Bishop Berkley's (radical) ideas of the non-existence of matter.

is what gives rise to critically questioning what we may comfortably take for granted and say about the 'out there'[18]. Following through on the above strawman argument quite often leads opponents of a constructivist worldview to yet another (and at least partially fallacious) claim about constructivism, namely that it leads to solipsism. But – in lieu of the above – if we may talk about solipsism at all in connection with constructivism it is not an ontological solipsism but an epistemological one[19] (e.g. Schmidt 1987: 34ff). As we just saw, constructivism does not deny ontological reality, but it holds that all claims put forward about ontological reality are claims made by an observer – in casu: the researcher. In other words: In constructivism there can be no immaculate conception.

2.3 Methodology

Generalizing crudely there are two ways of understanding methodology, a very broad and very narrow understanding. In the very broad sense of the word, methodology is defined along these lines:

> *Methodology concerns the theoretical, political and philosophical roots and implications of particular research methods or academic disciplines.* (Seale, 2004: 508)

This appreciation of methodology in effect conflates methodology with research design – in the sense that research design is understood in this essay, at any rate. Consequently, I find this to be a conceptually problematic understanding and hence not the appreciation of methodology subscribed to here. The narrower appreciation of methodology, which I favor, reads:

> *A methodology refers to the choices we make about cases to study, methods of data gathering, forms of data analysis etc. in planning and executing a research study … methodology defines how one will go about studying any phenomenon.*(Silverman, 2013: 113).

Methodology, in essence, "pertains to the science and study of methods and the assumptions about the ways in which knowledge is produced" (Grix, 2002:179). As the "science and study of methods" methodology frames the scope of method(s) to choose from. In that capacity, "methodology refers to the principles, concepts and theories that underpin these methods" (Daymon and Holloway, 2011: 100). That, in turn, is also why it occupies a position between philosophy of science and methods in the configuration of the elements of the research design presented here. Methodology functions as a kind of intermediary between the researcher's assumptions about the world and how s/he goes about studying it. Kuada offers an illustration of this point:

> *If you assume that the social world can be objectively observed from outside, you will adopt a methodology that focuses on an examination of relationships [e.g. cause and effect, input - output], but if you assume that the social world can only be understood by obtaining first-hand knowledge of the persons under investigation, you will opt for a methodology that focuses on individuals' interpretation of the world as they experience it.* (Kuada, 2012: 58)

In the first of Kuada's elaborations, it is implied that the researcher in question would opt for a quantitative methodology, in the second for a qualitative methodology. Opting for a quantitative approach entails a focus on producing data that are or can be transformed into numerical entities, opting for a qualitative approach entails a focus on constructing data that are non-numeric (e.g. narratives, interpretations, etc.). For a dyed-in-the-wool quantitative researcher the constructivist position, that the world is a (social) construct, is quite simply not legitimate. The prevailing argument runs along these lines: "If social reality is a social construction, what is there to measure?" (Andersen and Hansen, 2009: 18)[20] and – consequently – what is there to pit these constructs against? Merely other – equally illegitimate – constructs? For a dyed-in-the wool constructivist, on the other hand, the positivist position of an

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[18] To a constructivist this distinction does go back to Kant and his "The Critique of Pure Reason".

[19] The above-mentioned Heinz von Förster also – and ingeniously so – refutes all accusations of epistemological solipsism in constructivism – for those interested, an elaboration of his argument may be found in Segal, 2001.

[20] My translation from the Danish: "Hvis den sociale virkelighed er en social konstruktion, hvad er der så at måle". (Hansen and Andersen, 2009: 18).

observer-independent world is – quite simply – itself (merely) a construction. It becomes obvious that the choice made, the position taken, with regards to philosophy of science, influences methodology, in effect rendering these two elements interdependent. (I will address the interdependencies of the elements somewhat more in-depth in section 3).

In addition to the methodological dichotomy, illustrated neatly by Kuada, we find a third methodology, namely that of Mixed Methods (e.g. Dellinger and Leech, 2007), i.e. a methodology that calls for both a quantitative and a qualitative approach to doing research. Johnson and Onwuegbuzie sum up the reason behind their Mixed Methods approach like this:

> *A tenet of mixed methods research is that researchers should mindfully create designs that effectively answer their research questions; this stands in contrast to the common approach in traditional quantitative research where students are given a menu of designs from which to select.* (Johnson and Onwuegbuzie, 2004:20)

It can come as no big surprise that the "philosophical orientation most often associated with MM [Mixed Methods] is pragmatism" (Teddlie and Tashakkori, 2008:7). Neither "that mixed methods emerged from practical needs of the investigators in the field" (Dellinger and Leech, 2007:4), rather than from disciplinary tradition or doxa. In line with a pragmatic worldview comes "the bottom line … that research approaches should be mixed in ways that offer the best opportunities for answering important research questions" (Johnson and Onwuegbuzie, 2004:16). If we take this to the level of research design, it becomes evident that the interdependencies run deeper, so to speak; they are not (merely) a matter of interdependencies between philosophy of science and methodology, no, the interdependencies also encompass both the research agenda in question, the methods employed and the data looked for. Needless to say, this adds to both the breadth and depth of choices to be made at the level of methodology as well as to the complexity of the process of choosing itself. One effect of this is that consciously taking a stance based on a more agnostic approach (at least more agnostic than a solely tradition-driven one) and allowing for more parameters to influence one's decision-making processes, eventually adds to the robustness of the ensuing research results. The conclusion which follows from the idea of interdependencies over (disciplinary or otherwise prescriptive) tradition can be summed up in this way:

> *This view leads to the conclusion that research methodology should not be something we apply or select so much as something we design out of particular situations and then argue for in our studies.* (Sullivan and Porter, 1993:221)

Sociologist Alfred Schütz, too, explicitly refers to the research agenda as a framing device for methodological issues, when he states:

> *The basic postulate of the methodology of social science, therefore, must be the following: choose the scheme of reference adequate to the problem you are interested in, consider its limits and possibilities, make its terms compatible and consistent with one another, and having once accepted it, stick to it!* (Schütz, 1976[1964]:8)

He actually goes one step further and explicitly adds an evaluative stance to this when he states that "[t]his is the real meaning of the so often misunderstood postulate of "purity of method"" (ibid.). This kind of relationship between methodology and method, which is not necessarily / disciplinarily / traditionally there, but which must be argued for, and which ultimately ties in with the research agenda in question goes hand in hand with the credo of this paper (see section 3). As such it also makes for an appropriate transition to the next element in the research design, that of method.

2.4   Method

To many researchers methods are of paramount importance, in fact adhering to a sanctioned method when conducting research is actually a condition sine qua non to most – if not all – research communities. The main reason is that method "refers to matters of practical research technique" (Seale, 2004:508).

Tracing the etymological roots of 'method' back to its ancient Greek origins it literally meant as much as path or track. As a path or track, method serves two overall purposes for any researcher: First of all, in the process of conducting research, method allows the researcher to follow the beaten track, if you will, ensuring that s/he is doing what relevant colleagues agree on is an acceptable way of gathering and/or of analyzing data. Secondly, after the research has been conducted and made public, in one way or the other, method forms the core or the audit trail (Daymon and Holloway, 2011). That is, a well-documented method is what allows an audience to follow the researcher's line of thought, allows the reader to replicate and – in doing so – to assess the robustness, the legitimacy of the researcher's process from data to argument. As alluded to a few lines above, the term method pertains to both methods for data gathering and for data analysis, both of which are explicitly perceived as "step-by-step guides" (Andersen, 2013). When it comes to data gathering, method is comparable to a net one throws out over a body of water. Depending on the quality of the body of water (e.g. the population, the sample, the case, the corpus, etc.) and the size and the integrity of the meshes in the net (e.g. the definition of, the criteria of, the attributes of the entities sought after), the researcher catches and lands data of a certain kind. In the same process other entities which are not compatible with the meshes go free, i.e. are not considered data in the sense of the particular method and research agenda in question. This collection of "raw data" (e.g. Daymon and Holloway, 2011: 301) typically needs to undergo some sort of a refining process in order for it to be or become eligible for the purpose of helping the researcher answer his or her research questions. That refining process, i.e. the method of analysis, is typically driven by an idea of reducing the complexity of the "raw data". This process, which in many ways is akin to a sense-making process, often takes place as a categorization effort, as a patterning effort, as a structuring effort or the like. If the researcher approaches his or her data inductively, s/he – in principle – lets the data speak for itself. In an approach which is sometimes referred to as "unmotivated looking" (Psathas, 1995: 45) patterns, themes, frequencies, etc. emerge in or from the data – or not. If the researcher approaches his or her data deductively, s/he – in principle – imposes unto the data his or her ideas from the get-go. That is, the researcher looks for, say, predefined patterns, predefined themes, predefined frequencies, etc.

2.4.1   Two Necessary Digressions – Neutrality and Fidelity

Before ending this section, it is critical that I bring forward two very important caveats, both of which question traditional dogmas pertaining to method use. For the purpose of this paper, I label the first dogma the dogma of method-internal neutrality, the other the dogma of method-external fidelity. In terms of the dogma of method-internal neutrality, Law describes the core issue in these words:

> … *methods… not only describe but also help to produce the reality that they understand.*(Law, 2004:5)

In other words: A method is never a neutral data documentation device; on the contrary, a method is also always a biased data production device. In ensuring that the researcher finds what s/he is looking for (at the cost of not seeing and not finding other entities), data gathering methods are in principle also always data generating methods, and – in that capacity: pre-manipulative devices. The same goes for methods of data analyses. The method with which data is analyzed allows the researcher to identify, pattern, describe, etc. certain, pre-selected attributes, features, characteristics, etc. while overlooking others – and necessarily so. Needless to say, this does not render method use illegitimate or obsolete, but it does add a necessary layer of reflexive thinking to the method section of any research project and ditto paper.

When it comes to the dogma of method-external fidelity, i.e. that the usage of a certain method follows logically from a certain philosophy of science, or that the usage of a certain method follows logically from a certain methodology, that dogma, too, cannot – and maybe should not – be upheld in its strictest sense any more. In a rather radical interpretation of this idea Grix proposes that:

> *Methods themselves should be seen as free from ontological and epistemological assumptions, and the choice of which to use should be guided by research questions.* (Grix, 2002: 180)

This is radical in as much as a quantitative methodology would traditionally and unquestionably call for the use of quantitative methods, whereas a qualitative methodology would traditionally and unquestionably call for the use of qualitative methods. Grix does not accept this linkage and his argument for discarding of it he derives from the supremacy of the research question. If the research question, the research interest, the research agenda etc. stipulates that the use of a particular method is particularly well-suited, then he cannot accept that he should be barred from using said method on the grounds of epistemological or ontological baggage or on the grounds of disciplinary tradition. Whereas this line of thought is very much in tune with the credo of this paper, Grix may (still) be too radical in most research communities. Regardless of one's attitude towards his bold statement, though, the statement itself – and the logic behind it – does compel us to ponder what we take for granted in terms of how we argue for our choice of method. First of all because it highlights the fact that we should at least allow ourselves to acknowledge that we have a choice; that we, method-wise, do not necessarily always need to do as we have been socialized into doing (cf. section 1.1). Secondly, because it offers a different logic than that of tradition as its backing; it offers the, in many ways, much more compelling logic of following through on one's research question.

2.5   Data

Etymologically speaking data is the plural of datum, i.e. Latin for what is given. Even though not many researchers probably ponder the etymology of their concepts, the core idea of data as what is given to us nevertheless seems to linger. In the words of Charles Sanders Peirce, one of the founders of Pragmatism[21], the idea is epitomized in his demand that we do not doubt in philosophy what we do not doubt in real life. What you can (positively) see, touch, measure, weigh, count, etc., well, that does in fact exist. Furthermore, it does so in the very way in which you see, touch, measure, weigh, count, etc., it. It is that very point of departure which would protect a dyed-in-the-wool positivist – again we are talking prototypically – from doubting the objective existence of his or her data, provided, of course, they were obtained according to one or more sanctioned methods (cf. section above) and provided said methods have been followed rigorously. At the opposing end of the spectrum, a dyed-in-the-wool constructivist would readily admit that his or her data are, in fact, constructed, and – equally important – s/he would also readily contend that they cannot be otherwise. To the one camp, data can be obtained in a way that renders them objective, to the other camp that very idea is a fallacy. To the one camp the subjective, (self-)constructed origin of data is a given, to the other camp that very provenience renders them nigh invalid, etc. Despite this polar opposition, and the accompanying lack of acceptance of the data of the respective other, both camps acknowledge that data are pivotal to doing (empirical) research[22]. What remains, then, is a common understanding of data as the entities researchers gather from the sites relevant to the research project at hand – be it in discourse, in interviews, in questionnaires, in the field, etc. – in order to answer the research questions posed.

In accordance with this, two inferences must be made at this point. First of all, that the conceptualization and the status of data are determined by the underlying research interest, the philosophy of science chosen, the methodology adhered to, and the method(s) employed. Secondly, and that follows from the former, that no one form of data (Blaikie, 2010:23) is a priori 'better' than another. What may make one form of data (a posteriori, as it turns out) superior to another form of data, consequently, is whether or to what extent this or that form of data can help the researcher in answering the research question (e.g. Andersen et al., 2012: 37-39). So even if there may be a historical preference in some, more nomothetically oriented, disciplines to perceive of data as having an atomistic ring to them; that perception of data is no longer exclusive to, say, the so-called hard and the wet sciences. When, for instance, some "interpretative … sociologists seek to understand the very basis and source of social

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[21] He would later call his version of Pragmatism "Pragmaticism"; he did so in order to distinguish it from the (corrupted) Pragmatism of his peers.

[22] As far as student research is concerned, Robson even goes as far as stating: "No data – no project" (2002:385).

reality" (Morgan and Burrell, 1979:31), it is quite obvious that a reductionist view of data has colonized a research area, which would, historically, be more ideographic in nature.

In the vocabulary of the previously mentioned Peirce I hold that the abstract concept of data as "type" is able to encompass a wide variety of concrete instantiations or forms of data, "tokens" (1931-58, sec. 4.537). Data traditionally come in two different forms, two different tokens: Quantitative data and qualitative data. According to Saunders et al. quantitative data are "numerical data or … data that could usefully be quantified to help you answer your research question(s) and to meet your objectives"(2012: 472). They go on to say that "they can range from simple counts such as the frequency of occurrences to more complex data such as test scores, prices or rental costs" (ibid.). Qualitative data, on the other hand are non-numerical. Returning to Kuada's methodological dichotomy (cf. section 2.3) qualitative data come in the form of verbalizations (of attitudes, meaning, knowledge, etc.). Both forms of data come with a certain academic baggage. If a researcher is on a quest for law-like or causal relationships, numerical data (stemming from quantitative methods, embedded in a quantitative methodology, framed by a realist ontology, aiming at explaining (rather than understanding) and driven by a nomothetic research interest, etc.) the data of choice are proto-typically numerical. If, on the other hand, the research agenda is ideographic then the data of choice are proto-typically qualitative in nature (and have come about via a subjectivist ontology, a quest for understanding (rather than explaining), is embedded in a qualitative methodology, applying qualitative methods, etc.). But – as has been pointed out explicitly several times already – that academic baggage does not necessarily need to be adhered to.

3   A WEB OF INTERDEPENDENCIES

As stated in the abstract of this essay, the focus has not been on looking in-depth at the individual elements of a research design[23]. The focus has been on how we may perceive research design from a more integrative point of view and what we might gain from such a perception. The integration proposed comes in two, partly overlapping, forms. First, it is the deliberate integration of the individual elements of the research design. "No man is an island", as John Donne would have it, but neither is any one individual element of a coherent research design. Among other things, this has meant that for each of the research design elements presented and discussed in this paper (research question, philosophy of science, methodology, method and data) I have pointed to interdependencies with other research elements. Secondly, the integration proposed pertains to the embeddedness of the research design in its particular environment, i.e. the research community in which the research is carried out and to which it is supposed to contribute. This (environmental) aspect of the integration proposed is critical since the process of conducting research is no 'deus ex machina', it is – in essence – a craft learned in a particular social, academic setting. The same goes for the appraisal of research and the selection of criteria we employ for doing so, etc. Being anchored in a particular genius loci is – at the same time – both confining and reassuring.

When it comes to how the relationships between the elements of the research design are typically illustrated, a cursory examination shows a tendency to depict research designs in the form of a descending staircase (e.g. Grix, 2002, and Kuada, 2012). At the very top of the staircase you find philosophy of science, one step down comes methodology, then method, and eventually you have descended to the level of data. Grix furthers the idea that descending top-down, from philosophy of science to data, is a 'must' when doing research – at least for the student researcher (Grix, 2002: 179). While the idea of letting a decision made at the – relatively speaking – higher level in the research design frame the scope of the decision to be made at the – relatively speaking – lower lever in the research design is both alluring and unquestionably merited, it also imposes problematic restrictions. It does so in as much as it imposes a sort of rationality unto a process that may not, truth be told, be as rational as we would maybe have liked it to be. This rationality may very well run counter to the actual, real-life research processes as they are experienced by many researchers. The point is that the linear and rational way in

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[23] Fortunately, a plethora of textbooks caters to that particular need.

which we as researchers present and justify our research to our peers in our publication outlets etc. may not correspond very well with how the actual research was conducted. This insight is not new; it is in many ways an instantiation of Popper's distinction between the context of discovery and the context of justification – albeit at a more mundane level of observation. But explicitly acknowledging this insight and – equally important – allowing this insight a voice of its own in the research process – and in the research design – would probably constitute a break with tradition – at least to some researchers in some research communities.

Whereas the approach to designing one's research favored in this essay certainly appreciates the idea of a cascading decision making process, that ideal of rationality does not – in fact: cannot – encompass the scope of interdependencies for which I am looking. Returning to the above-mentioned illustrations of research designs, the strict descending directionality proposed by Grix cannot be upheld, but that does not mean that the idea of internal congruency which I take to be the underlying premise, is not valid. It is – in essence – necessary but not sufficient. The congruency that I advocate in this paper is two-tiered. In the context of discovery, my illustration of the research design would not resemble a descending staircase but would depict a web-like structure in which the research question would be central. This necessarily spills over into the context of justification, where the congruency, is not tied to a top-down directionality, it is a congruency which is simultaneously top-down, bottom-up and criss-cross. Admittedly, this kind of research design congruency – and derived from that the kind of project consistency, which can come about in this way – is not your everyday garden variety research design. On the contrary, it is a research design, where – in principle – all relations and all interdependencies between the research design elements and its environment are suspended in a web of oscillatory decision-making processes, ultimately ensuring the consistency required.

Spurring a relational rather than an atomistic outlook gives rise to an ecological[24] appreciation of research design, i.e. a holistic research design that takes into explicit consideration the interrelationships between the elements in the skeleton structure, and its environment, i.e. the relevant research community. A research design, in other words, which promotes plasticity and fluidity over adherence to static protocol. And which, at the same time, does not relinquish control over project-relevant, multifaceted decision-making processes – and their respective interdependencies – but which in fact meticulously deliberates of each and every one of them.

4 REFERENCES

Alvesson, M. and Sandberg, J. (2013): Construction Research Questions – Doing interesting research. Sage. Los Angeles et al.

Andersen, Bjarne Hjort and Hansen, Erik Jørgen (2009): Et sociologisk værktøj – Introduktion til den kvantitative metode. Hans Reitzels forlag. København.

Andersen, Ib (2013): Den skinbarlige virkelighed – om videnproduktion inden for samfundsvidenskaberne. Samfundslitteratur. Frederiksberg.

Andersen, Lotte Bøgh / Hansen, Kasper Møller / Klemmensen, Robert (eds.) (2012): Metoder i statskundskab. Hans Reitzels Forlag. København K.

Arnold, Stephen J. and Fischer, Eileen (1994): Hermeneutics and Consumer Research. Journal of Consumer Research, vol. 21, June 1994, 55-70.

Berlin, Isaiah (2005): Den ideale stræben og andre essays. Udvalg, oversættelse og indledning ved Anders Smith. Gyldendals Bogklubber. Gylling.

Blaikie, Norman (2010): Designing Social Research – The Logic of Anticipation. 2nd edition. Polity Press. Cambrigde.

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[24] For an appreciation of "ecological" in the sense of this essay, see, for instance, Gibson, 2015.

Cresswell, John W. (2014): Research Design – Qualitative, Quantitative, and Mixed Methods Approaches. International Student Edition. 4th edition. Sage. Los Angeles et al.

Daymon / Holloway (2011) Qualitative Research Methods in Public Relations and Marketing Communications. 2nd edition. Routledge. Abingdon.

Dewey, John (1933): How we think – A restatement of the relation of reflective thinking to the educative process. D.C. Heath and Company. Boston et al.

Donne, John (1624): Devotions upon Emergent Occasions, no. 17, 108–9 (No Man Is an Island).

Duberley, Joanne / Johnson, Phil / Cassell, Cathrine (2012): Philosophies underpinning qualitative research. In. Gillian Syman and Cathrine Cassell (eds.), Qualitative Organizational Research – Core Methods and Current Challenges. Sage. Los Angeles et al. 15-34.

Einstein, Albert; Leopold Infeld (1971[1938]): The Evolution of Physics. The Growth of Ideas from Early Concepts to Relativity and Quanta. University Press. Cambridge.

Dellinger, Amy B. and Leech, Nancy L. (2007): Towards a Unified Validation Framework in Mixed Methods Research. Journal of Mixed Methods Research, Volume 1, number 4, October 2007, Sage. 309-332.

Fukuyama, Francis (1992): The End of History and the Last Man. Free Press / Avon Books. New York.

Gadamer, Hans (1975): Wahrheit und Methode. Grundzüge einer philosophischen Hermeneutik. Mohr. Tübingen.

Geertz, Clifford (1973): The Interpretation of cultures – selected essays. Basic Books. New York.

Gibson, James J. (2015): The Ecological Approach to Visual Perception. Classic Edition. Psychology Press. New York.

Glasersfeld, Ernst von (1990a): An Exposition of Constructivism – Why some like it Radical. Journal for Research in Mathematics Education. Monograph, Vol. 4, Constructivist Views on the Teaching and Learning of Mathematics (1990), 19-29+195-210.

Glasersfeld, Ernst von (1990b): Environment and communication. In: Steffe L. P. & Wood T. (eds.) Transforming children's mathematics education 1–2. Erlbaum. Hillsdale. 30–38.

Glasersfeld, Ernst von (1998): Why Constructivism Must be Radical. In: Constructivism in education. N. Bednarz and J. Garrison (eds.) Cambridge University Press. Cambridge. 23-28.

Grix, Jonathan (2002). Introducing students to the generic terminology of social research. Politics 22(3), 175 – 186.

Heidegger, M. (1962): Being and Time. Harper & Row. New York.

Johnson, R.B. / Onwuegbuzie, A.J. (2004): Mixed Methods Research: A research paradigm whose time has come. Educational Researcher, 33(7), 14-26.

Kant, Immanuel (1787): The Critique of Pure Reason. 2nd edition. Translated by J. M. D. Meiklejohn. http://www.gutenberg.org/files/4280/4280-h/4280-h.htm

Kastberg, Peter (2014): Organizational Knowledge Communication – a Nascent 3rd Order Disciplinarity. Journal of Organizational Knowledge Communication. 1, 1, 83-97.

Kleiber, G. (1993): Prototypensemantik – Eine Einführung. Francke Verlag. Tübingen.

Kuada, John (2012): Research Methodology – A Project Guide for University Students. Samfundslitteratur. Frederiksberg.

Lakatos, Imre (1978) The Methodology of scientific research programmes. Philosophical Papers. Volume 1. Edited by John Worral and Gregory Currie. Cambrigde et al.: Cambrigede University Press.

Law, John (2004): After Method – Mess in social science research. Routledge. London and New York.

Lewin, Kurt (1936). Principles of Topological Psychology. McGraw-Hill. New York.

Makkreel, Rudolf (2016): Wilhelm Dilthey. In: The Stanford Encyclopedia of Philosophy (Fall 2016 Edition), Edward N. Zalta (ed.), https://plato.stanford.edu/archives/fall2016/entries/dilthey/

Maturana, Humberto (1978): Biology of Language – The Epistemology of Reality. Academic Press. New York.

Morgan, G., & Burrell, G. (1979): In search of a framework. In G. Morgan, and G. Burrell, Sociological Paradigms and Organizational Analysis. Ashgate Publishing Limited. Hants.

Ortega y Gasset, José, (1961 [1923]): The modern theme. Harper & Row. New York.

Peirce, Charles S. (1931-58), Collected Papers of Charles Sanders Peirce. Hartshorne and Weiss (eds.). Harvard University Press. Cambridge, MA.

Popper, Karl R. (2005 [1956]): Three Views Concerning Human Knowledge. In: Knowledge – Critical Concepts. Nico Stehr and Reiner Grundmann (eds.). Routledge. 306-330

Presskorn-Thygesen, Thomas (2013): Paradigmer inden for samfundsvidenskaben. In: Nygaard (ed.) Samfundsvidenskabelige analysemetoder. Samfundslitteratur. Frederiksberg. 25-44.

Psathatas, G. (1995): Conversation Analysis – The Study of Talk-In-Interaction. Sage. Thousand Oaks.

Robson, Colin (2002): Real World Research – A Resource for Social Scientists and Practitioner-Researchers. 2nd edition. Blackwell Publishing. USA / UK / Australia.

Rovelli, Carlo (2016): Syv små fortællinger om fysik. Gyldendal. København.

Russell, Bertrand (1912): The Problems with philosophy. Home University Library, 1912; Oxford University Press paperback, 1959; reprinted, 1971-2. http://www.ditext.com/russell/russell.html

Russell, Bertrand (1996:39 [1925]): What I believe. Routledge. London and New York.

Russell, Bertrand (1926): Theory of Knowledge. For the encyclopedia Britannica. https://www.marxists.org/reference/subject/philosophy/works/en/russell1.htm

Russell, Bertrand (1946): History of Western Philosophy – and its Connections with Political and Social Circumstances from the Earliest Times to the Present Day. George Allen and Unwin Ltd. https://ia802303.us.archive.org/25/items/westernphilosoph035502mbp/westernphilosoph035502mbp.pdf

Savage, Mike (2015): Social Class in the 21st Century. Pinguin Books Ltd.

Saunders, Mark / Lewis, Phillips / Thornhill, Adrian (2012): Research Methods for Business Students. 6th edition. Pearson. Harlow et. Al.

Schmidt, Siegfried J. (1987): Der radikale Konstruktivismus – Ein neues Paradigma im interdisziplinären Diskurs. In: Der Diskurs des Radikalen Konstruktivismus. Siegfried J. Schmidt (ed.). Suhrkamp Verlag. Frankfurt am Main. 11-88.

Schütz, A. (1976[1964]): The social world and the theory of social action. In: Alfred Schutz. Collected Papers II. Studies in Social Theory. Edited and introduced by Arvid Brodersen. Martinus Nijhoff. The Hague. 3-19.

Seale, C. (2004): Researching Society and Culture. Sage. London.

Segal, Lynn (2001): The Dream of Reality – Heinz von Försters Constructivism. 2nd edition. Springer. New York et al.

Silverman, D. (2014). Generalizing from case study research – Interpreting Qualitative Data. Sage. Los Angeles et al.

Sullivan, Patricia / Porter, James E. (1993): On Theory, Practice, and Method – Toward a Heuristic Research Methodology for Professional Writing. In: Writing in the Workplace – New Research Perspectives. Rachel Spilka (ed.). Southern Illinois University Press. Illinois. 220-237.

Teddlie, Charles / Tashakkori, Abbas (2008): Foundations of Mixed Methods – Integrating Quantitative and Qualitative Approaches in the Social and Behavioral Sciences. Sage. Los Angeles et al.

Vogt, Paul / Gardner, Dianne C. / Haeffele, Lynne M. (2012): When to Use What Research Design. Guildford Press. New York.