

2014

The Multidimensionality of Hermeneutic Phenomenology: From Philology Through Science and Technology to Theology

Babette Babich

Fordham University, babich@fordham.edu

Follow this and additional works at: https://research.library.fordham.edu/phil_babich

Part of the [Continental Philosophy Commons](#), [Epistemology Commons](#), [History of Philosophy Commons](#), and the [Philosophy of Science Commons](#)
Network

Logo Recommended Citation

Babich, Babette, "The Multidimensionality of Hermeneutic Phenomenology: From Philology Through Science and Technology to Theology" (2014). *Articles and Chapters in Academic Book Collections*. 100. https://research.library.fordham.edu/phil_babich/100

This Book Chapter is brought to you for free and open access by the Philosophy at Fordham Research Commons. It has been accepted for inclusion in Articles and Chapters in Academic Book Collections by an authorized administrator of Fordham Research Commons. For more information, please contact considine@fordham.edu, bkilee@fordham.edu.

Introduction

Babette Babich

The Multidimensionality of Hermeneutic Phenomenology: From Philology Through Science and Technology to Theology

Studies of hermeneutics have historically invoked and even enumerated dimensions¹ and hermeneutic phenomenology is inherently multidimensional. In part this is due to the essential connection between hermeneutics and philology, which, the present editor—writing as she does as much as a Nietzsche specialist as a Heidegger specialist—cannot overlook.² But it is also the legacy of Wilhelm Dilthey in particular. Hence Joseph J. Kockelman's 2003 *Ideas for a Hermeneutic Phenomenology of the Natural Sciences* invokes "The Importance of Methodical Hermeneutics."³ With this description, echoing the contributions of his friend and long-time colleague, Thomas Seebohm, Kockelmanns relates Dilthey to Boeckh and thus to the classic tradition of hermeneutics including but also well in advance of Gadamer.⁴ Hence

¹ See E. D. Hirsch, Jr. (1972) in addition to the collection edited by Günter Figal and Hans-Helmuth Gander (2005) as well as an earlier collection featuring both legal and literary contributions, Winfried Hassemer (1984), in addition to Ronald Bontekoe's overview (1996), etc.

² See here the contributions to Helmut Flaschar, Karlfried Gründer and Axel E.-A. Horstmann (1979). See too for a discussion with reference to Gadamer as well as Husserl and Heidegger, István Fehér (1999) or (2001).

³ Kockelmanns (2003). See for a discussion of Boeckh and Dilthey, Otto Friedrich Bollnow's (1982) as well as Thomas M. Seebohm's monograph (2004) in addition to Seebohm's (1984). See too in connection with Boeckh's teacher, Schleiermacher, E. D. Hirsch, Jr. (1975). In connection with Nietzsche, although not ascribing particular philological excellence to Nietzsche James Q. Whitman (1986) as well as Viktor Poschl, "Nietzsche und die klassische Philologie" in: Flaschar, Gründer and Horstmann (eds.), *Philologie und Hermeneutik im 19. Jahrhundert*, pp. 141–155 and more recently Christian Benne (2005).

⁴ Kockelmanns, Joseph (2003). See for a discussion of Boeckh and Dilthey, Otto Friedrich Bollnow's (1982) and, adding, methodical hermeneutics, Thomas M. Seebohm's monograph *Hermeneutics: Method and Methodology* (2004) as well as his essay, "Boeckh and Dilthey (1984) and see too in connection with Boeckh's teacher, Schleiermacher, E. D. Hirsch, Jr. (1975). Giovanni Leghissa also includes a discussion of Boeckh in his contribution to the current volume. In connection with

speaking of methodical hermeneutics, what Kockelmans (and to be sure what Seebohm) understood as hermeneutic phenomenology comprised the full scope of the scholarly and 'scientific' traditions of classical philology just where philology subsumes not only archaeology but the disciplinary breadth of aesthetics and history as well as philosophy and theology. In this methodical fashion, classical philology—like Husserl's famous phenomenological call to the 'things themselves'—refers to nothing less than the words themselves.

Although even otherwise hermeneutically sensitive scholars routinely limit their conception of Nietzsche to his supposed proclamation of the death of God,⁵ such a limitation can steer us awry when it comes to hermeneutics and philology. Nietzsche's own hermeneutic phenomenology is clearly expressed in his philological study of ancient Greek lyric and tragedy out of what Nietzsche called "the spirit of music."⁶ Thus philologically, i.e., directed exactly literally to the words themselves, Nietzsche there undertook to 'hear' Greek lyric and tragic poetry, hearing with his eyes as he described the philological task in question. For Nietzsche, the scope of *aesthetics* as he defined it as a science corresponded to the *scientific* question of his own discipline of ancient or classical philology. And he had posed this question even before his first book inasmuch as the critical perspective Nietzsche urges beginning with his inaugural lecture in Basel is also the reason he concludes that lecture with a conversion of Seneca's dictum: philology is to become philosophically critical which is also to say that philology has to be set on the path of a critical science.

In this sense, we can begin to comprehend Nietzsche's otherwise difficult to understand self-critique (or self-defense), as he claims that in his first book, *The Birth of Tragedy Out of the Spirit of Music*, he found himself grappling with the very multidimensional problem of science itself: "something frightful and dangerous, a problem with horns ... in any case, a new problem ... the problem of science itself, science considered for the first time as problematic, as questionable."⁷ Asking how science, as such, is possible *qua* science (which is what I have described as a critical philosophy of science),⁸ Nietzsche was in this sense the first to propose a hermeneutics of science.

Nietzsche, although not ascribing particular philological prowess to Nietzsche, James Q. Whitman (1986) as well as Viktor Poschl, "Nietzsche und die klassische Philologie" in: Flaschar, Gründer and Horstmann (eds.), *Philologie und Hermeneutik im 19. Jahrhundert*, pp. 141–155 and more recently Christian Benne (2005).

⁵See Adriann T. Peperzak's contribution in the essays below in addition to Kockelmans' own (1983).

⁶See Babich (2005) as well as Christophe Corbier (2009) and see the final chapters of my *The Hallelujah Effect. Philosophical Reflections on Music, Performance Practice and Technology* (Surrey: Ashgate, 2013) for more discussion and further references. Damir Barbarić in his insightful "Hörendes Denken" in Figal and Gander, eds., "*Dimensionen des Hermeneutischen*," pp. 37–58, explores the question of hearing in an effort to differentiate Heidegger's rhetorically attuned hermeneutics from Gadamer's hermeneutics but he does not raise the question Nietzsche does in terms of the music of words, that is to say of the sounding of the text.

⁷Friedrich Nietzsche (1980a), Vol 1. Hereafter: KSA.

⁸Thus see my Babich (2010a, 2009).

Nietzsche would later address physics itself, characterizing the natural scientist's 'interpretation' of nature as a "lack of philology,"⁹ invoking (ah, so politely!) his own scientific expertise or authority ("speaking as an old philologist"), to accuse natural scientists of misinterpreting their interpretations, that is to say forgetting that their interpretations corresponded to "interpretation rather than text."¹⁰

In my own Nietzsche-indebted overview of different approaches to continental philosophy of science—including philosophies of science other than the traditional preoccupation with physics that characterizes mainstream or analytic philosophy of science—I discuss both philology and method, echoing Karl Jaspers' along with Karl Reinhardt's additional reflections, in order to argue for the multidimensionality of the philosophy of science itself: "The Case for -P Philosophies of Science, where P=Physics."¹¹

Kockelmans alludes to Nietzsche's famous reflections on science as interpretation in *Beyond Good and Evil*, focusing in this case on the issue of text *qua* text.¹² To be sure, Kockelmans' own concern was methodical hermeneutics, and like others, he does not use text as Nietzsche speaks of 'text,' i.e., as a metaphor for the object as such but conventionally or with respect to the traditions of scientific interpretation. For Nietzsche however, as for Heidegger, the 'text' when it comes to natural science will be its objects, or else, as Patrick Heelan also speaks of these, its instruments, its 'readable' technologies.

The relevance of hermeneutics and science in particular must be foregrounded here as it is central to the current collection but also given the sometimes peripheral presence of such approaches in mainstream histories and philosophies of sciences. Although one can also explore this peripherality in terms of the very mainstream tendency to distinguish the history of science, and its more traditionally text-based or historiographically hermeneutic orientation, from the philosophy of science and its traditional orientation to theory and experiment, one can also, as noted above, trace this back to an old distinction, as Dilthey expresses it, whereby nature, we explain but the life of the mind we understand: *Die Natur erklären wir, das Seelenleben verstehen wir*.¹³ This distinction has been decisive, especially for what would become today's analytic and logical positivist philosophies of science (e.g., von Wright's

⁹ Nietzsche, *Beyond Good and Evil*, §22; KSA 5, 37.

¹⁰ Ibid.

¹¹ See Babich, "Towards a Critical Philosophy of Science," pp. 359ff. On Nietzsche and Reinhardt and history, see Wolfgang Müller-Lauter (1999) and see too for a discussion of Löwith and history, Rodolphe Gasché's essay in the present collection below.

¹² See Kockelmans, *Ideas for a Hermeneutic Phenomenology of the Natural Sciences. Volume II*, pp. ix. Kockelmans here refers to Paul van Tongeren's (2000).

¹³ Wilhelm Dilthey, Vol. VII (1916–1967), p. 144 See further, Dilthey, *Introduction to the Human Sciences*, Princeton: Princeton University Press. Sabine Müller, a philosophical physicist includes Dilthey along with an explicit reference to hermeneutics in her *Programm für eine neue Wissenschaftstheorie* (Würzburg: Königshausen & Neumann, 2004) but even where Dilthey is not mentioned by name he remains influential—rather in the Hegelian spirit that tends not to draw connections to other authors.

1971 *Explanation and Understanding*).¹⁴ To this day we continue to contrast the natural and the human sciences, whereby the natural sciences dominate our ideal notion of science as science. Hence physics is the pre-eminent or archetypical science (the “-P-sciences” mentioned above accordingly include the philosophy of chemistry as well as the earth sciences including geology, as well as biology).¹⁵ The human sciences for their part include history and literary studies as well as art history and theology but they also traditionally include the more quantifiably promising disciplines of psychology, sociology, ethnography and political other social sciences. Thus in his 1930s Nietzsche lectures, Heidegger highlights the academic tendency to connect the arts and the sciences, foregrounding less a conjunction than a contest, an agonistic tension nicely expressed in Rorty’s pragmatic bon mot as “physics envy.”¹⁶ Rorty’s phrase captures the relation to the natural sciences particularly in evidence in analytic philosophy, evident in the conflict that has in the interim peaked (without for that being fully resolved) under the rubric of the so-called science wars¹⁷ but also in the ongoing debates on the relevance or irrelevance of philosophy (as expressed from the point of view of physicists like Stephen Hawking),¹⁸ where what counts as philosophy excludes hermeneutic and phenomenological kinds and is pretty much defined as Paul or Patricia Churchland define it, i.e., as good will advocates for brain scans or as dedicated, in P.M.S. Hacker’s more pithy phrase, to “singing the Hallelujah chorus for the sciences.”¹⁹ Indeed, Hawking’s and other scientist’s complaints would seem to make it plain that the scientists see themselves as perfectly capable of bandleading on their own behalf.²⁰

Dilthey’s contrast between explication and understanding is a clear one and articulates an importantly hermeneutic truth when it comes to the relation between

¹⁴Georg Henrik von Wright (1971).

¹⁵See my above cited: “Towards a Critical Philosophy of Science” for this distinction and extensive references to the philosophy of chemistry, including Eric Scerri as well as Jaap van Brakel—whose work also appears in another context in the present collection—as well as the philosophy of geology, including the work of Rom Harré and Bob Frodeman (and this collection features some of Frodeman’s work), in addition to the philosophy of biology (and to which Dimitri Ginev’s contribution in this collection also belongs) including the complex case examples of Haeckel and Franz Moewus as well as Rupert Sheldrake, Lynn Margulis and the molecular cancer researcher and AIDs epidemiologist, Peter Duesberg.

¹⁶Richard Rorty (1994). See for further references, my discussion “*ex aliquo nihil*: Nietzsche on Science, Anarchy, and Democratic Nihilism,” (2010).

¹⁷The science wars were instigated by disgruntled thinkers on the side of physics and traditionally positivistic philosophy of science. See for complete references and a hermeneutic account Babich (2002b). As well as the introduction to the same volume: Babich (2002c).

¹⁸Hawking has been saying this for some time—and it is complemented by his ambition to be heard as a philosophically as well as scientifically in his *A Brief History of Time*. See for one account in the popular press: Matt Warman (2011). For this, see Stephen Hawking and Leonard Mlodinow (2010).

¹⁹In interview with James Garvey (2010). For a measured discussion, see Maxwell R. Bennett and Peter M. S. Hacker (2003).

²⁰This I emphasize in an interview: “An Impoverishment of Philosophy.” In: Dennis Erwin and Matt Story, eds., *Purlieu: Philosophy and the University* (2011), pp. 37–71.

subject and subject in the human sciences. This recurs in Gadamer's existential emphasis in his reminder that we always understand otherwise, when we understand, inasmuch as, in this very Diltheyan sense, understanding is always understanding another—an other, any other's—understanding. But despite its clarity and correctness (as Heidegger distinguishes ontic truth), Nietzsche challenges that although we may give our science the name of “‘Explanation’ . . . it is ‘description’ that distinguishes us from older stages of knowledge and science. Our descriptions are better—we do not explain any more than our predecessors.”²¹ As Nietzsche goes on to reflect:

How could we possibly explain anything? We operate only with things that do not exist: lines, planes, bodies, atoms, divisible time spans, divisible spaces. How should explanations be at all possible when we first turn everything into an image, our image!²²

Nietzsche later observes that “It is perhaps just dawning on five or six minds that physics, too, is only an interpretation and exegesis of the world (to suit us, if I may say so!) and not a world-explanation.”²³ Explanation turns out to be all about a redescription of the unfamiliar in familiar terms, whereby the unknown is able to be ‘taken’ as known, *as if* known—a point not lost on the neo-Kantian philosopher Hans Vaihinger.²⁴

In addition to Nietzsche's hermeneutic and phenomenological thinking,²⁵ the range of approaches to hermeneutic phenomenology including but not limited to the philosophy of science characterizes the breadth of not only Martin Heidegger in his writing on science and technology but also Maurice Merleau-Ponty, in addition to a range of philosophers of science cutting across the contemporary analytic continental-divide, where some are patently analytically minded and others more traditionally, or classically, continentally framed. The term can be applied, arguably—by which I mean descriptively—to many including, among sociologists and even poets, theorists and historians of science, such as Günther Abel, Karl-Otto Apel, Babette Babich, Gaston Bachelard, Nancy Cartwright, Peter Caws, Bob Crease, Martin Eger, Jacques Ellul, Paul Feyerabend, Dagfinn Føllesdal, Dieter Freundlieb, Steve Fuller, Carl F. Gethmann Ronald Giere,

²¹ Nietzsche, *The Gay Science*, §112; KSA, Vol. 3.

²² *Ibid.*

²³ Nietzsche, BGE §14; KSA Vol. 5.

²⁴ See Hans Vaihinger's *The Philosophy of "As If"*. I discuss Vaihinger and Nietzsche together with the philosopher of chemistry and early interpreter of Nietzsche and science, Alwin Mittasch in Babich (1994). For a related discussion but particularly with reference to Robert Julius Mayer, see Günter Abel (1998).

²⁵ Gadamer had already written about Nietzsche and hermeneutics some time ago along with Paul Ricoeur and Gianni Vattimo, in addition, of course, to almost everyone who has ever written on Nietzsche and interpretation. And anyone concerned with Nietzsche and science was perforce reflecting upon yet another dimension of hermeneutic phenomenology, to wit Vaihinger as well as Mittasch but also Walter del Negro and Reinhardt Löw, Jean Granier, Friedrich Kaulbach, Wolfgang Müller-Lauter and others. Several collections have appeared drawing out the lines of Nietzsche and phenomenology, most recently and most comprehensively, Élodie Boubil and Christine Daigle (2012).

Dimitri Ginev, Trish Glazebrook, Ian Hacking, Lee Hardy, Patrick Heelan, Kurt Hübner, Peter Janich, Pierre Kerszberg, Ted Kiesel, Joseph J. Kockelmans, Bruno Latour, Hans Lenk, Reinhard Löw, Nordmann, Gerard Radnitzky, Joseph Rouse, Thomas Seeböhm, Michel Serres, Isabel Stengers, Bas C. van Fraassen, and Carl Friedrich von Weizsäcker, John Ziman, among many others. Although hardly to be reduced to any one tradition, if only to the extent that each of the above names—and many more could be added—represent philosophical approaches in their own right, along with their own specializations, this broad range of hermeneutic phenomenological approaches to the history and philosophy of science is highlighted to an astonishing degree in Joseph J. Kockelmans' (1923–2008) several approaches to the philosophy of science beginning with a concern with the history and philosophy of mathematics²⁶ and physics²⁷ and, as he himself emphasizes,²⁸ with Husserl.²⁹ On his own account of this and after his initial work in the philosophy of mathematical physics, Kockelmans' intellectual development works through Merleau-Ponty³⁰ as well as Heidegger's philosophical reflections on science in *Being and Time* and throughout his later writings (including Heidegger's reflections on art),³¹ before Kockelmans goes on to offer his own overview in his two-volume study, the first volume published in 1993 and the second volume almost a decade later in 2002: *Ideas for a Hermeneutic Phenomenology of the Natural Sciences*.³²

Heidegger had argued that reflective or meditative thinking or philosophy is—meaning that it both presupposes and that it entails—questioning. In this questioning and therefore hermeneutic sense, the Heidegger of 1929/1930 is able to contend that “all science is perhaps only a servant with respect to philosophy.”³³ The same spirit of this early suggestion can be heard in the later Heidegger's provocative

²⁶ Joseph J. Kockelmans (1953).

²⁷ Kockelmans (1958, 1962).

²⁸ See for this emphasis: Kockelmans, *Ideas for a Hermeneutic Phenomenology of the Natural Sciences*, pp. ix ff.

²⁹ See for example, Kockelmans (in Dutch) on *Husserl's Phenomenological Psychology* (1964), in English as *Edmund Husserl's Phenomenological Psychology. A Historico-Critical Study* (Pittsburgh: Duquesne University Press, 1967) as well as his “Husserl's Original View on Phenomenological Psychology,” *Phenomenological Psychology Phaenomenologica*, Vol. 10, 3 (1987): 3–29. See too Kockelmans' monograph on Husserl which begins with a reprint and translation of Husserl's 1928 article on “Phenomenology” in the *Encyclopedia Britannica*: Kockelmans (1994) as well as Kockelmans (1970).

³⁰ Joseph J. Kockelmans (1970) as well as “Merleau-Ponty on Space and Space-Perception,” *Review of Existential Psychology and Psychiatry*, 4 (1964) pp. 69–105.

³¹ Kockelmans (1985).

³² Kockelmans (1993, 2002).

³³ Heidegger 1995, 5. The focus on questioning is the meaning of critique, foregrounded as essential in Kant and post-Kantian thought in Nicholas Rescher's contribution to the current volume. See also Richard Tieszen (2005) who emphasizes the importance for Gödel of this likewise Husserlian emphasis on the role of philosophy.

dictum on science in his *What is Called Thinking* that, and above all: ‘science does not think.’³⁴

In this sense, the Gadamerian hermeneutic philosopher, Jean Grondin, seemingly argues that continental philosophy is hermeneutics—as it were—all the way down.³⁵ But traditional practitioners of hermeneutic philosophy have tended to keep themselves well clear of the broad themes of philosophy, especially epistemology but above all philosophy of science, emphasizing as students of hermeneutics tend to do, a focus on text rather than practice. The result can lead to misprisions in the classic debates over the years between Gadamer and Habermas or the debate specifically relevant to the current context, between Patrick Aidan Heelan and György Markus.³⁶ Markus takes the literary or textual conventional understanding of the hermeneutic tradition as his point of departure, invoking the “cultural organization of the Author-Text-Reader relation.”³⁷ Markus then goes on to insist that when it comes to the philosophy of science, meaning the natural sciences, “writings explicitly addressed to such an undertaking are very rare.”³⁸ But this insistence exemplifies what Nietzsche called the acoustic (*ceteris paribus*: cognitive) illusion, that where one hears nothing, there is nothing. Thus if we have not bothered to read widely—and many of us, even many of the more scholarly among us, do not bother—we assume that what we have read exhausts the extant texts, which then allows us to go on to say that such approaches are either nonexistent or rare. The tendency is self-confirming and convenient. Thereby scholars dispense themselves from the need to cite other scholars. Coupled with the tendency scholars have to focus on just a few names at the tip of the fashionable disciplinary iceberg, the attention deficit disorder Nietzsche called a ‘lack of philology’ continues to this day.

Thus and in order to contend in 1987 that there is “No Hermeneutics of Natural Sciences,” Markus was required not only to overlook Heidegger himself—who offers a precisely hermeneutic account of the natural sciences and specifically naming physics as such and thereby amplifying Husserl’s phenomenological project for the sciences in Heidegger’s *Being and Time*—but also, and more expressly, Heelan’s 1965 monograph on Heisenberg’s philosophy of science,³⁹ as well as Kockelmans’ 1966 monograph on the philosophy of physical science (leaving out Kockelmans’

³⁴ Heidegger, *What is Called Thinking*, 1968, 8ff. For discussion see Jean-Michel Salanskis (1995), Babich (2003). Ginev (1997).

³⁵ See Jean Grondin (2000).

³⁶ See here Gyorgy Markus’s patently circular essay: “Why is There No Hermeneutics of Natural Sciences,” *Science in Context*, 1/1 (1987), pp. 5–51 as well as Heelan’s patient rejoinder: “There is a Hermeneutic Philosophy of Natural Science: Rejoinder to Markus.” *Science in Context*, 3 (1989): 469–480. Largely engaging Markus, see Dimitür Ginev (1997). See yet more broadly, Heelan (1998).

³⁷ Markus, “Why is There No Hermeneutics of Natural Sciences,” 5.

³⁸ *Ibid.*, pp. 5–6.

³⁹ Patrick A. Heelan (1965).

earlier Dutch language studies),⁴⁰ in addition to, among excluded others, Heidegger's successor in Freiburg after the war, the Hungarian philosopher of science, Wilhelm Szilasi who published a very hermeneutical minded study of science (in Heidegger's spirit) in 1945 and focused on related themes until the end of his life.⁴¹

The history of the philosophy of science itself, in the meetings of the American Philosophy of Science Association and in its publications, which in the 1960s received the work of Kockelmans as it also received Heelan's contributions with an openness that was as striking as it would prove to be short-lived, has yet to be written, but any account would need to review the changing rubrics that rule the reference to hermeneutics.⁴² Thus Kockelmans pointed out that he himself originally spoke of "existential phenomenology" and only later came to speak of the same as "hermeneutic phenomenology"⁴³ and Heelan too would experiment with context-dependence and interpretation.

Another part of the problem may well be traceable to my own teacher, Hans-Georg Gadamer himself, who maintained, perhaps because his own father was a well-known professor of chemistry, a certain distance from the sciences, and who, when he did engage the sciences in his long life, did little to supersede the effects of this same distance. Thus Gadamer's *Reason in the Age of Science* repeated Dilthey without going beyond him.⁴⁴ More troublesome was the conventional distinction lent to studies of the social sciences (already burdened by the old fact/value distinction as sciences of spirit in a German context) by authors who did not really introduce hermeneutics at all into books that were nonetheless so titled, such as Zygmunt Bauman's *Hermeneutics and Social Science* which was rather more of a primer for anthropological sociology than anything else.⁴⁵ By contrast, of course, Kockelmans

⁴⁰ See Kockelmans (1966), which in turn was a translation of an earlier text written in Dutch: *Phaenomenologie en Natuurwetenschap: een inleiding in de wijsbegeerte der natuurwetenschappen* (Haarlem: Erven F. Bohn, 1962).

⁴¹ Wilhelm Szilasi (1945) as well as Szilasi (1961).

⁴² But see Heelan's own biographical reflections, "Le petit philosophe" for a beginning and a chronological review of Kockelmans' as indeed of Heelan's own publications in this matter can also be revealing.

⁴³ This is also to be seen in the original title for the largest society for the study of continental philosophy in North America, the Society for Phenomenology and Existential Philosophy. Some years ago there was talk of changing the name of the society to reflect not only hermeneutics but other significant trends. Similar emphases also can be seen in the leading journal for continental philosophy which was originally called *Man and World* and is now called, obviously enough, *The Continental Philosophy Review*.

⁴⁴ Gadamer (1981). But of course all of this collection is about showing the precise relevance of Gadamer's thinking to science as exemplified, just for one example by an essay featuring medical and nursing professionals among the collective authors: Nancy J. Moules, David W. Jardine, Graham P. McCaffrey, Christopher B. Brown, "Isn't All of Oncology Hermeneutic?" *Journal of Applied Hermeneutics*, pp. 1–10.

⁴⁵ Simon Glynn's concluding essay below offers an exception to this claim. See Zygmunt Bauman's (1978) also avoided significant engagement with Gadamer, reading hermeneutics to be sure as a literary tradition. I should also note that although Richard Bernstein's study of pragmatism and hermeneutics invokes science in the title of his book, Bernstein does not in fact speak to philosophy

always sought to include both phenomenology and hermeneutics in his own discussions of the social sciences.⁴⁶

By contrast, there are significant signs that things are changing. I read Alfred Nordmann's "Getting the Causal Story Right" as an important step in such a direction, interior to mainstream philosophy of science, beyond the continued damage done by Markus's limitation of hermeneutics to the "interpretive encounter of a reader with a text"⁴⁷ rather than and as Kockelmans himself had read Heidegger's hermeneutic transformation of the phenomenological return to Husserl's things themselves in the schemes that Heidegger contended made up the region or delimited an individual science *qua* science, or as Merleau-Ponty saw this as informing sense-perception including measurement, as Heelan would also argue in both Heidegger's and Husserl's sense, as well as theory.

If Heidegger could call Husserlian phenomenology the *Urwissenschaft* in 1919,⁴⁸ his signal contribution was his articulation of an explicitly hermeneutic phenomenology. Thus if the Heidegger of 1925, almost in the very same terms that Husserl uses, refers to the "crisis of philosophy as science," he reflects in the same spirit—and indeed one that will recur almost verbatim in the early section of *Being and Time*—that all "sciences and groups of sciences are undergoing a great revolution of a productive kind that has opened up new modes of questioning, new possibilities, and new horizons."⁴⁹ Heidegger goes on to detail the theory of relativity in physics along with the crisis of foundations in mathematics, to which one must add quantum mechanics along with the movement against mechanistic thinking in the biological sciences. For Heidegger, what is at issue is the *constitution* of modern technological and mathematizable (measurable, calculable, model-oriented) science, conceived in both the Husserlian phenomenological sense and the mechanically explicit sense of standardized manufacture and institutional technology.⁵⁰

of science. Similarly, the rhetoric of science can fail to engage the broad tradition of hermeneutics as can be seen by more rather than less conventional studies such in evidence in monographs and collections such as Allan G. Gross and William M. Keith (1997). By contrast and although also analytically inclined Chrysostomos Mantzavinos (2005) offers a systematic approach to what may count, very provisionally, as a new beginning.

⁴⁶Thus see in particular Kockelmans' important essay: "Toward an Interpretative or Hermeneutic Social Science," *Graduate Faculty Philosophy Journal*, 5 (1975): 73–96 as well as his article on history: "Hermeneutic Phenomenology and the Science of History," *Phänomenologische Forschungen*, 2 (1976): 130–179, his essays "Reflections on Social Theory," *Human Studies: A Journal for Philosophy and the Social Sciences*, 1 (1978): 1–15 and "Deskriptive und interpretierende Phänomenologie in Schutz's Konzeption der Sozialwissenschaft" in: Walter Sprondel and Richard Grathoff, (eds.) *Alfred Schutz und die Idee des Alltags in den Sozialwissenschaften* (Stuttgart: Enke Verlag, 1979) 26–42.

⁴⁷Alfred Nordmann's (2008).

⁴⁸Heidegger (2000), p. 3, 11ff. See further Ted Kisiel (2002), 17ff.

⁴⁹Heidegger (2002, p. 148).

⁵⁰This is a complex point, and later the same Heidegger who will foreground *Gelassenheit*, suggests in the 1930s that the trajectory of modern technology may be described as a "humanism" — reading humanism here as Nietzsche speaks of the human, all too human. See for this reading of the *Beiträge* of the 1930s and 1940s, Babich (2012a) as well as my own essay included in the

But it would be difficult to characterize Joseph Kockelmans' approach better than Ted Kisiel has where Kisiel also has recourse to the above-mentioned distinctions and contrasts to do so:

Contrary to Patrick Heelan and me, Joe K's hermeneutic approach to the philosophy of science consistently follows an (to me unremarkable) approach sketched out by MH in SZ 363 of "thematizing objectification" with math physics as its ultimate model, which via mathematical projection abstracts and demarcates a domain of objects, which it regards as Nature, for research by way of formalization and other such theoretical systematizations. All this summarized in his book (Kluwer, 1993) entitled *Ideas for a Hermeneutic Phenomenology of the Natural Sciences*.⁵¹

To this extent, and as we may, following Kisiel here, review Kockelmans' own philosophical trajectory in the philosophy of science, Heidegger himself also followed and complemented Husserl's own approach to science. In the same way, as Kockelmans has also foregrounded this conjunction, both Heidegger and Husserl significantly regarded phenomenology as an approach needed for any philosophy of science that might come forth as such.⁵² But in the same spirit, and this is where many readers of Heidegger's philosophy of science will tend to shy away, recognizing this as a critical reservation, Heidegger also opposes sense-directed reflection [*Besinnung*] to the rational, calculative project of Western technologically articulated and advancing science. Thus Heidegger discusses the relation between science and philosophy in *Being and Time*, noting as he does there that philosophical logic can either 'limp along' after the sciences,⁵³ or else it can leap ahead, as a literally "productive logic."⁵⁴ For Heidegger this generative logic that leaps ahead "into some area of Being, discloses it for the first time, in the constitution of its Being, and, after thus arriving at the structures within it, makes these available to the positive sciences as transparent assignments for their inquiry."⁵⁵

Reflecting on what might be counted as the "future" of hermeneutic philosophy, the Hegelian Otto Pöggeler, who was along with Bas C. van Fraassen, a contributor to Tim Stapleton's edited *Festschrift* in Kockelmans honor,⁵⁶ could observe that no possibility that is not adequately anticipated or met can come to be. What is then lacking is not a failure of possibility with respect to what has or what might come to

collection below on Heidegger's 1949/1950 lectures as well as, for a critical account relevant to our own times, Babich (2012–2013).

⁵¹ Ted Kisiel, email to the author. 12:00 AM, 11 June 2013.

⁵² Indeed although the great majority of the contributions show the dominant influence of analytic philosophy, the contributions to Carlo Ierna, Hanne Jacobs, and Filip Mattens (2010) illustrate this point as does R. L. Tieszen (1989) as well as Ginev (1997) and the contributions to Babich (2002a) as well as Glazebrook (2012).

⁵³ Heidegger, *Being and Time*, 31.

⁵⁴ Heidegger, *Being and Time*, 30.

⁵⁵ *Ibid.*, 31.

⁵⁶ See the contributions to Timothy Stapleton (1994).

pass but a deficiency in the prerequisite or condition for the possibility of matching such a possibility in advance and as *point de départ* in the present time.⁵⁷

Kockelmans' own *Ideas for a Hermeneutic Phenomenology of the Natural Sciences*⁵⁸ begins with a sober recollection of the breadth of his background in his introduction to this collection, going back indeed to his fairly patently hermeneutic 1958 study on *Time and Space*.⁵⁹ Although it bears directly on the issue at hand, i.e., although it is precisely relevant to the multifarious dimensionality or dimensionalities of hermeneutic phenomenology of science precisely qua philosophy of science, there is here no adequate or fitting way to detail the history of reception and lack of reception, i.e., to explicate the antecedents and consequents of what are (or become) received viewpoints vs. the unreceived viewpoints that collectively make up the hermeneutic constellation of what is routinely included within and what is excluded from what is called philosophy of science. Some of this is due to what is widely condemned as scientism or the 'physics envy' quoted from Rorty above.⁶⁰ Other elements are doubtless due to a related trend on the part of analytic philosophy to bar from its ranks anything, anyone and indeed any themes that might compromise analytic philosophy's ongoing effort to be taken as the sole arbiter of science and reason—even in place of scientists as such—but may also be accounted to the extreme rigor of hermeneutic phenomenology which from the start conceived its own approach as scientific, and of the very first rank.

It is in this fashion that Heidegger reflects on the reflexive contradiction of the claim that "there is no absolute certainty."⁶¹ Like Nietzsche's claim that there is no truth (only interpretation), Heidegger does not dispute the argument countering that this claim advances "a claim to absolute certainty that there is no absolute certainty." Nevertheless and just as Nietzsche does not dispute but much rather encourages the critic who observes that the claim that 'everything is interpretation' is itself an interpretation, the issue for philosophical and logical reflection is exactly, as Heidegger points out, that "this apparently unshakable argument nevertheless carries no weight."⁶² At issue is the lived dynamic of philosophy or "freedom" for Heidegger, a freedom which also corresponds to an "innermost ambiguity,"⁶³ the same ambiguity that appears in Nietzsche's writings as "change" or "becoming." It is because of the "turbulent" freedom of

⁵⁷ See here Otto Pöggeler (1994).

⁵⁸ Kockelmans (1993).

⁵⁹ Cited as: "*Time and Space: The Meaning of Einstein's Relativity Theory for a Phenomenological Philosophy of Nature* (Haarlem: Bohn, 1958)" in Footnote 2 of Kockelmans, 1993: "Preface", ix. Original title: *Tijd en ruimte : de opvattingen van Albert Einstein over de absolute betrekkingen volgens tijd en ruimte tussen voorvallen in de werkelijkheid en haar betekenis voor de wijsbegeerte der anorganische natuur* (Haarlem: Bohn, 1958).

⁶⁰ Rorty, "A Tale of Two Disciplines" and see, again, for further references and discussion, Babich, "*Ex aliquo nihil*."

⁶¹ Heidegger (2001), p. 18, cf. 17.

⁶² Heidegger, *The Fundamental Concepts of Metaphysics*, 18.

⁶³ *Ibid.*, 19.

philosophizing, as human beings must philosophize, everything that belongs to the human condition “belongs just as essentially to the truth of philosophy.”⁶⁴ Hence and in a Nietzschean (and indeed Avenarius-cum-Machian) moment reflecting on the economy of knowledge, Heidegger observes that “No knower necessarily stands so close to the verge of error at every moment as the one who philosophizes.”⁶⁵

For Heidegger—and this reflects the overall spirit of the present collection on the multidimensionality of hermeneutics—philosophy is called upon to think on science. But Heidegger also contends not only that science is infamously innocent of thought. And in what we may now see to be an echo of Nietzsche’s remarks on physics and interpretation in *Beyond Good and Evil*, Heidegger also writes in his essay “Science and Reflection,” that “Physics as physics can make no assertions about physics.”⁶⁶ To this extent—and this is why hermeneutics cannot be dispensed with, perhaps particularly when it comes the natural sciences—Heidegger’s objections are, logically, formal ones. Ted Kisiel explains Heidegger’s gnomic pronouncement on error: “In order to reflect on any science, it is necessary to transcend that science and adopt a transcendental vantage point, to put it in Kantian terms.”⁶⁷ For Heidegger, a scientist philosophizes, with all the risks of the same, as a philosopher not a scientist when reflecting on the foundations of his own discipline.

When Kockelmans concludes the first volume of his *Hermeneutic Phenomenology of Natural Science* by reflecting on the same foundations with respect to the history and philosophy of science, his point concerns the very conceptual framework of science as this itself “essentially depends on its mathematical character.”⁶⁸ In this sense Kockelmans stresses, as Hilbert had already argued as necessary point of departure for mathematics as a science, the foundational point Heidegger makes above, that “mathematics is not a means to express a rationality that is already there” but much rather that mathematics “constitutes the rationality of our description of the observed phenomena.”⁶⁹ The essays to follow exemplify this rigor and above all they testify to the multidimensionality of hermeneutic phenomenology not only in the philosophy of science but also for the philosophy of technology as well as metaphysics and epistemology, and including aesthetics, as well as explorations of the history of philosophy and theology.

⁶⁴ Ibid.

⁶⁵ Ibid.

⁶⁶ Heidegger (1977), here 176.

⁶⁷ Theodore J. Kisiel, “Science Phenomenology and the Thinking of Being,” in Kockelmans and Kisiel, eds., *Phenomenology and the Natural Sciences: Essays and Translations* (Evanston: Northwestern University Press, 1970), 167–183, here 170.

⁶⁸ Kockelmans, *Ideas for a Hermeneutic Phenomenology of Natural Science*, p. 281.

⁶⁹ Ibid.

Plan of the Text

In his lead essay, “A Paradox of Cognition” in the first section, *Cognition, Bio-Hermeneutics, and Lifeworld*, Nicholas Rescher offers a reflection on the classical irony of the circumstance that finds us increasingly aware of the limitations of our knowledge the more we know. Rescher takes his point of departure from Kant’s observation that every answer to our questions provides new materials for the development of further questions. As knowledge expands, the lineaments of our ignorance are brought even more clearly into sight. Questioning is an earmark of hermeneutic phenomenology. In his essay to follow, Dimitri Ginev turns to a case study drawn from vectorial biochemistry in his “The Articulation of a Scientific Domain from the Viewpoint of Hermeneutic Phenomenology: The Case of Vectorial Metabolism.” Ginev’s case study involves both theoretical objects related to anisotropic processes of trans-membrane transport and objects of inquiry contextually ready to hand within a configuration of scientific practices, especially including the hermeneutic fore-structure of scientific research in terms not only of scientific practices but also hermeneutic and horizontal possibilities as well as spaces of representation in addition to readable technologies.

The next essays take up the social sciences. Gregor Schiemann in his contribution, “One Cognitive Style Among Others: Towards a Phenomenology of the Lifeworld and of Other Experiences,” addresses the work of Alfred Schütz in the phenomenology of the social sciences. Schiemann emphasizes Schütz’s pluralist theory of experience. Speaking not only on cognitive styles but of the lifeworld as a world of perception as Husserl expressed it but also of the layer-model of the lifeworld developed by Schütz and Thomas Luckmann, Schiemann shows that “lifeworld” does not denote a category that encompasses culture or nature but refers to a delimited action-space and goes on to deploy Schütz’s criterion-catalogue to characterize both experimental science and subjectivity. Then, in his essay to follow, “Steps Toward a Postfoundational Phenomenology,” Giovanni Leghissa explores the problem of historicity together with the paradoxes of foundation for the sake of a more comprehensive inquiry into the concept of lifeworld. Drawing upon Husserl and Blumenberg, Leghissa explores the relationship between history and the lifeworld as well as the paradoxes contained in the *Krisis*. The concluding essays in this first section turn to practical hermeneutic dimensions in the natural sciences, including the philosophy of geology as well as measurement. Robert Frodeman discusses “Hermeneutics in the Field: The Philosophy of Geology,” arguing that geological reasoning provides a rich and realistic account of both the power and limitations of scientific reasoning. Frodeman shows that geological reasoning highlights the hermeneutic and historical nature of reasoning, scientific or otherwise, in addition to the neglected kinship between reasoning in the sciences and the humanities. To conclude this first section, Robert Crease examines measurement as an ‘emblematic technology’ in his essay, “The Metroscape: Phenomenology of Measurement.” Reading measurement to develop and extend Heidegger’s concept of *Gestell*, Crease argues that measurement is more than one tool among others, such as rulers, scales, and other

instruments, measurement is a fluid and correlated network that is smoothly and intimately integrated into the world and its shape. This essay proposes the concept of *metroscape* to develop and extend Heidegger's concept of *Gestell*.

The second of the four sections in this collection, "Hermeneutic and Phenomenological Philosophy of Science and Technology" begins with a lead essay by Patrick Aidan Heelan, "Consciousness, Quantum Physics, and Hermeneutical Phenomenology" who begins with a powerful metaphor comparing Friedrich Schleiermacher's 'hermeneutic' transformation of Kant's anthropology, in order to include then-newly discovered peoples that Captain Cook had discovered in the South Sea Islands to Kockelmans effort to update Kant's notion of natural science to include the phenomenological lifeworld syntheses of classical, relativity, and quantum physics. In this hermeneutical move, the 'observer' is 'embodied consciousness' and 'measure-numbers' represent 'observable presence.' For Heelan, the quantum notion of an "observable" introduces into the discursive language of physics the common sense lifeworld notion of "contextuality" as Heelan himself had earlier developed the notion of a context-dependent logic. In the next essay, Michael Stoelzner begins by noting that usual treatments of Nietzsche's thesis of eternal recurrence tend to highlight its ethical or anthropological rather than its more scientific aspects. Yet Stoelzner reminds us that this was not always so and during the first half of the twentieth century, several eminent scholars treated eternal recurrence as a serious, if speculative, scientific idea, either to justify its validity or to find it worthy of an elaborated criticism within the science of the day. Stoelzner reviews Oskar Becker's 1936 effort to defend the scientific and logical basis of Nietzsche's writings, noting that although Becker endorses Abel Rey's *Le retour éternel et la philosophie de la physique* (1927), he neglects the work of the mathematician Felix Hausdorff, particularly his *Das Chaos in kosmischer Auslese* (published in 1898 under the pseudonym Paul Mongré). Stoelzner's offers a balanced overview of Becker's arguments against the backdrop of Rey's and Hausdorff's considerations, concluding that these severely constrain Becker's conclusions. For Stoelzner, Becker's argument rests upon the constructivist standpoint in the foundations of mathematics and the Heideggerian underpinning of it by the temporality of mathematical thought that he had already given in his 1927 *Mathematische Existenz*. But Becker also assumes that, for periodic motions, one can (in thought) reverse the order of time. A look at Hausdorff's book and a proto-set-theoretic argument presented there shows, however, that such a reversal does not work without invoking what Hausdorff calls transcendent reality. From this set-theoretical and cosmological perspective, the rest of the contributions in this section take up Heidegger and technology, beginning with Theodore Kisiel's essay "Heidegger and Our Twenty-first Century Experience of *Ge-Stell*," where he proposes an etymological translation of *Ge-Stell*, Heidegger's word for the essence of modern technology, from its Greek and Latin roots as "syn-thetic com-posit[ion]ing." For Kisiel, the virtue of such a compound translation shows that Heidegger's *Ge-Stell* presciently portends our twenty-first century experience of what Kisiel calls "the internetted WorldWideWeb," with its virtual infinity of 'websites' in 'cyberspace,' but also Global Positioning Systems, interlocking air traffic control grids, world-embracing weather maps, the

24/7 world news coverage of cable TV networks like CNN, etc.,—all of which are structured by the complex programming based on the computerized and ultimately simple Leibnizian binary-digital logic generating an infinite number of combinations of the posit (1) and non-posit (0). Kisiel argues that the sharp contrast between the global time-space technologically foreshortened into instantaneity and simultaneity and the radically local time-space of our situated historical existence illuminates nothing less than the temporal-spatial tension between *Ge-Stell* and *Da-Sein* and Kisiel accordingly seeks to bring them together in contemporaneous compatibility. In my own essay to follow, “Constellating Technology: Heidegger’s *Die Gefahr/The Danger*,” I revisit the original 1949 lectures to the Club of Bremen. I argue that a hermeneutic not only of Heidegger’s reflections on technology but the context in which he offered his lecture series can offer insight into some of the more controversial passages in these texts. Like Kisiel, I too advert to today’s media context, particularly the ecology of modern technicized consciousness (and here I underline that we are still in need of a greater integration of Heidegger’s thinking and critical theory), as well as the increasing real-world ecological pressures of our own day to rethink, once again, the related notions of event [*Ereignis*] and ownedness [*Eigentlichkeit*]. Lin Ma and Jaap van Brakel, in their jointly authored essay, “Heidegger’s Thinking on the ‘Same’ of Science and Technology,” begin by noting that as opposed to the common view that modern technology derives from modern science, Heidegger presents a reverse picture in which science originated in the essence of technology, wherein Being speaks. Ma and van Brakel contend that in this sense Heidegger speaks of the Same [*das Selbe*] of science and technology as ultimately grounded in the history of Being. From 1938 to the end of his life in 1976, Heidegger constantly explored the question concerning the relation of science and technology and kept himself well-informed of both traditional and new types of technology and science, including quantum physics, nuclear technology, and biophysics. Ma and van Brakel argue however that one cannot ascribe to the Heidegger the view that these new developments originate a new Epoch of Being. In his concluding contribution to the first half of this collection, “Logos and the Essence of Technology,” Holger Schmid contends that current convictions that nature is not ‘nature’ but social construction corresponds to the self-accomplishment of metaphysical Platonism, thereby opening a common hermeneutic horizon for two articles of Heideggerian doctrine: namely, that technology has a non-technological ‘essence’ and that the final outbreak of the ‘principle of reason’ follows an incubation period of more than two millennia. What thus unfolds for Schmid is the philosophic history of the word ‘logos’: not speech, as Heidegger rightly urges, but ‘laying.’ In this fashion, and including important references to Wilhelm von Humboldt on language and, more subtly, to Friedrich Georg Jünger on technology, Schmid continues to argue that today’s technoscientific world view increasingly determines the way reality is perceived, privileging the framework of the natural as opposed to the human sciences.

The second half of the collection begins with the section *Philosophical Truth, Hermeneutic Aesthetics, and History of Philosophy*. Graeme Nicholson, in his lead essay here, “On the Manifold Meaning of Truth in Aristotle,” makes the case that

when Aristotle treats true and false statements in his logical treatises, what is demonstrated is that truth and falsity are the pre-supposed, non-discursive grounding for statements themselves. Nicholson goes on to note that it is even more salient that Aristotle's ethical treatises show that intellectual virtues are constituted by truth whereas the *Metaphysics* shows that truth in thinking is sustained by the truth of being. As Nicholson argues, these diverse studies can be connected to one another by way of the Greek term for truth, *aletheia*, as Heidegger has treated it. Jeff Malpas' essay, "The Twofold Character of Truth: Heidegger, Davidson, Tugendhat," continues Nicholson's focus on the concept of truth as *aletheia*, or 'unconcealment.' Malpas differs from Nicholson's analysis in that he places his emphasis on Tugendhat's influential criticism of Heidegger's identification of truth with *aletheia* together with Donald Davidson's account. Malpas seeks to show why it remains the case that *aletheia* is to be understood as a mode of truth, arguing that this involves understanding a certain transcendental-topological structure as pertaining to *aletheia*, thereby understanding truth as standing in an essential relation to place or *topos* constituting the ground for genuine questioning or critique. In his essay, "What can Philosophy of Science Learn from Hermeneutics—What Can Hermeneutics Learn From Philosophy of Science?" Jan Faye challenges the traditional supposition that hermeneutics and phenomenology were the dominant positions in the philosophy of the humanities, whereby the validity of these constitutive acts of meaning depended on the historical situation of the interpreter and of the object of interpretation. Although agreeing with the hermeneutic-phenomenological tradition, Faye proposes a view of interpretation and understanding resting on the idea that human cognition is a natural phenomenon. Thus Faye argues that objective understanding exists in the humanities in the sense whereby the validity of an interpretation, like an explanation in the sciences, is independent of the interpreter's historical situation. As the concluding contribution to this section, Enrico Berti's "The Classical Notion of Person and its Criticism by Modern Philosophy" illustrates the definition of person given by Boethius as "an individual substance of a rational nature," and as derived from Aristotle. Berti explores the criticisms of this notion formulated by both modern and contemporary philosophers from David Hume to Derek Parfit and details the rediscovery of the classical notion of person, or of its Aristotelian elements, by Saul Kripke, David Wiggins, Paul Ricoeur, and Martha C. Nussbaum.

The concluding section, *Hermeneutic Science and First Philosophy, Theology, Hermetics and the Universe*, begins with a contribution that recollects the purview of the collection as a whole. In his essay, "Philosophie des sciences et philosophie première", Pierre Kerszberg argues that ever since the institution of Galilean science, the mathematical science of nature has wanted to surmount the deceptive appearances of everyday experience. Yet reference to familiar experience is insurmountable even for contemporary theory. Kerszberg, thus undertakes the project of first philosophy in terms of the horizon of a *mathesis universalis* in order to explore the possibilities of an epistemology that eliminates both the fantasy of absolute control of what is as well as the skepticism that inevitably follows the frustration of the same fantasy. For Kerszberg, Kant's transcendental phenomenology opens

a path to such, including the contributions of modern and contemporary science to invent kinds of evidence that would engage anew the gestures of the body translated into the spaces of thought. Adriaan T. Peperzak's "A Re-Reading of Heidegger's "Phenomenology and Theology" in dialogue with Kockelmans own engagement with theology raises the question of the status of both science and theology, motivated by critical questions concerning his basic statements about the presence and absence of certain relations between faith and philosophy. Peperzak invokes traditional theological debates as well as a reflection on Franz Overbeck, usually noted in connection with Nietzsche but who was important for many contemporary debates on theology.

In the penultimate article in this collection, "The Reminders of Faith: On Karl Löwith's Conception of Secularization," Rodolphe Gasché's essay explores Löwith's notion of secularization. Gasché argues that this notion presupposes a conception of faith found only in the religions of the Book. For Gasché, Löwith's analyses of history, no matter whether eschatological or progressive, are adumbrated against the background of the Greek experience of the physical cosmos as this is characterized by cyclical time. The final contribution by Simon Glynn, "The Hermeneutics of God, the Universe, and Everything," offers a comprehensively global perspective on hermeneutic interpretation as a means of clarifying and resolving apparent incoherencies and contradictions within the scriptures, legal, classical, and other texts. Explicating such wide-ranging application within these diverse fields of human inquiry, Glynn concludes, along with Heidegger, that hermeneutic interpretation is central to all epistemological understanding, as it is to human existence.

Acknowledgments

- [AU2] Permission from dpa Bildagentur to reprint the photograph included in Babette Babich, "Constellating Technology: Heidegger's *Die Gefahr/The Danger*" is gratefully acknowledged.

Robert Frodeman's contribution has appeared in earlier variations as Frodeman, "Geological reasoning: Geology as an interpretive and historical science," *GSA Bulletin* 107 (1995): 960–968 as well as Frodeman, *Geologic: Breaking Ground between Philosophy and the Earth Sciences* (Albany: State University of New York Press, 2003). An earlier version of Enrico Berti's "The Classical Notion of Person and its Criticism by Modern Philosophy" was initially published under the title of "The Classical Notion of Person in Today's Philosophical Debate" in the collection edited by Edmond Malinvaud and Mary Ann Glendon, *Conceptualization of the Person in Social Sciences, Proceedings of the Eleventh Plenary Session of the Pontifical Academy of Social Sciences*, Vatican City (2006): 63–77 and was republished in part with the title "The Classical Notion of Person and its Criticism by Modern Philosophy" in *International Academy for Philosophy, News and Views*, New Series, Vol.1, No 1, 22 (Spring 2009): 9–19. The first instauration of Rodolphe

Gasché's essay was published in *Divinatio. Studia Culturologica Series*, Sofia: MSHS, vol. 28 (2008): 27–50. An earlier version of Holger Schmid's essay was published in the *Proceedings of the 35th Meeting of the Heidegger Circle. On Heidegger's 1976 Letter to the 10th Meeting of the Heidegger Circle in Chicago* (New York: Fordham University, 2001): 101–114.

The co-editor of this collection, Dimitri Ginev, conceived the idea for this collection in honor of the memory of one of the pioneers of hermeneutic phenomenology, Joseph J. Kockelmans. Both of us together worked to bring the contributors here included in the present volume. This volume is both a tribute to Joseph Kockelmans as well as an invitation to read—and to re-read—Kockelmans' work.

As the corresponding and working coeditor, the present author thanks the reviewers of the volume for their helpful suggestions and to Anita van der Linden-Rachmat as well as the series editor. In addition to my gratitude to Joseph Kockelmans, Jr., and Veronique Foti, I am also grateful to Tim Stapleton, Patrick Aidan Heelan and Dimitri Ginev. William J. Richardson, S.J., Richard Cobb-Stevens, and David B. Allison also provided helpful discussions. But my deepest tribute of thanks is owed to Ted Kisiel, who worked with Joe Kockelmans in Pittsburgh and who has inspired me in the years since I first encountered Ted in my reading of the collection he edited with Joe Kockelmans and again when I met him in person, for the first time, in Berlin and ever since.

References

- Abel, Günter. 1998. *Nietzsche: Die Dynamik der Willen zur Macht und die ewige Wiederkehr*. Berlin: de Gruyter.
- Babich, Babette. 1994. *Nietzsche's philosophy of science: Reflecting science on the ground of art and life*. Albany: State University of New York Press.
- Babich, Babette, ed. 2002a. *Hermeneutic philosophy of science, Van Gogh's eyes, and god: Essays in honor of Patrick A. Heelan, S.J.* Dordrecht: Kluwer.
- Babich, Babette. 2002b. Sokal's hermeneutic hoax: Physics and the new inquisition. In: *Hermeneutic philosophy of science Van Gogh's eyes, and god*, ed. B. Babich, 67–78. Dordrecht: Kluwer.
- Babich, Babette. 2002c. The fortunes of incommensurability: Thoughtstyles, paradigms, and Patrick A. Heelan's hermeneutic of science. In: *Hermeneutic philosophy of science, Van Gogh's eyes, and god*, ed. B. Babich, 1–18. Dordrecht: Kluwer.
- Babich, Babette. 2003. On the analytic-continental divide in philosophy: Nietzsche's lying truth, Heidegger's speaking language, and philosophy. In *A house divided: Comparing analytic and continental philosophy*, ed. Carlos G. Prado, 63–103. Amherst: Humanity Books.
- Babich, Babette. 2005. The science of words or philology: Music in *The birth of tragedy* and the alchemy of love in *The gay science*. In *Revista di estetica*. n.s. 28. XLV, ed. Tiziana Andina, 47–78. Turin: Rosenberg & Sellier.
- Babich, Babette. 2006. Heideggers 'Beiträge' zwischen politische Kritik und die Frage nach der Technik. Trans. Harald, Seubert with the author. In *Eugenik und die Zukunft*, ed. Stefan Sorgner, H. James Birx, and Nikolaus Knoepffler, 43–69. Freiburg: Karl Alber Verlag.
- Babich, Babette. 2009. Nietzsche's philology and Nietzsche's science: On the 'problem of science' and 'fröhliche Wissenschaft.' In *Metaphilology: Histories and languages of philology*, ed. Pascale, Hummel, 155–201. Paris: Philologicum.

- Babich, Babette. 2010a. Towards a critical philosophy of science: Continental beginnings and bugbears, whigs and waterbears. *International Journal of the Philosophy of Science*. 24(4): 343–391.
- Babich, Babette. 2010b. *ex aliquo nihil*: Nietzsche on science, anarchy, and democratic nihilism. *American Catholic Philosophical Quarterly*. 84(2): 231–255.
- Babich, Babette. 2012a. Heidegger's philosophy of science and the critique of calculation: Reflective questioning, *Gelassenheit*, life. In: *Heidegger on science*, ed. Patricia Glazebrook, 159–192. Albany: State University of New York Press.
- Babich, Babette. 2012b. Heideggers Wille zur Macht: Die Beiträge lesen im Rückblick auf Nietzsche, Wissenschaft und Technik. In *Heidegger und Nietzsche*, ed. Babich, Denker, and Zaborowski (trans: Harald Seubert), 283–321. Amsterdam: Rodopi Verlag.
- Babich, Babette. 2012c. Philosophische Figuren, Frauen und Liebe: Zu Nietzsche und Lou. In *Nietzsche Forschung*, ed. Renate, Reschke, 113–139. Berlin: Akademie Verlag.
- Babich, Babette. 2012–2013. *O, Superman!* or being towards transhumanism: Martin Heidegger, Günther Anders, and Media Aesthetics. *Divinatio*. 36(Autumn/Winter): 83–99.
- Babich, Babette. 2013. *The Hallelujah effect. Philosophical reflections on music, performance practice and technology*. Surrey: Ashgate.
- Barbarič, Damir. 2005. Hörendes Denken. In: "*Dimensionen des Hermeneutischen*": *Heidegger und Gadamer*, ed. Figal, Günter and Hans-Helmuth Gander, 37–58. Frankfurt: Klostermann.
- Bauman, Zygmunt. 1978. *Hermeneutics and social science*. London: Hutchinson.
- Benne, Christian. 2005. *Nietzsche und die Historisch-kritische Philologie*. Berlin: de Gruyter.
- Bennett, Maxwell R., and Peter M.S. Hacker. 2003. *Philosophical foundations of neuroscience*. Oxford: Wiley.
- Betti, Emilio. 1967. *Allgemeine Auslegungslehre als Methodik der Geisteswissenschaften*. Tübingen: Mohr.
- Bernstein, Richard. 1983. *Beyond objectivism and relativism: Science, hermeneutics, and praxis*. Philadelphia: University of Pennsylvania Press.
- Bollnow, Otto Friedrich. 1982. *Studien zur Hermeneutik Band I: Zur Philosophie der Geisteswissenschaften*. Freiburg: Alber.
- Bontekoe, Ronald. 1996. *Dimensions of the hermeneutic circle*. Amherst: Humanity Books.
- Boubil, Élodie and Christine Daigle, eds. 2012. *Nietzsche and phenomenology power, life, subjectivity*. Bloomington: Indiana University Press.
- Corbier, Christophe. 2009. Alogia et eurythmie chez Nietzsche. *Nietzsche-Studien*. 38: 1–38. For more discussion and further references.
- Dilthey, Wilhelm. 1916–1967. *Gesammelte Schriften*. Göttingen: Vandenhoeck and Ruprecht.
- Dilthey, Wilhelm. 1991. *Introduction to the human sciences*. Princeton: Princeton University Press.
- Duesberg, Peter H., D. Mandrioli, A. McCormack, J.M. Nicholson, D. Rasnick, C. Fiala, C. Koehnlein, H.H. Bauer, M. Ruggiero. 2011. AIDS since 1984: No evidence for a new, viral epidemic—not even in Africa. *Italian Journal of Anatomy and Embryology*. 116(2): 73–92.
- Fehér, István. 1999. Philologie und Hermeneutik: Verständnis der Sache, Verständnis des Textes. *Berliner Beiträge zur Hungarologie (Schriftenreihe des Seminars für Hungarologie an der Humboldt-Universität zu Berlin)*. 11: 11–25.
- Fehér, István. 2001. Hermeneutics and philology: 'Understanding the matter,' 'understanding the text.'" *Continental Philosophy Review*. XXXIV(3): 269–285.
- Figal, Günter and Hans-Helmuth Gander, eds. 2005. "*Dimensionen des Hermeneutischen*": *Heidegger und Gadamer*. Frankfurt: Klostermann.
- Fine, Arthur. 1993. "Fictionalism." *Midwest Studies in Philosophy*. 18(1): 1–18.
- Flaschar, Helmut, Karlfried Gründer, and Axel, E.-A. Horstmann, eds. 1979. *Philologie und Hermeneutik im 19. Jahrhundert: zur Geschichte und Methodologie der Geisteswissenschaften*. Göttingen: Vandenhoeck & Ruprecht.
- Ginev, Dimitür. 1995. *Die Mehrdimensionalität geisteswissenschaftlicher Erfahrung*. Essen: Die Blaue Eule.
- Ginev, Dimitür. 1997. *A passage to hermeneutic philosophy of science*. Amsterdam: Rodopi.
- Ginev, Dimitür. 1997. *Essays in the hermeneutics of science*. Aldershot: Ashgate.
- Ginev, Dimitür. 2011. *The tenets of cognitive existentialism*. Athens: Ohio University Press.

- Glazebrook, Trish, ed. 2012. *Heidegger on science*. Albany: State University of New York Press.
- Grondin, Jean. 2000. Continental or hermeneutical philosophy: The tragedies of understanding in the analytic and continental perspective. In: *Interrogating the tradition: Hermeneutics and the history of philosophy*, ed. John Sallis, and Charles Scott, 75–83. Albany: State University of New York Press.
- Gross, Allan G., and William M. Keith, eds. 1997. *Rhetorical hermeneutics: Invention and interpretation in the age of science*. Albany: State University of New York Press.
- Ierna, Carlo, Hanne Jacobs, and Filip Mattens, eds. 2010. *Philosophy, phenomenology, sciences: Essays in commemoration of Edmund Husserl*. Frankfurt am Main: Springer.
- Hacker, Peter M.S. with James Garvey. 2010. Hacker's challenge. *The Philosopher's Magazine*, October 25.
- Hassemer, Winfried. ed. 1984. *Dimensionen der Hermeneutik: Arthur Kaufmann zum 60. Geburtstag*. Heidelberg: R.v. Decker and C. F. Müller.
- Heelan, Patrick Aidan. 1983. *Space-perception and the philosophy of science*. Berkeley: University of California Press.
- Heelan, Patrick Aidan. 1975. Heisenberg and radical theoretic change. *Zeitschrift für allgemeine Wissenschaftstheorie*. 6: 113–138.
- Heelan, Patrick Aidan. 1970. Complementarity, context dependence, and quantum logic. *Foundations of Physics*. 1: 95–110.
- Heelan, Patrick Aidan. 1965. *Quantum mechanics and objectivity: The physical philosophy of Werner Heisenberg*. The Hague: Martinus Nijhoff.
- Heelan, Patrick Aidan. 1989. There is a hermeneutic philosophy of natural science: Rejoinder to markus. *Science in Context*. 3: 469–480.
- Heelan, Patrick Aidan. 1998. Scope of hermeneutics in the philosophy of natural science. *Studies in the History and Philosophy of Science*. 29: 273–98.
- Heelan, Patrick Aidan. 2011. Le petit philosophe. In: *In search of the whole: Twelve essays on faith and academic life*, ed. John C. Haughey, 129–146. Washington, DC: Georgetown University Press.
- Heidegger, Martin. 1927. *Sein und Zeit*. New York: Harper & Row.
- Heidegger, Martin. 1962. *Being and time*. Trans. John Macquarrie, and Edward Robinson. New York: Harper & Row.
- Heidegger, Martin. 1977. Science and reflection. In *The question concerning technology and other essays* (trans: William Lovitt), 155–182. New York: Harper.
- Heidegger, Martin. 2001. *The fundamental concepts of metaphysics: World, finitude, solitude*. Trans. William McNeill, and Nicholas Walker. Bloomington: Indiana University Press.
- Heidegger, Martin. 2000. *Towards the definition of philosophy*, Trans. Ted Sadler. London: Continuum.
- Heidegger, Martin. 2002. Wilhelm Dilthey's research and the struggle for a historical worldview. Trans. Charles Bambach. In Heidegger, M., *Supplements: From the earliest essays to "Being and time" and beyond*, ed. John van Buren. Albany: State University of New York Press.
- Hirsch, Jr., E. D. 1972. Three dimensions of hermeneutics. *New Literary History*. 3(2), *On Interpretation: I* (Winter): 245–261.
- Hirsch, Jr., E. D. 1975. Current issues in theory of interpretation. *The Journal of Religion*. 55(3): 298–312.
- Hübner, Kurt. 1979. *Kritik der wissenschaftlichen Vernunft*. Alber: Freiburg/München.
- Hawking, Stephen, and Leonard Mlodinow. 2010. *The grand design*. New York: Bantam.
- Kisiel, Theodore. 2002. *Heidegger's way of thought*. London: Continuum.
- Kockelmans, Joseph. 1953. *Philosophy of mathematics in the middle ages* (in Dutch). Langemark: Vonksteen.
- Kockelmans, Joseph. 1958. *Tijd en ruimte : de opvattingen van Albert Einstein over de absolute betrekkingen volgens tijd en ruimte tussen voorvallen in de werkelijkheid en haar betekenis voor de wijsbegeerte der anorganische natuur* [Time and space: The meaning of Einstein's relativity theory for a phenomenological philosophy of nature]. Haarlem: Bohn.
- Kockelmans, Joseph. 1962. *Phaenomenologie en Natuurwetenschap: een inleiding in de wijsbegeerte der natuurwetenschappen* [Phenomenology and physics]. Haarlem: Erven F. Bohn.

- Kockelmans, Joseph. 1964. *Husserl's phenomenological psychology* [in Dutch]. The Hague and Tiel: Lannoo.
- Kockelmans, Joseph. 1964. Merleau-Ponty on space and space-perception. *Review of Existential Psychology and Psychiatry*. 4: 69–105.
- Kockelmans, Joseph. 1966. *Phenomenology and physical science: An introduction to the philosophy of physical science*. Pittsburgh: Duquesne.
- Kockelmans, Joseph. 1967. *Edmund Husserl's phenomenological psychology. A historico-critical study*. Pittsburgh: Duquesne University Press.
- Kockelmans, Joseph. 1970. The mathematization of nature in Husserl's last publication. In: *Phenomenology and the natural sciences essays and translations*, ed. Kockelmans, and Theodore J. Kisiel, 45–67. Evanston: Northwestern University Press.
- Kockelmans, Joseph. 1970. Merleau-Ponty on space perception and space. In: *Phenomenology and the natural sciences*, eds. Joseph J. Kockelmans, and Theodore J. Kisiel, 274–311. Evanston: Northwestern University Press.
- Kockelmans, Joseph. 1975. Toward an interpretative or hermeneutic social science. *Graduate Faculty Philosophy Journal*. 5: 73–96.
- Kockelmans, Joseph. 1976. Hermeneutic phenomenology and the science of history. *Phänomenologische Forschungen*. 2: 130–179.
- Kockelmans, Joseph. 1978. Reflections on social theory. *Human Studies: A Journal for Philosophy and the Social Sciences*. 1: 1–15.
- Kockelmans, Joseph. 1979. Deskriptive oder interpretierende Phänomenologie in Schütz' Konzeption der Sozialwissenschaft. In: *Alfred Schütz und die Idee des Alltags in den Sozialwissenschaften*, eds. Walter M. Sprondel, and Richard Grathoff, 26–42. Stuttgart: Enke.
- Kockelmans, Joseph. 1985. *Heidegger on art and art works*. Dordrecht: Martinus Nijhoff.
- Kockelmans, Joseph. 1983. The challenge of Nietzsche's 'god is dead'. In: *The great year of Zarathustra (1881–1981)*, ed. David Goicoechea, 63–80. Washington, DC: University Press of America.
- Kockelmans, Joseph. 1986. *A companion to Martin Heidegger's "being and time."* Washington, DC: Center for Advanced Research in Phenomenology and University Press of America.
- Kockelmans, Joseph. 1987. Husserl's original view on phenomenological psychology. *Phenomenological Psychology Phaenomenologica*. 10(3): 3–29.
- Kockelmans, Joseph. 1993. *Ideas for a hermeneutic phenomenology of the natural sciences*. Dordrecht: Kluwer.
- Kockelmans, Joseph. 1994. *Edmund Husserl's phenomenology*. West Lafayette: Purdue University Press.
- Kockelmans, Joseph. 2003. *Ideas for a hermeneutic phenomenology of the natural sciences. Volume II: On the importance of methodical hermeneutics for a hermeneutic phenomenology of the natural sciences*. Dordrecht: Kluwer Academic Publishers.
- Mantzavinos, Chrysostomos. 2005. *Naturalistic hermeneutics*. Cambridge: Cambridge University Press.
- Margulis, Lynn. et al., 2009. Spirochete round bodies. Syphilis, lyme disease & AIDS: Resurgence of 'the great imitator'? *Symbiosis*. 47: 51–58.
- Markus, Gyorgy. (1987). Why is there no hermeneutics of natural sciences. *Science in Context*. 1/1(1987): 5–51.
- Mittasch, Alwin. 1952. *Nietzsche als Naturphilosoph*. Stuttgart: Alfred Kroner Verlag.
- Müller, Sabine. 2004. *Programm für eine neue Wissenschaftstheorie*. Würzburg: Königshausen & Neumann.
- Müller-Lauter, Wolfgang. 2000. *Nietzsche: His philosophy of contradictions and the contradictions of his philosophy*. Trans. D. Parent. Bloomington: University of Illinois Press.
- Nietzsche, Friedrich. 1980a. Versuch einer Selbstkritik. *Die Geburt der Tragödie*. In: *Kristische Studien-Ausgabe*, eds. Giorgio Colli, and Mazzini Montinari, Vol. 1. Berlin: de Gruyter.
- [AU3] Nietzsche, Friedrich. 1980b. *Beyond good and evil*. KSA 5.
- Nietzsche, Friedrich. 1980c. *The gay science*. KSA 3.
- Nordmann, Alfred. 2008. Getting the causal story right: Hermeneutic moments in Nancy Cartwright's philosophy of science. In: *Nancy Cartwright's philosophy of science*, eds. Luc Bovens, Carl Hofer, Stephan Hartmann, 369–388. New York: Routledge.

- [AU4] Pöggeler, Otto. 1994. The future of hermeneutic philosophy. In: *The question of hermeneutics*, ed. Stapleton, 17–35. Dordrecht : Kluwer.
- Poschl, Viktor. 1979. Nietzsche und die klassische Philologie. In: *Philologie und Hermeneutik im 19. Jahrhundert*, eds. Flaschar, Gründer and Horstmann, 141–155. Göttingen: Vandenhoeck & Ruprecht.
- Rorty, Richard, 1994. A tale of two disciplines. *Callaloo*. 17/2: 575–585.
- Salanskis, Jean-Michel. 1995. Die Wissenschaft denkt nicht. *Tekhnema*. 2: 60–85.
- Seebohm, Thomas M. 2004. *Hermeneutics: Method and methodology*. Frankfurt am Main: Springer.
- Seebohm, Thomas M. 1984. Boeckh and Dilthey: The development of methodical hermeneutics. *Man and World*. 17: 325–346.
- Sheldrake, Rupert. 2012. *The science delusion: Freeing the spirit of enquiry*. London: Coronet.
- Stapleton, Timothy, ed., 1994. *The question of hermeneutics*. Kluwer: Dordrecht.
- Szilasi, Wilhelm. 1945. *Wissenschaft als Philosophie*. Zürich: Europa Verlag.
- Szilasi, Wilhelm. 1961. *Philosophie und Naturwissenschaft*. Bern: Francke.
- Tieszen, Richard. 2005. *Phenomenology, logic, and the philosophy of mathematics*. Cambridge: Cambridge University Press.
- Tieszen, Richard. 1989. *Mathematical intuition: Phenomenology and mathematical knowledge*. Dordrecht: Kluwer.
- Warman, Matt. 2011. Stephen Hawking tells google ‘philosophy is dead.’ *The Telegraph*. May 17.
- Whitman, James Q. 1986. Nietzsche in the magisterial tradition of German classical philology. *Journal of the History of Ideas*. 47: 453–468.
- Vaihinger, Hans. 1924. *The philosophy of “As If.”* Trans. C. K. Ogden. London: Kegan Paul.
- Van Fraassen, Bas. 1994. *The question of hermeneutics*, ed. Stapleton, Timothy. Kluwer: Dordrecht.
- Van Brackel, Jaap. 1999. On the neglect of the philosophy of chemistry. *Foundations of Chemistry* 1: 111–174.
- van Tongeren, Paul. 2000. *An introduction to Nietzsche’s philosophy*. West Lafayette: Purdue University Press.
- von Wright, Georg Henrik. 1971. *Explanation and understanding*. Ithaca: Cornell University Press.