

Published in: *Studies in History and Philosophy of Science*  
Volume 31, No. 4, December 2000  
Essay Review  
One Whitehead, Not Three  
Norman Sieroka  
Pages 721–730  
[https://doi.org/10.1016/S0039-3681\(00\)00029-7](https://doi.org/10.1016/S0039-3681(00)00029-7)

Current affiliation of author (October 2020):  
Theoretische Philosophie,  
Universität Bremen  
[www.uni-bremen.de/theophil/sieroka](http://www.uni-bremen.de/theophil/sieroka)

## Essay Review

### One Whitehead, Not Three

Norman Sieroka

Michael Hampe, *Alfred North Whitehead* (Munich: Beck, 1998), 207 pp., ISBN 3- 406 41947-X, Paperback DM24.

‘... and a guru is the last thing he wanted to be.’ That is what Dorothy Emmet, who wrote her PhD with Alfred North Whitehead back in the 1920s, told me about her supervisor. Neither as a supervisor nor as a lecturer was he ever dogmatic about the process philosophy of his *Process and Reality*. And it is this dogmatic process reading of Whitehead which Emmet is and always has been opposed to because it would turn Whitehead into something he never wanted to be, namely a guru. According to Emmet—whom I take to be right here—Whitehead can only be understood properly if viewed through his earlier works on mathematics and the philosophy of science. Unfortunately, however, the popular philosophical understanding tends to divide Whitehead into three (something not even Heidegger or Wittgenstein managed). There is Whitehead I, the mathematician who most famously wrote *Principia Mathematica* together with Russell around 1910. Then we have Whitehead II, the philosopher of science who around 1920 worked on an alternative to Einstein’s theory of relativity. Finally there is the ‘process guru’ Whitehead III of the late 1920s and 1930s—a rather erratic block on the metaphysical landscape with his writing on ‘actual entities’, ‘conceptual prehensions’, ‘propositional feelings’ and so on.

*Alfred North Whitehead*, a volume in a series of monographs on major thinkers published by Verlag C. H. Beck, is an excellent German introduction to Whitehead’s philosophy. Having been supervised by Emmet for a year back in the 1980s, the author, Michael Hampe, not only dedicated the book to her but also shares in it her reservation

about reading Whitehead as a pure process philosopher. On a different occasion Hampe emphasised that several introductory works on Whitehead fail to pay attention to his earlier work, which easily leads ‘to the impression that for the later Whitehead the topics which were important for him as a mathematician and theoretical physicist between 1890 and 1920 do not play any role in his metaphysics after 1922. But this would be a misinterpretation. Whitehead constantly widened his focus without really dropping existing topics of interest.’<sup>1</sup> Consequently, Hampe in his introduction emphasises the continuity in Whitehead’s work, which, as we will see, allows him also to take into account certain parts of Whitehead’s later writings which other writers pass over.

This book is already Hampe’s third work on Whitehead after his PhD Thesis *Die Wahrnehmung der Organismen* and his two co-edited volumes of essays and documents about Whitehead’s *Process and Reality*. (His ‘Habilitation’ entitled *Gesetz und Distanz* also includes a chapter with some thoughts on Whitehead.) As Hampe admits in his preface, he hesitated to write this introduction precisely because he had written so much on the topic beforehand that he was afraid of writing nothing but a ‘stylistic variation’ (p. 7) of his previous work. However, given that ‘the German literature lacks a *general survey* of [Whitehead’s] philosophical writings’ (p. 8) that takes more than just part of his later writings into account, Hampe decided to write the book.

In addition to the emphasis on the continuity in Whitehead’s work, another reason why it is particularly interesting to look at Hampe’s book is that it is a *German* introduction to Whitehead. Within the Anglo-American tradition process philosophy is not merely outside the mainstream but has developed into a kind of counter- movement against the analytic mainstream itself (with Whitehead as its hero, or rather guru). Talking again in terms of popular philosophical dichotomies and prejudices one might imagine that Whitehead must then be a big figure in Continental philosophy (or must at least share many of its concerns and emphases). So, for example, Lucas in his *The Rehabilitation of Whitehead* argues:

In many respects, Whitehead and Russell symbolize the deep division in professional temperament, style, and methodological stance that has subsequently come to dominate contemporary philosophy, and indeed, that forms the background climate of opinion for the present study: analytic versus Continental; logical and linguistic versus the systematic and metaphysical; conceptual elucidation and clarification versus historical study and phenomenological description.<sup>2</sup>

First, the dichotomies given here are very problematic in general. Furthermore, they are particularly misleading in the case of Whitehead. For the way Whitehead distrusts the study of language as a way to philosophical insight distinguishes him

1 Hampe (1997), p. 105; translation mine. All other quotes taken from Hampe’s work are my translations as well.

2 Lucas (1989), p. 111.

not only from analytic philosophers like Russell but also, for instance, from Continental philosophers like Heidegger who engaged in etymology. This is something Hampe correctly acknowledges (p. 25). And there are other reasons, which we shall come across later, why it is misleading to view Whitehead as congruent with Continental philosophy.

Hampe's book consists of eight chapters, the first of which is biographical ('An English Mathematician Being a Philosopher in America') and the last of which is on 'Whitehead's Relevance' for contemporary philosophy. There Hampe discusses, among other things, the influence Whitehead gained in the social sciences through the work of Emmet during the 1950s and later through the works of Talcott Parsons and Niklas Luhmann. The other six chapters are about Whitehead's different writings basically in order of their publication. The first two of these chapters (Chapters II and III on 'Calculus and Education' and 'Panphysics', respectively) are on Whitehead's pre 1925 writings. Chapter IV ('Reason and Living') is mainly on *The Function of Reason*, after which follows a chapter on *Process and Reality* ('Metaphysics'). Chapters VI and VII ('History, Science and Religion' and 'Wisdom of Old Age About Last Things') are about Whitehead's later writings such as *Adventures of Ideas* and *Modes of Thought*.

Instead of saying something on each chapter, I shall focus on Chapters II and III, for they illustrate nicely both what Hampe's writing is like and how he convincingly shows the continuities in Whitehead's work.

Chapter II is likely to be the one most telling for the contemporary philosophical audience. For it discusses texts quite unfamiliar to this audience, namely Whitehead's 1898 *Treatise on Universal Algebra (UA)* and two essays from the collection *The Aims of Education (AE)* (Whitehead, 1929).<sup>3</sup> In this very short chapter Hampe talks about the background and the work of Whitehead the mathematician and academic teacher. And the basic themes raised here come up again and again in the other chapters of Hampe's book when he introduces Whitehead's later writings on the philosophy of science and metaphysics.

When Whitehead was studying and teaching mathematics in Cambridge, it was the time of major revolutions in mathematics, a perfect example being the development of non-Euclidean geometry. In his *UA* Whitehead tries to embed several different algebraic systems (taken from logic and geometry) in one even more abstract calculus. Notably in Part IV of his *Process and Reality (PR)* Whitehead gives a theory of extension which according to Hampe can be viewed as a kind of proto-geometry from which, again, other geometrical systems can be abstracted.

More generally Hampe views the *UA* project as an early forerunner of Whitehead's philosophy of symbolism, as becomes clear in the course of the book. Although Whitehead departs to some extent from this early, very mathematical picture, he will still hold later that the 'languages' of all our different experiences (religious, scientific, aesthetic, etc.) must be reconstructable within one abstract and coherent

---

3 The essays Hampe discusses are 'The Aims of Education' and 'The Rhythmic Claims of Freedom and Discipline'—both of which are originally addresses, given in 1916 and 1923, respectively.

speculative philosophy. But the way mathematics is able to deal with abstractions and to synthesise ideas is still of importance for the later Whitehead and is discussed, for example, in ‘Mathematics and the Good’, an article published in *Essays in Science and Philosophy (SP)*.

Another distinguishing quality of Hampe’s book is his making of helpful comparisons between Whitehead’s ideas and those of other philosophers. Thus, Hampe contrasts Whitehead’s idea of philosophy as synthesising different symbolic systems with Heidegger’s and Wittgenstein’s approaches in *Sein und Zeit* and *Philosophical Investigations*, respectively (pp. 48–49). For the latter, in contrast to Whitehead, seem to give ordinary life experience a priority over scientific experience. However, we might compare Whitehead’s philosophy of symbolism with the work of Ernst Cassirer. Hampe develops this somewhat further in his chapter on ‘Whitehead’s Relevance’ for contemporary philosophy, where he also discusses Nelson Goodman, who was influenced by Cassirer and became the most famous advocate of a pluralistic theory of symbols over the last few decades. But, whereas Cassirer’s and Goodman’s work is primarily epistemological, Whitehead’s philosophy of symbolism (together with Peirce’s theory of signs, and semiotics) is metaphysical. Here Hampe mentions Susanne Langer, a student of Whitehead, as someone who tried to connect these traditions.

In the same context Hampe also conjectures why Whitehead was little acknowledged for so long (p. 181). He suggests that this was because Whitehead did not want to privilege one symbolic system (i.e. one type of experience) over another but to synthesise them in a speculative philosophy. This is indeed untypical for the twentieth century, a century in which lots of people did precisely that, namely privileging one symbolic system over all others. Just think of psychologism, biologism, physicalism or sociologism here.

In an earlier work Hampe made a different conjecture why Whitehead was so little acknowledged for such a long time.<sup>4</sup> There Hampe argued that the anti-metaphysical rhetoric pushed Whitehead away from the mainstream. And surprisingly this holds for so different pejorative notions of ‘metaphysics’ as those of the positivists and of Heidegger. Since Whitehead’s approach is not strictly verificationist he must be condemned from a positivist perspective for doing metaphysics. On the other hand Whitehead tries to depict the world with the help of sciences, and so from a Heideggerian point of view he too must be condemned, being a metaphysician.

Coming back to Whitehead’s *UA*, what also fascinated him about this kind of overall and abstract calculus is that it allows one to engage in a kind of ‘controlled speculation’. A calculus enables one to think very generally and abstractly but also in a very controlled manner. According to Hampe this becomes obvious in Whitehead’s early writings on education. Just as there is a special kind of harmony between freedom and discipline in using an abstract calculus, this harmony (or ‘rhythm’, as Whitehead calls it in *AE*) is also essential in education. ‘Students are alive, and the purpose of education is to stimulate and guide their self-development’ (*AE*, p. v).

---

4 Cf. Hampe (1991a), pp. 12–15.

Introducing this idea opens the door to many Whiteheadian themes that Hampe discusses in later chapters. There is, for example, the analysis of ‘speculative reason’ in *The Function of Reason (FR)*, where again Whitehead elaborates the importance of having a calculus or logical base to engage in this special type of guided speculation and shows how this leads towards a ‘cosmology’, a speculative philosophy.

Furthermore, Whitehead talks about the harmony between discipline and freedom in education as leading to an aesthetic sense of style. This is also a topic we come across several times in Hampe’s book. Without such aesthetic values our actions are senseless and aimless and we are bound to vegetate, to vanish in mere repetition. This is a problem Whitehead later calls ‘fatigue’ in *FR*. There, as well as in *PR*, Whitehead elaborates an even more dynamic notion of values in the sense that we need changing values. In *FR* he introduces the difference between living well and living better. The main idea is that we should not simply re-run experiences. With different values underlying our actions we react differently in similar circumstances, which in turn enables us to get a certain level of contrast which Whitehead takes to be important. When discussing living better and speculative reason, Hampe hints at the parallel with Nietzsche’s notion of ‘self-overpowering’ (p. 87).

Whitehead’s historiography of science is again a topic where Hampe picks up on the striving for contrast. Here he compares Whitehead’s ideas with the work of Kuhn and Feyerabend (pp. 91–2). For Whitehead’s framework also emphasises the importance of changes (‘revolutions’) in science but for him they are part of a larger process of striving for new contrasts. In this sense they are part of speculative reason and of living better; they are not something irrational or anarchic. However, as Hampe emphasises, a progress towards truth is nothing Whitehead puts forward in this context.

Again in Chapter VII, where Hampe discusses *Modes of Thought (MT)* and some essays from *SP*, the key topics are abstractions and striving for contrast. In these very late works Whitehead makes explicit that all the systems brought forward in philosophy are abstractions. They are based on certain values and contrasts, which means that they enable one to recognise some things while at the same time they exclude other things. One should never—and Whitehead is happy to draw that conclusion for his own work—take an abstraction for the real thing; that would be what he calls ‘the Fallacy of Misplaced Concreteness’. In some sense this would be like taking Euclidean geometry as the one and only possible geometry of the world. Hence again, this idea of bringing together different abstractions under the heading of a ‘cosmology’ is similar to Whitehead’s project in *UA* of synthesising different algebraic systems in one calculus.

When talking about abstractions and ideals in *SP*, Whitehead connects his views on mathematics and morality. For both have to do with ideals (or abstractions) that we need to organise and evaluate our acting (p. 167). At the same time those ideals are not real, but belong to the realm of possibilities. This is the point where Whitehead’s notion of immortality and God also come into play. I cannot go into that here, but, as Hampe shows, for Whitehead it is by other people adopting our values and making some of the

resulting possibilities actual that a person becomes immortal (p. 173). God, then, is the one who makes ‘suggestions’ for us about how to intensify contrast; and He is the one who plays through all the consequences (or possibilities) of our decisions—something we cannot ourselves do.<sup>5</sup>

Chapter III, which deals with Whitehead’s project of panphysics, as in his *An Enquiry Concerning the Principles of Natural Knowledge (PNK)* (Whitehead, 1925), *The Concept of Nature (CN)* (Whitehead, 1920) and *The Principles of Relativity (Pre)*, is notably the longest chapter in Hampe’s book. In these works Whitehead was looking for one coherent terminology to account for both the world as we ordinarily experience it and the world as it is described scientifically. As Whitehead sees it there is a ‘bifurcation of nature’ (cf. *CN*, Ch. II) going on. Already Galileo’s law of fall and Newton’s theory of gravitation were opposed to day-today experience (for example that we don’t see different things falling at the same speed). However, whereas these theories might be reunified with ordinary experience at some point, this seems not to be the case with Einstein’s theory of relativity, for example. Again it is the invention of non-Euclidean geometry, according to Hampe, that is of importance here. For assuming a non-Euclidean geometry for space, as the theory of relativity does, cuts off the world as it is ordinarily experienced from the world as it is scientifically described. Thus, we cannot comprehend nature as a whole with the help of a unified geometry. Euclidean geometry, for example, is the basis of one type of experience (namely ordinary experience) but it is not constitutive of all types of experience (such as scientific experience). This, of course, went strongly against Kant’s account in *The Critique of Pure Reason*. Hampe, however, does not compare Whitehead’s and Kant’s theories of space in particular; but he compares their different attempts to unify experience in general (pp. 46–48).

Thus, in his panphysical writings Whitehead aims to give one terminology for experience in ordinary life as well as in science. However, here he is keen on drawing a distinction between ‘perception’ and ‘thought’:

Nature is that which we observe in perception through the senses. . . . nature can be thought of as a closed system whose mutual relations do not require the expression of the fact that they are thought about. . . . Thought about nature is different from the sense-perception of nature. (*CN*, pp. 3–4)

In his later work Whitehead also deals with questions concerning notions like reason or thought, whereas at this stage it appears to him as if he could carry out the reconstruction of scientific and ordinary life experience without touching any epistemological or metaphysical questions.

To give this reconstruction Whitehead first attacks the most basic concepts of natural science. As he argues in *PNK* (pp. 2–3), the notions of ‘time’, ‘space’ and

---

<sup>5</sup> Hampe discusses Whitehead’s notion of God in the chapter on *PR* and in his chapter on *Adventures of Ideas* and *Religion in the Making*.

‘matter’ can hardly explain change in nature. Thus, he wants to replace them with ‘duration’ and ‘change’ as basic notions. Already in 1919 his perfect example was that of organisms (just as they were to be ten years later in the so called ‘organic’ philosophy of *PR*). The thought here is that if you look at something as being a distribution of matter at an instant there is little to distinguish an organism like a bird from a stone. To be able to reconstruct an organism as a living object it is crucial to have notions of duration and change.

Whitehead then goes on to make space-time a kind of ether of events (cf. CN, p. 78), in which what we normally call objects become the recognita of different events. Scientific experience then gets reconstructed from this ether of events as a Riemannian space together with relativistic simultaneity whereas in the case of ordinary life experience we have Euclidean space together with absolute simultaneity. However, both are derived from the same ether of events, space-time.

The last two sections of Hampe’s third chapter go into more detail about Whitehead’s critique and alternative conception of relativity and the method of extensive abstraction (and I take it as a strength that Hampe goes into some technical detail here, for example, about Whitehead’s mereology). Again this topic is highly relevant for Whitehead’s later work. In his 1906 article ‘On Mathematical Concepts of the Material World’ Whitehead already claimed that a relational theory of space is incompatible with the assumption of a simplicity of points. It is characteristic of his geometry throughout all his work that it works without entities like this. The world for Whitehead is always something complex right from the beginning and simple things are abstractions from that—also his actual entities are always something complex. Although Whitehead cannot really deal with this problem at this stage one can already see him striving towards the infiniteness of experience, the infinitely many possibilities of putting patterns onto the world.

Whitehead’s move from things to events was already one step towards what he became famous for, process philosophy. But, as Hampe discusses at the beginning of Chapter IV, the further important step here is that from a continuity of events towards a teleological account of them. Before the second edition of *PNK* the notion of ‘process’ does not play any role in Whitehead’s writings (cf. *PNK*, p. 202). Afterwards, however, Whitehead starts to present constellations of events as processes, as developments reaching for certain aims. This move enabled Whitehead to unify accounts of nature and accounts of human actions, something that was hardly possible before precisely because human actions seemed to be guided by purposes or aims whereas nature did not seem to be guided that way. In doing so Whitehead departed from the project of panphysics, in which, as we have seen, he was keen on *not* talking about ‘thought’ and so on.

The strength of Hampe’s demonstration of the continuity of Whitehead’s work should be obvious by now. However, there is one work I was hoping to hear more about: Whitehead’s and Russell’s *Principia Mathematica* (*PM*). For in a different context Hampe was hinting at an interesting analogy between the ontology of *PR* and

what one might call an ‘ontology of functions’ in *PM*.<sup>6</sup> The similarities here would be between actual entities and variables, eternal objects and predicates, and prehensions and logical connectives. Then Whitehead’s panphysics would appear as the crucial step away from class-theoretic foundations: foundations that seem unable to support a theory of extension (Whitehead failed to provide a reduction of geometry to the *PM* calculus, which was supposed to become a further *PM* volume) and that had to be replaced by a mereological attempt. The interesting step towards his *opus magnum* would then be the transition from a spatial mereology towards a mereology of space-time.

Admittedly, although I take a detailed reconstruction of that to be one of the most interesting tasks for people working on Whitehead, surely no one could expect this from an introductory work like Hampe’s—in particular because such a reconstruction is very likely to become quite technical and could presumably only be properly understood by people with a solid mathematical background. However, a few more words on *PM* would have been nice.

The reader might wonder why Hampe does not mention process theology in his chapter on Whitehead’s relevance. I take it that he has good reasons for that. First, Hampe has dealt with Whitehead’s notion of God already in two other chapters. Secondly, he maintains that ‘Whitehead’s image of God—that was of deep impact for Christian theology in America and became a whole *process theology*—is not really congenial to a post-Kantian philosophical thinking’ (p. 159). Here it is surely true that German theology has its own heroes to deal with. Furthermore, as Hampe emphasises elsewhere, Whitehead is a metaphysician working on a general but not a specifically Christian theology. This becomes obvious in Whitehead’s writings when he explicitly mentions, for example, Buddha and Christ together.<sup>7</sup> Thus, making Whitehead the father of a strictly Christian theology appears to Hampe to be very misleading.

To sum up: the first very good feature of this book is that it shows the continuity in Whitehead’s work. This seems to be particularly fruitful. For example, it enables Hampe to contextualise and acknowledge the importance of Part IV of *PR*, that is, Whitehead’s theory of extension.<sup>8</sup> Most of the introductory books (both in German and English) fail to do so and the reason for this seems to be that they aim only to introduce Whitehead’s process terminology.<sup>9</sup> However, this forces the question of whether such an introduction of process terminology becomes nothing but a ‘pushing around of . . . Whiteheadian scenery which contributes to no understanding’,<sup>10</sup> to use a Hampean metaphor from elsewhere. This is not to say that people should not dive into process terminology if they want; but a work that is meant to be a *general* introduction to Whitehead must offer more than that. And that is what Hampe’s book does (while at the same time it pays the price that it cannot go into much detail because it has to cover so much ground).

---

6 Cf. Hampe (1991b), p. 237.

7 Cf. Hampe (1997), pp. 109–10.

8 Cf. Hampe (1991b) as well.

9 An exception here are the works of Victor Lowe—in particular Lowe (1985, 1990).

10 Hampe (1994), p. 261.

Surely Hampe's 200-page work cannot be as historically adequate as Victor Lowe's huge two volume biography *Alfred North Whitehead: The Man and His Work*, but then that is not what Hampe goes for, as he himself acknowledges (p. 8)—and not everyone wants to read 700 pages to get a first grip on a philosopher.

The other very good feature of this book is the way it shows analogies and disanalogies with so different philosophers as Cassirer, Goodman, Heidegger, Kuhn, Nietzsche and Wittgenstein (to name but a few). This seems to be appropriate because people who start reading Whitehead, I take it, usually will have read some philosophers before (given that Whitehead is not taken to be a seminal figure). Hence the reader should find some roadsigns on his way into the work of a philosopher who never was more than one person and who surely cannot be used as a flagship of a supposedly purely Christian theology or a Continental inspired counter-movement against analytic mainstream—for 'a guru is the last thing he wanted to be'.

*Acknowledgements*—I am grateful to Dorothy Emmet and Hans-Peter Schütt for general discussion; many thanks to Nick Jardine and Peter Kail for reading earlier drafts of this paper.

## References

- Hampe, M. (1991a) 'Whiteheads Metaphysik und das philosophische Verständnis der Gegenwart', in M. Hampe and H. Maaßen (eds), *Prozeß, Gefühl und Raum-Zeit: Materialien zu Whiteheads 'Prozeß und Realität'* (Frankfurt: Suhrkamp), pp. 10–31.
- Hampe, M. (1991b) 'Whiteheads Entwicklung einer Theorie der Ausdehnung', in M. Hampe and H. Maaßen (eds), *Prozeß, Gefühl und Raum-Zeit: Materialien zu Whiteheads 'Prozeß und Realität'* (Frankfurt: Suhrkamp), pp. 220–243.
- Hampe, M. (1994) 'Whitehead und der deutsche Idealismus', *Hegel-Studien* **29**, 259–263.
- Hampe, M. (1997) 'Jenseits von Moderne und Postmoderne: Whiteheads Metaphysik und ihre Anwendung in der theoretischen und praktischen Philosophie der Gegenwart', *Philosophische Rundschau* **44**, 95–112.
- Lowe, V. (1985, 1990) *Alfred North Whitehead: The Man and His Work*, 2 vols (Baltimore: Johns Hopkins University Press).
- Lucas, G. R. (1989) *The Rehabilitation of Whitehead: An Analytic and Historical Assessment of Process Philosophy* (Albany: State University of New York Press).
- Whitehead, A. N. (1920) *The Concept of Nature* (Cambridge: Cambridge University Press).
- Whitehead, A. N. (1925) *An Enquiry Concerning the Principles of Natural Knowledge* (Cambridge: Cambridge University Press).
- Whitehead, A. N. (1929) *The Aims of Education and Other Essays* (New York: Macmillan).

This postprint was prepared by Hannah Mahé Crüsemann.