Darwin, Dilthey, and Beyond
Science, literature, and hermeneutical ontology

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Review of: Ilse M. Bulhof, *On the language of science. A study of the relationship between literature and science in the perspective of a hermeneutical ontology. With a case study of Darwin's The origin of species* (Leiden: Brill, 1992; ISBN 90-0409-644-2). Brill Studies in Intellectual History, vol. 34, US $ 57.

Introduction

As indicated by the subtitle of her book, Bulhofs study raises three distinct subjects: literature and science, hermeneutical ontology, and Darwin. Although they take up separate parts of the book, these subjects are discussed in close connection with each other. The first part of the book is a case study of Darwin's *Origin of Species*, analyzing it as a work of art and literature rather than as a traditional piece of scientific writing. The observation that Darwin's success was principally due to rhetoric and not to fact casts doubt on the traditional positivistic image of scientific language and practice. The second part of the book generalizes upon these findings. In chapter five, on the separation of science and literature, Bulhof traces the history of our conception of natural science from Antiquity, through medieval nominalism and the scientific revolution of the sixteenth and seventeenth centuries, to modern-day views such as that of literary theorist Roman Ingarden. The genealogy of natural knowledge, Bulhof claims, effectively deconstructs the separation between the 'ornamental' and the 'factual' use of language with which contemporary philosophy of science is charged. The ensuing *Zwiespalt* is revealed as a merely optional device that was conveniently produced by natural science itself in the course of its early development. Finally, in the last three chapters, Bulhof argues for a radically new outlook on knowledge and reality. Chapter six, on literary language and 'evasive' reality, introduces the notion of a 'hermeneutical ontology': a reconception of natural reality as being essentially like a text, waiting to be interpreted by its 'readers'. The requirements for such interpretation, the author submits, are well beyond the power of positivist science, with its obvious implications of creative inertia. This brings us back to Bulhofs appeal for a rapprochement between scientific and literary language, of the kind we purportedly find in Darwin's *Origin of Species*.

Bulhofs earlier work includes studies on Nietzsche, Dilthey, and hermeneutics, as well as historical studies on the reception of Darwin and Freud in the Netherlands. Although drawing in part on material from her Darwin

has meanwhile acquired the status of almost a cliche. In this manner one can enjoy much of the book, being struck again and again by passages from authors one may never have heard of, and in whose works one may wish to delve somewhat further.

All this intellectual excitement is to some extent counterbalanced by an effect that began to worry me more as I penetrated further in van der Pot's book. Too often, I think, opinions are confronted with other opinions, without *any* empirical material being adduced that might enable one to make a choice between one view and another on other grounds than just a sense of emotional recognition. Not always, yet much too often matters raised in this book are decided on grounds of general plausibility. It is here that the outstanding *qualité* of the author — his analytical acumen — lays him open to a certain *défaut*. This is that one would like to be presented with empirical material which might serve as a test, thus moving all those numerous opinions to a higher plane — that of theories in the veritable sense of the word. Too often we are facing just the conclusions of authors cited, whereas the value of those conclusions resides precisely in the cogency (or the lack thereof) of the empirical material upon which the conclusion ultimately rests.

It may seem as if, in voicing this complaint, I am asking for an even bulkier book than van der Pot's *Die Bewertung des Technischen Fortschritts* has turned into already. This, then, is not the case. In this review I have asked for a somewhat different — more in particular, for a more concise and therefore more accessible — book. But whether or not an 'abridged van der Pot' would be feasible is, in the end, neither here nor there. A full translation into English seems to be in the making, and I recommend it to everyone. For there is in any case very good reason to admire what van der Pot did accomplish. Few topics in the history of humanity have exerted quite so tangible an impact upon our lives as the progress of technology — no one who was not already convinced of this truth before he touched the book can still get around it upon laying it down. Any attempt whatsoever to introduce order into the enormous volume of literature on the subject, and to put that order to good service in hacking a path through the jungle of literature, thus rendering it vastly more accessible, deserves our profound respect. This is especially true when the effort is guided throughout by the sober objectivity, the fairness, the erudition, the coherent vision, and the analytical acumen displayed by van der Pot in *Die Bewertung des technischen Fortschritts*.

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research, *On the language of science* is not primarily a contribution to empirical history of science. Its aim lies rather in the field of *meta-science*, arguing for a new *philosophical* perspective on science and reality. It is with this philosophy that we shall be specifically concerned in our discussion. The reader is warned: Bulhof's approach is an unconventional one; by the standards of 'regular' studies in the history of science it even appears highly provocative. For this reason, the book deserves the close attention of historians and philosophers of science alike.

A problem in philosophy of science

Earlier critics of positivism, such as Karl Popper and W.V. Quine, rejected the idea that we are forced by facts to accept our scientific statements. Others, such as Thomas Kuhn and Paul Feyerabend, applied historical, sociological and psychological analysis to the image of science as a continuous accumulation of objective information about reality. They presented us instead with a history of science ruled by rhetoric and continuously disrupted by revolutions. From the 1960s onward, a new picture of science emerged that is essentially relativistic and anti-realist in its implications, challenging the received view of modern empiricists. Our corpus of knowledge about reality appeared to many to be an almost free creation of man, constrained only by contingent historical, sociological and psychological circumstances, not by the object of knowledge itself. This anti-realism, which is a direct consequence of the view of science as a social construction, evoked strong reactions on the part of a new school of so-called scientific realists (see, for example, the papers collected in Leplin 1984). Surely reality has more grip on our knowledge than is admitted by this reverberation of philosophical idealism? To many the world seemed to be well lost, as anti-realist Richard Rorty once famously put it.

Philosophy in the 80s was faced with a classic dilemma in a new guise. Either we accept that culture shapes our science, in which case we can no longer trace the contribution of reality to our knowledge and lose touch with the world, or we pledge to the so-called objective facts of positivist science, in which case we are unable to account for the undeniable influence of sociohistorical determinants. In the course of the past decade, numerous arguments have been exchanged between the two factions, but as a result the positions have only hardened. Arguably, the dilemma between idealism and realism calls for a more sophisticated and more fundamental approach. One such approach has been proposed by Hilary Putnam, who introduced a new metaphysics of 'internal realism' in an attempt to break the deadlock. Ilse Bulhof's study *On the language of science* is another self-conscious attempt in the same direction.

A series of equivocations

BulhoPs contribution to the debate is both inspired and inspiring. In her case

study of Darwin's *Origin of Species*, she offers a thorough analysis of the various literary aspects of this text, covering its use of metaphors, its manner of rhetorical persuasion, its deployment of narrative plots ranging from detective story to creation myth, its communicative strategies, as well as the structure of its argument. Carrying on, in a way, the line of narratological analysis of Darwinism as initiated by authors such as Misia Landau and Gillian Beer (see, for example, Beer 1983, and Landau 1991), Bulhof shows in detail how strongly evocative and creative Darwin's writing is.

This unobjectionable observation is only a starting point, however, a first step toward the stunning thesis that reality is a text. When we consider the overall structure of *On the language of science*, BulhoFs argument strikes us as a series of small shuffles and equivocations. From the consideration that Darwin made use of metaphors, Bulhof gradually shifts toward the claim that his text is a model of rhetorical persuasion — meaning that it is not discursive in the traditional, logico-scientific sense of the word. Her next slide is to the claim that *The origin of species* is not a scientific text at all, as traditionally understood. Rather, it is itself a literary text. This being established, the author infers that there is generally no apparent difference between science and literature. Now, it is commonly held that what the language of literature does, as traditionally understood, is to 'enchant' reality, conjuring up new worlds, and introducing new ways of looking at the old world. If science is like literature, then we must accept that science, too, is an enchantment of reality. Far from showing us reality as it is in itself (the traditional 'disenchantment' view rejected here), science offers an *interpretation*, much like a piece of literary work does. From this claim a final, small step takes us to the conclusion that all reality, including reality as it is studied by science, is a text, or 'like' a text — for what else can be interpreted besides a polysemie textual structure?

What's new?

As indicated earlier, Bulhofs frame of reference with regard to 'modern philosophy of science' is typically that of logical empiricism, which makes one wonder whether she is flogging a dead horse. Positivism was buried years ago by postempiricist philosophers such as Thomas Kuhn, Paul Feyerabend, W.V. Quine, Nelson Goodman, and Wilfrid Sellars. Almost twenty years after Feyerabend's notorious classic *Against method* (1975), the avowal that rhetoric plays an important role in science can no longer be called new, of course. In a way, what Bulhof does to Darwin is what Feyerabend did to Galileo. Also as regards her general thesis on science and literature, Feyerabend is relevant. In *Wissenschaft als Kunst* (1984), he explicitly explores the alignment of the roles of art and science in our transactions with reality. Another question that immediately springs to mind is how Bulhof's 'metaphors' compare to other notions developed

by postempiricist philosophy, such as Kuhn's paradigms, Mary Hesse's models, or Imre Lakatos's well-known methodology of scientific research programs. In important respects, these theories seem particularly cognate to BulhoPs approach. A comparison suggests that the literary devices used in science are nothing like the free-floating figments of human imagination utilized in the field of fiction. Rather, they are serious hypotheses about the nature of reality that can be put to rigorous test, more or less in the old empiricist way. Finally, and from a more 'postmodernist' angle, we may ask how Bulhof's hermeneutical ontology relates to other positions in late twentieth-century philosophy, such as Putnam's metaphysics of 'internal realism', or the new 'pragmatism' advocated by Richard Rorty. We shall presently return to some of these issues.

Role of blasphemy underrated

An important background to Darwin's rhetorics that is nearly completely left out by Bulhof is constituted by the controversial character of his theory. That species are not created as unchanging entities; that man is the product of senseless coincidence, not of the God's intention to create in His own image; that nature is not essentially good and harmonious, but cruel and indifferent; that man stems from animals, and, even worse, from apes; that Victorian social and cultural order is not the apex of an inevitable progress toward civilization — such views were not only bold and unorthodox, but might, still worse, be considered blasphemous, morally wicked and politically radical.

Darwin was acutely aware of this. As we know from his letters and personal papers, he was tormented, mentally as well as physically, by the idea of loosing his reputation as a God-fearing and orderly citizen, which was more than an imaginary liability in mid-nineteenth-century England. For almost two decades, Darwin confined his ideas to the drawer, for, as he wrote to his friend Joseph Hooker in 1844, to publish them felt like confessing a murder. Seen against this background — well documented by Desmond and Moore in their recent Darwin biography (1991) — Darwin's fetching poetic personifications of nature and his incessant avowal of her beauty surely served in part, for himself as well as for others, to sugar the bitter pill of man's reprobate rapprochement to the animals. The 'chaplain of the devil', as he sometimes wryly called himself, had every reason to express his ideas very carefully.

A rich source for the style and rhetorics of *The origin of species*, and another background that is badly neglected by Bulhof, was the set of specific genre conventions ruling natural theology, which studied the forms of life as products of the wisdom of God. With his theological background, Darwin had been an avid reader of Paley, and was well-versed in the genre. While he fought its content (the argument from design), he borrowed from its style, no doubt partly without thinking, but also in a well-considered effort to avoid offending the

public as much as possible. In this respect we would suggest a (non-exhaustive) reading of his rhetoric taking P. Bourdieu's *Ce que parler veut dire* (1982) as its guideline, uncovering the cultural economy of linguistic exchange, the fields of power and the mechanisms of self-censorship which govern every discourse to a certain degree, but which were particularly strong in the case of Darwin's obnoxious discoveries.

Why Darwin was convincing

As offensive as Darwin's theory was, it nonetheless did not fail to convince, quickly and in broad circles. According to Bulhof, the positive reception with which the *Origin of Species* was met should be accounted for primarily in terms of its oustanding use of language. It was Darwin's rhetoric that convinced the public, she holds, much more so than his logic. The nature and quality of Darwin's argument, the assembled weight of his empirical evidence — according to Bulhof, these were largely irreievant.

Of course Darwin was an excellent writer, and of course he availed himself of various rhetorical devices, communicative strategies, metaphors, and narrative plots. He took them wherever he could find them, basing himself now on the experience of gardeners and breeders, and on various aspects of social and economic reality (the struggle for life, the workings of natural and national economy, the unrelentless economic competition), then again on Malthus's analysis of the growth of population in relation to the production of food, or on the astounding performance of the wide range of automated machinery that was then in vogue. We want to dispute none of these facts about Darwin's use of 'literary' means to convey his ideas. What we do take exception to, however, is the claim that Darwin's rhetoric explains why his theory was accepted. This simply begs the question. For why did his rhetoric convince? Presumably, Bulhofs answer would have to be, 'Because it is in the nature of clever rhetoric to convince people'. By myopically Fixating on rhetoric, her argument becomes blatantly circular at this point. She robs herself of the possibility of turning to deeper levels of explanation, involving the nature and the *quality* of the 'rhetorically used' arguments.

Let us take metaphors as an example. There is an aspect to metaphors that is neglected almost entirely by Bulhof. Apart from whatever strictly 'rhetorical' function they may have, metaphors offer *models* that may or may not fit the data, and that may or may not be appropriate in a given theoretical setting. In a word, metaphors in science behave like *testable* models. Beautiful imagery is one thing, but if it is empirically or theoretically inappropriate, or if it turns out to be not fruitful, then it is relentlessly abandoned. Metaphors in science, we would suggest, convince to the degree that they are empirically and theoretically fertile, ordering hitherto disjunct facts, linking hitherto disparate concepts, applying

methods where they had not been applied before. With regard to the question raised by Bulhof, viz., how Darwin's *succes fou* is to be explained, we can now see that it was not so much because he used *metaphors*, but because he used *good* ones. Bulhof's panrhetoricism, however, is unable to deal with this aspect of evaluation.

As intimated earlier, the role of metaphors, models, and analogies is widely acknowledged in modern philosophy of science. Our imagination is bolstered by 'waves' and 'particles' in quantum mechanics, 'flow charts', 'symbols' and 'computations' in cognitive psychology, 'wormholes' in cosmology, and 'organels', enzymatic 'keys', and 'messenger' amino acids in microbiology. This practice arguably goes back to the old Aristotelian rule from the *Posterior Analytics*, that science advances by understanding what is less known in terms of what is better known. In more modern terms, metaphor in science is the redeployment of concepts and solutions developed in one domain for uncovering the hidden variables in hitherto intractable problems in other domains (see, for example, Churchland 1989). The question of empirical and theoretical evaluation — testability and fertility — is one with which any plausible account of metaphor in science will have to deal.

Summarizing, we see that the use of imagery and imagination does not make scientific theories imaginary in the literary sense. Of course, scientists must be imaginative to do a good job — but they simply do nol write fiction.

Reality a text?

Let us now turn to what is probably Bulhof's most stunning claim, viz., that reality is to be seen as a polysemous text, in the sense of a field of possibilities that are to be interpreted, and thus actualized, by the 'reader'. Every reading, she holds, is one of numerous, even infinitely many, possible interpretations. In a postmodern vein, and under the influence of Wolfgang Iser's *Rezeptionsästhetik* (see, for example, his 1971), reading the text is seen as lending meaning *to* it, not recuperating meaning *from* it. Its meaning, Bulhof holds,

> cannot be detached from the act of reading: there is no such thing as 'the' meaning, to be approached more or less successfully in Che different readings. The meaning ... is the interactive product of text and reader, and not a given meaning, bidden in the text to be discovered by interpreters (p, 252).

A genre that is typically referred to in this context is that of poetry. A poem can continually give rise to new interpretations and new effects; it has not one possible way of being, but many. According to Bulhof, the same is true of reality. "Like poems, phenomena in nature, relatively stable as they are, have various ways-to-be, and *become* what we *(and* other beings and forces) *let* them *be* in our dealings with them, in our case notably in our language behaviour" (p. 260,

italics Bulhof).

Originally, hermeneutics was an ancillary discipline dedicated to the interpretation of texts in law and theology. Dilthey then broadened its scope to include all human utterances whatsoever. Bulhof's ontology now presses hermeneutics one step ahead, from the domain of language into that of reality: it comes to incorporate moons and viruses, rain forests and vulcanoes next to poems and plays — all that is rich in ambiguous meaning, asking to be read by man. The instrument of interpretation is turned into a full-blooded ontology: finally, the maid has become master.

An important motivation for BulhoPs seemingly unorthodox move is her reconstruction of the history of our notion of natural knowledge. In the richly documented fifth chapter of her book ('On the separation of science and literature'), she points to two events as being mainly responsible for our present ontological predicament: the rise of nominalism in the fourteenth century, and the scientific revolution of the sixteenth and seventeenth centuries.

Medieval nominalism, associated primarily with the name of William of Ockham, combined an ontology of particulars with a conception of language as a conventional, hence *arbitrary,* set of signs. This development effectively spelled the end for the comfortable idea that our knowledge of reality is objective to the extent that it is 'dictated' by reality itself. Reality does not dictate, for it does not speak; we speak *about* nature, but our language is a contingent set of signs. Ever since nominalism, Bulhof maintains, the relation between words and reality has remained problematic.

The scientific revolution of the sixteenth and seventeenth centuries rang the knell of the Aristotelian-Scholastic tradition of knowledge acquired by reading texts, and expanded by means of a priori reasoning. It proposed instead to reestablish direct contact with nature itself, seeking knowledge through observation. Bulhof discusses in some detail the efforts made by philosphers of the period, including Boyle, Galileo, and Descartes, to communicate their observations in a language that is as neutral as possible, a transparent container for knowledge that is true to reality itself.

> From the seventeenth century onwards, the 'direct' contact with nature by means of experimentation and observation was advanced as a replacement for merely verbal disputation and acquisition of knowledge by reading books ... By rejecting rhetorical and literary language in truth-finding, and by relying on scientific instruments, experimental science separated nature from the realm of human affairs ... Scientific discourse produced that separation, produced a reality apart from man (p. 200).

According to Bulhof, the ensuing *Zwiespalt* between the ornamental and the factual use of language, which was inherited by positivist philosophy of science, still dominates our modern conception of natural knowledge. Now, obviously,

nominalism and observationalism are uncomfortable bed-fellows. If reality does not speak, then observation cannot hear it. Conversely, if language is a merely conventional device, how can it hope to cut reality at its joints? It is from this quandary that Bulhof tries to escape with her notion of reality as a polysemous text.

Over the past fifteen years or so, the problem sketched here has been pressed with increasing urge by several other writers, including Richard Rorty and Hilary Putnam (see, for example, Rorty 1979, 1990, and Putnam 1981). As noted above, its general background is that of realism and idealism in philosophy of science. Arguably, all forms of realism at bottom presuppose what Putnam has called a "God's eye point of view," a notion of reality as it is in itself, independent of our knowledge. For if reality does not have a ready-made nature, how can we claim that our knowledge *faithfully represents* it? Idealism, on the other hand, seems to imply that out view of reality is our own free creation. Putnam's way out of this dilemma (a solution which, at this point, is basically the same as Rorty's) is to reject the 'God's eye' externalism and opt for what he calls 'internal realism' — the view that our notions of truth and reality can be meaningfully discussed only *from within* the particular set of concepts (language) we happen to be working with; the idea of a framework-transcendent reality is simply not accessible to reason.

A residual problem for internal realism, and an apparent remnant of idealism, is the encroaching relativism and 'loss of reality'. There seems to be no way for us to explicate how the nameless reality lurking behind language *guides* our research and *constrains* our theories. We have lost contact with external reality. Although Bulhof does not address the issue in quite these terms, her account can arguably be seen as an attempt to reinstate contact with reality. If reality is like a polysemous text, then we see at once that our 'reading' of it is neither free nor found. Rather, it is an actualization of what was already contained in reality itself as a structure of *possible* interpretations. Though reality as such carries no articulate, identifiable meaning, it constrains the meanings we can attach to it, much as a normal text does. Texts are reluctant, and so is reality.

In order to evaluate Bulhofs suggestion, it may be instructive to compare it to a view that is at first blush totally different, viz., the naturalistic epistemology proposed by philosopher Paul Churchland (1979, 1989). According to Churchland, our theories of the world 'conceptually exploit' the 'natural information' contained in the deliverances of the senses. Whether this 'exploitation' is considered at the level of linguistic concepts or at that of the circuitry of our brains, it amounts to the imposition of order on what is by itself unordered sensory material. To take a simple example, think of the various interpretations that can be given of the retinal image of a transparent frame cube (Necker's experiment, see fig. 1). Each interpretation is a reordering of the same material,

and thus a new theory of what the world is like. The material may be *unordered*, yet it is not *chaotic:* the 'natural information' it contains is rich enough to constrain the possible interpretations that can be given of it. In this respect, Churchland's account is obviously similar to that of Bulhof: they both want to capture the way in which reality non-obtrusively contributes to our knowledge of the world. In this respect, Churchland's natural information plays the same role as Bulhofs polysemous text.

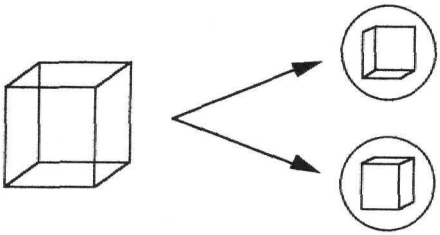

Figure 1 — Ambiguity of Necker cube. The natural information contained in a transparent frame image can give rise to several mutually inconsistent interpretations. Only two (3-D) interpretations are shown in this diagram

There is another aspect to Churchland's view that makes it relevantly similar to Bulhofs: contact with nature is bought at the expense of an encompassing master narrative working in the background. In Bulhof's case, this is the metaphor of the book of nature, while in Churchland's case it is a neurobiologically informed account of man. Can we say anything about which of the two is to be preferred? Against Churchland's naturalistic epistemology one might object that it is a circular project: it makes use of scientific knowledge in the course of explaining how knowledge of reality is possible. We are not sure whether this objection is really to the point, however. Notice that the issue at stake, in Churchland's proposal, is not how to *justify* our knowledge claims (which would indeed make the naturalist approach viciously circular), but rather to give a general understanding of our cognitive intercourse with reality. Why not take our inspiration where we can find it? Bulhof takes *her* metaphor from philosophical and theological tradition, Churchland takes it from modern science. When it comes to the crunch, it may well be that 'metaphors' in philosophy should meet the same standards as 'metaphors' in science, as suggested earlier: if they are

not fruitful, they should be abandoned. The question, then, is whether Bulhof's new explorations of the 'book of nature' constitute a progressive problem shift in philosophy.

Christian master metaphor

BulhoPs textification of reality is very close to the traditional trope of the book of nature, written by a divine Author, and readable by finite beings because they were created in His image. It reminds us of the old controversy about which of the two books, that of nature or Holy Scripture, reveals more about the ultimate origin and structure of reality. References to a Creator are sparse in BulhoPs book, however, although not completely absent. Her professed loyalty is to postmodernist approaches in the wake of Nietzsche — ironically so, because, if anything, postmodernism is the crisis of the traditional grand narratives, one of which still seems to feed into BulhoPs discourse. The semantic field approach to metaphor, for one, strongly suggests the impossibility of separating the notion of a text from the closely related notion of an author. In this respect, BulhoPs study itself seems to be a better example of the rhetorical use of metaphor than *The origin of species*, defending with subtle rhetoric a highly specific, venerable Western reading of reality, trying to salvage it from radical secularization and 'disenchantment' by more recent scientific approaches. The mystery of creation has become the polysemy of the text. As far as the prospect of progress is concerned, there is reason to be slightly worried.

Another aspect of BulhoPs account that causes concern is the fact that her master metaphor is deeply *intellectualist* in nature. Its record in philosophical and theological tradition, as well as its development by Bulhof herself, are tied to the conception of *reading books.* The reader *(cum libello in angulo)* is engaged in a predominantly intellectual process of interpretation. There is reason to believe that this choice of metaphor is rather awkward in the present context. First and foremost, when it comes to finding a metaphor that expresses the equal contributions of subject and object in knowledge, that of reality as a book seems to get off on the wrong foot, fraught as it is with the wrong connotations, verging on the passive and contemplative. The reader's submission is admittedly reduced by the appeal to Iser's theory of literature, but it cannot be taken away completely. What is more, why take the wrong metaphor and try to tinker it into shape, instead of beginning with a better one in the first place?

Bulhof herself presses the need for an ethical concern in metaphysics and philosophy of science. In the final analysis, it is for moral reasons that she rejects the notion of a separated and unmediated truth, because "in present conditions it prevents a *humane* approach to nature" (p. 273, our italics). This appears to us to be one of the truly strong points of BulhoPs approach. What she wants to advocate is a respectful interaction and partnership with nature. Now,

she asks, "would our interpretive freedom in 'reading' the 'text' of nature not make us responsible for our interpretations in a way that the scientist who supposedly merely 'mirrored' nature could never be?" (pp. 256-257). This strikes us as a rather strained way of putting the case. It would certainly be different if we were *writing* the book of nature — but merely *reading* it seems hardly sufficient to convey the ethical dimension of responsibility. Even Churchland's metaphor of 'conceptual exploitation', discussed above, with its obvious connotations in the field of economy, seems to be more practically inclined than that of the *liber naturae*. Another alternative that immediately suggests itself, and one that indeed seems to be much more congenial to Bulhof's own intentions, is the metaphor of a *dialogue* between man and nature, which obviously has a much stronger ethical dimension of *engagement* than the metaphor of reality as a book.

Conclusion

The world is no metaphorical book, although Ilse Bulhof's book is a metaphorical world: hers. We liked her book, though not her world. The book raises profound issues in metaphysics and philosophy of science — issues, admittedly, on none of which we ourselves feel too secure. Her hermeneutical approach is certainly a fresh and unconventional contribution to the field, even if we think in to be misguided in important respects. BulhoPs book is recommended reading for all those interested in recent developments in the field of Darwin studies, literary theory, philosophy of science, and late twentieth-century metaphysics.

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