

in this paradoxical way, the relation between reason and freedom, the ontological principle and the irrationality of freedom, is elegantly solved: no freedom is without reason, each act of freedom can be charged, *but* no reason reaches the nucleus of subjectivity. There remains a radical irrationality of freedom, *although* subjective freedom has no arbitrary or random possibility to realize itself beyond the borders of its own past or God's ordered offering of novelty. (Crudely said, no stone-event can decide to mutate into a note of Schubert's Trout Quintet.)

Altogether, with its main interest in the consistency and even beauty of Whitehead's thought and its cautious developing of its own perspectives, but also with its spare use of critique, we can fittingly highlight the special features of this book. Nevertheless, we may ask if some differentiation of phases within Whitehead's thought and the discussion of the last decades on this issue would not reveal a rather different account of freedom or other problems and their consistency in Whitehead's philosophy. For instance, his "non-relevant" potentialities, which have been excluded as "radicals," could then be interpreted rather as "emerging" potentialities, induced as yet unrealized within the nexus of all actualities as it historically develops (as through hybrid feelings), provided by the body of the world and not just by God. Thus, not-yet-realized possibilities would be offered and would even originate within the real process of this world-nexus—tantamount with a third way open to freedom. However, the bright side of Hauskeller's approach to Whitehead is not the developmental complexity of Whitehead's philosophical journey but introduction by simplification—and truly this is an accomplishment.

Elmar Busch. *Viele Subjekte, eine Person: Das Gehirn im Blickwinkel der Ereignisphilosophie A. N. Whitehead.* (Wilzburg: Konighausen & Neumann, 1993), 214 pp. (Epistemata. Wiirzburger wissenschaftliche Schriften, Reihe Philosophie 133) [Reviewed by Roland Faber, University of Vienna, Austria].

One of the most interesting of the recent approaches to Whitehead, especially, but by no means solely, in a German-speaking context, can be seen in this book. In great efforts toward clarity, Busch's encounter with Whitehead is rich in detail and rigorous in structure. Offering in the first two parts a short but sufficient presentation of Whitehead's philosophy, the main interest of the third part is to find the internal connection between the philosophical, psychological, and specifically, the physiological branches of his thought. The last section, then, develops the physiology that Whitehead offered particularity in *Process and Reality*, thereby focusing on the brain, its function, importance, and interpretation in a process perspective.

First, a short chapter on the strategy of Whiteheadian argumentation introduces Whitehead's method by summarizing the introductory remarks of

Process and Reality. A valuation of such a method regarding today's paradoxical situation of brain research problematizes the themes of the book: the brain, subject and object, and the speculativeness of every possible thought about nature (17-20). The difference from other German-speaking introductions to Whitehead, as is done here especially in part two (21-108), may be seen in the description and analysis of the intimate structural relation between Whitehead's theory of subjectivity (in the context of Descartes, Hume, and Kant) and the impulse modern physics gave to Whitehead for the development of his thought. For Busch, the importance of Whitehead's event-theory is to be found in its assuming experience to be the fundamental element of reality in the sense of constituting the ontological structure of reality. Experience, in this context, is defined essentially by being related to other objective realities, but with the twist that the so-called objective realities are in themselves nothing other than events of experience (51). In the context of modern physics, this means that one needs to integrate modern field theory within the subject-object relativity. Each is a certain locus within the physical field of all events and has its character merely by the efficacious influx of this field. (82). The continuum of the field and the extension, founded on this field, are not independent from the individual event (83). But although the continuum has objective reality and is not just an *invention* by an event, rather being its basis, the extensive continuum (including space-time) is yet the *projection* of the immediately experiencing event. This is Whitehead's reformed version of the subjectivist principle, connecting subjectivity and physical reality (80). At the same time, the internal, subjectively immediate and experiencing events are field-theoretically grasped as both quanta *and* continuous schemes of relation; that is, they are understood as quantified and organized systems of waving currents of energy (97).

Indeed, these events occur in connections of indefinitely different levels of organized nexūs, societies, and organisms. Within this range, we can observe what Whitehead called "living events" (95). Residing as highly organized nexūs of novelty, they are even incapable of realizing a social order with definite characteristics *because* of this novelty (139). Nevertheless, these free events operate on the basis of the support of more strictly organized, physiological organisms, as can be seen clearly in the human body and more specifically in the human brain. This side of Whitehead's thought is primarily discussed in the third part of Busch's book, which explores the surprising importance that Whitehead granted to physiology in his thought, with neurophysiology having central interest (129 ff). Offering his theory of neurophysiological connectivity as a correlative basis for the activity of the human mind, Whitehead is shown to describe a rather original approach to the questions at stake. Besides the analysis of feelings, higher experiences (consciousness), and perception, Busch calls primary attention to the fact that Whitehead locates these "higher events" (entire living nexūs) as physical or physically based events within the extensive continuum (and thus within the space-time frame). Mind and consciousness

appear as intensively creative events in the (void) interspace *between* the more simply organized, but highly repetitively ordered, cells of the brain; thus, within their unified electromagnetic (and other) fields (137). After describing the rather complicated theory of perception, duration, localization, projections of straight lines, strain-loci, and focal regions (altogether picking up upon part IV of *Process and Reality*) (142-156), Busch concentrates on the topic of "leading events of entire living nexūs" and the consequences that this consideration may have for an understanding of personal continuity and subjective integrity (157-164).

These consequences finally lead Busch, in his critical fourth chapter, to a radicalization of the path that Whitehead was clearing away. Not only does he want to follow Whitehead in his disturbing analysis of subjectivity seen as a rather discontinuous, highly creative nexūs of "personal ordered events," which are considered a serial order of inheritance (162), he wants to dissolve this forced element of seriality into a set of parallel subjective events (occurring in the same duration) that inherits more or less the same past of the nexus on which they are based (171 ff). Following the first offense Whitehead made against the the mainstream opinion of Western philosophy (namely in his attempt to disintegrate the continuity of subjectivity or personhood into a series of events), Busch makes an even further-reaching offense against this continuity by dissolving the yet remaining unity of a present event of such a series into a multitude of parallel subjective events of consciousness (172). Further, Busch develops how such a concept can consistently be argued concerning a nevertheless remaining unity. First, according to Busch, the highly similar past of the close parallel events (nearly identical universes) will guarantee unity, as does the requirement that one physiological organism must come to decisions regarding the whole movement of this organism at once (176). Secondly, the very nature of subjective parallelism itself can be adjusted to human experience insofar as such human, subjective, conscious experience occurs *from within*, and each subjective event from within cannot acknowledge parallel events (171). Thirdly, the summation of all physical fields of all events and organized nexūs in the brain guaranties the intensively broad stream of consciousness we do in fact experience instead of parallel personalities (172).

One of the more interesting consequences of Busch's book can be seen in his offering of new interpretations of memory and dream. Dreams, for Busch, would be analysed best as propositional phenomena: dream consciousness is a complex contrast between concrete propositions and a vague background of other potential propositions (178). The special phenomenon of memory within the context of the complex physiological environment of the human brain would evoke the interpretation of an extrapolation of the history of special causations in certain parts of the brain (177). As a last element of interest here, Busch's invitation to perform some Whitehead-based brain research projects should be mentioned. He offers three variations. First, the complex reciprocal efficacy

between single cells and electromagnetic fields should be observable (181). Secondly, the ability of the brain to totalize certain memories of specific brain-parts in certain moments must have measurable consequences for observable patterns of activation of the brain as a whole (183). Finally, the research in pathological phenomena like depression not only has to focus on problems of transmission or non-transmission of neurotransmitters, but also has to take into account individual patterns of individual brains making a measurable difference in the meaning and the physiological consequences of transmission or non-transmission of such neurotransmitters (184).

Despite this thorough and lucid analysis of many topics of Whitehead's philosophy in a physiological perspective, and the visions for further investigations following this analysis, there remains a strange interlude, which has to be mentioned. The only explicitly critical section of the book, that is to say, the only section in which Busch brings in his own thoughts (beyond the slight critique of personal ordered strains of events of consciousness and human subjectivity elsewhere) is found in a section about Whitehead's concept of God. This is briefly described (100-104) but not received as valuable at all (105-108). Not this refutation as such, but the way of introducing the topic, may be seen as the methodological weakness of the book. As with many other books showing considerable interest in a "naturalized" Whitehead (which is often identical with a "Whitehead without God"), the ideological background of interest and the personal pre-conception of analysis are not reflected further but instead projected into the God-problem. (Or put another way, the author found his bogeyman.) Since this methodological weakness is not as singular and isolated as one would be inclined to believe, but a quite common phenomenon in recent times, it seems necessary for me to point it out directly. Despite this tendency, we have to remember that Whitehead introduced the God-problem as being a *reflection* about the structure of the world and of the method of gaining knowledge of it rather than banishing it from rational discourse into inarticulate intuition. Busch, more guessing than proving, splits Whitehead's idea of "two natures" in God into two lines of rejection of Whitehead. First, all of what the primordial nature of God is can be found already in the "naturally" (i.e. without God) explored cosmos of Whitehead's philosophy; it adds no new information. The consequent nature, on the other hand, shall be interpreted as an additional element of a certain arbitrariness, not really compellingly forced by the analysis of nature. This, according to Busch, indicates that despite the genuine intuition of Whitehead, there is an element of inconsistency within Whitehead's system, obscuring the conceptions of otherwise clearly developed systematic concepts, such as "actual entity" (106). That is to say, the concept "actual entity", for Busch, cannot be unequivocally proposed of both the events of the world *and* God, respectively.

Here, now, harvesting the revenge of dismissed methodological consistency, Busch misses the complex involvement of Whitehead's concept of

God in his developing cosmos of concepts. This cosmos of notions, by no means, is in itself static; on the contrary, it is steadily evolving in accordance with his dynamic economy of concepts. Moreover, Whitehead never constructed a closed system. It could, instead, be the case that we are not pushed back to just *one* set of concepts (with only one meaning) but are firmly allowed to interpret notions such as "actual entity," for instance, in *many* ways, possibly even incoherent with one another, thereby steadily encouraged by otherwise seemingly inconsistent tensions arising by concepts that are embraced by the God-problem. It may well be that Whitehead's cosmos of thoughts and notions can lead us to a more dynamic view of what the cosmos' nature wishes to reveal; namely, an infinite multitude of richness shaped as the adventure of a thoroughly dynamic world.

Piotr Gutowski. *Filozofia procesu i jej metafizyka.* (Lublin: Redakcja Wydawnictw Katolickiego Uniwersytetu Lubelskiego, 1995), 275 pp. [Reviewed by Leemon McHenry, Department of Philosophy, UCLA, Los Angeles, California 90024].

Piotr Gutowski's book is an example of the growing interest in process philosophy and American philosophy in Poland today. (The present note is drawn from the Summary and Table of Contents in English appended to the text and from personal correspondence with Dr. Gutowski.) *Process Philosophy and its Metaphilosophy* (subtitled *A Study of Ch. Hartshorne's Metaphysics*) is divided into three chapters: I. The Basic Notions of Metaphysics, II. The Nature of Metaphysics, III. Argumentation in Metaphysics.

Gutowski claims that Hartshorne occupies an important place in contemporary American philosophy because of his opposition to the dominant positivistic and analytic trends and because of his defense of systematic philosophy in which metaphysics plays the central role. The book presents Hartshorne's metaphysics, explores his affinities and contrasts with Whitehead, and investigates his metaphilosophy. With regard to metaphilosophy, Gutowski is mainly concerned with: (1) Hartshorne's claim that metaphysics reaches necessary knowledge about reality, and (2) the justification for Hartshorne's own metaphysical views.

The first chapter of this book is designed as an introduction to the basic notions and theories of Hartshorne's process philosophy, and to process philosophy in general. Gutowski focuses his attention on the theory of temporal atomicity, according to which reality consists of microscopic, momentary, actual entities spontaneously creating themselves out of preceding entities. Both Whitehead and Hartshorne hold the view that synchronically situated actual entities cannot act on one another. Gutowski argues that the theory of temporal atomicity is both the source of originality of process philosophers and the cause of many serious problems, especially concerning macroscopic entities, and in