



Book Reviews / Buchbesprechungen

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Ina Goy, Eric Watkins (eds.)

Kant's Theory of Biology

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Kant's Theory of Biology is a collection of papers edited by Ina Goy and Eric Watkins, held at the international conference of the same name at Tübingen in December 2010. Presented and published papers resemble the increasing interest of Kantian scholars for the study of Kant's philosophy of biology.

Editors bring an informative "Introduction" by presenting Kant's views on biology highlighting the historical background of his thought, giving an overview of the development of his thought concerning notion of organism, and especially focusing on account of organisms given in the *Critique of the Power of Judgment*. They also shortly present the papers included in this volume.

The book is divided in three parts. First part is titled "Kant's Theory of Biology and Research on Nature in the Seventeenth and Eighteenth Centuries" and includes three papers which are focused on Kant's views concerning biology before 1790, and thus gives a necessary context and background for his later thought developed in the third *Critique*.

Mark Fisher's paper "Metaphysics and Physiology in Kant's Attitudes towards Theories of Preformation" discusses Kant's views about theories of organic generation held by his predecessors (epigenesis and preformation). Fisher emphasizes the distinction between occasionalism and preformation, and argues that Kant rejects the individual preformation and holds the complex theory of generic preformation, thus reconciling the epigenetic and preformationist views.

Ina Goy is focused on the influences of Wolff's thought on Kant's views in her paper "Epigenetic Theories: Caspar Friedrich Wolff

and Immanuel Kant". She describes in detail Wolff's account of organisms, and then uncovers epigenetic elements in Kant's account of organism (organized being). Finally she gives a brief contribution to contemporary debates concerning Wolff's influence on Kant arguing that it is much more important than it is usually considered.

In her paper "Organisms and Metaphysics: Kant's first Herder Review" Rachel Zuckert investigates Kant's reasons for the rejection of his student's view concerning single organic force. She shows that Kant rejected Herder's idea because it has no justification in empirical investigations (inductive generalization) nor in epistemological (i.e. transcendental) analysis, being pure speculative dogmatic metaphysical assumption. She shows that Kant's criticism is not so sharp in the third *Critique* due to Kant's transition in thought: he figured out that his proposal of teleological laws as regulative are not so far from Herder's proposal if they are used in regulative sense.

Part two, "Kant's Theory of Biology – Commentaries on the 'Critique of the Teleological Power of Judgement' and Other Writings" is the heart of the volume in quantitative and qualitative sense: it contains ten papers and all of them are concerned with a different points concerning Kant's teleology, necessary for understanding the central concept in biology – organism.

In paper titled "Teleological Judgment: Between Technique and Nature" Luca Illetterati thoroughly comments Kant's analysis of the organism, showing that, although Kant tries to avoid analogy with artefacts, he is finally forced to think about organised beings in such analogy. This is a reason he finally finds a solution in regulative status of laws given by our power of judgment locating their justification in the nature of our cognitive apparatus.

Predrag Šustar discusses a unique causal structure present in living world (between natural ends) on Kant's account in "Kant's Account of Biological Causation". First, he argues that Kant is committed to disposition-

alist view of biological causation, a view that biological processes should be understood in terms of powers, capacities or dispositions. He shows by an example from contemporary molecular biology (process of photosynthesis) that we need to appeal to some formative power – an argument for strength of Kant’s proposal. Šustar finally shows that Kant’s view is consistent with eliminativism or deflationism about traditional metaphysical systems (hylozoism and animism).

In “Nature in General as a System of Ends” Eric Watkins argues for two claims based in Kant’s third *Critique*. First, he shows that Kant convincingly argues for the claim that every thing in nature should be judged teleologically. Second, he argues that for Kant nature as a whole is a system of purposes and that nature has a purpose itself. Watkins carefully reconstructs Kant’s analysis showing that Kant’s peculiar conception of reason as the faculty that searches for the unconditioned, is crucial for understanding Kant’s arguments for both claims.

“Biological Purposiveness and Analogical Reflection” is the paper of Angela Breitenbach. She discusses the peculiar nature of teleological judgments about organisms: we do not articulate any determinate claim about them, but those judgments depend on the particular experiences of organisms as organisms. She argues that Kant’s solution is the analogy between organisms and the capacity of practical reason, by giving two main arguments. First, although we cannot explain organisms mechanically when we start to think about them teleologically, this immediately furthers our scientific research. Second, such analogy explains the peculiar kind of experience we have when we encounter organism(s) – it is a kind of symbolic representation of the purposiveness based on the projection of the features of our practical reason to living beings.

In “Mechanical Explanation in the ‘Critique of Teleological Power of Judgment’”, Peter McLaughlin wrestles first with several meanings of the term “mechanism”. He shows that it can finally have a reductionist meaning (as a notion by which wholes can be explained by their parts). He answers to several objection previously raised in literature for such account, but finally concludes that despite the strength of those answers we still lack a satisfactory account of “mechanism” which could be simultaneously necessary and merely regulative.

In “The Antinomy of Teleological Judgment: What It is and How It is Solved” Marcel Quarfood gives a novel interpretation of the Antinomy specified in the title of paper. He rejects standard interpretations of the anti-

nomy which always take one side of the distinction constitutive/regulative. He argues, on contrary, that we should understand antinomy as a case when we take regulative maxims as implying constitutive principles. Quarfood convincingly interprets Kant’s solution of the antinomy as a case where we are tempted to switch to constitutive understanding, instead of staying in the realm of regulative principles which taken together – as a disparate principles – do not form any contradiction at all.

Philippe Huneman, in “Purposiveness, Necessity, and Contingency”, explains first Kant’s conception of organisms as natural purposes, elaborating the peculiar nature of organisms which are simultaneously contingent (they are not determinate by the laws of mechanics), but also possess some form of lawfulness (we can differentiate between well-formed chick and ill-formed outgrowth for example). She shows that notion of purposiveness is grounded in the finiteness of our cognitive powers and that we need to appeal to some different kind of understanding – intuitive understanding – when we exercise our power of judgment in reflecting on organic nature.

In “Kant’s Theory of Biology and the Argument from Design” Ina Goy investigates Kant’s attitude toward so-called argument from design. She presents the three versions of the argument (by Aquinas, Hume, and Paley) and then locates possible spots in “Analytic” and “Dialectic” of Kant’s teleological part of the third *Critique* which can be taken as a basis for interpreting Kant as making argument from design. Although those places are merely consistent with argument from design, Goy argues that in “Methodology” Kant makes some explicit statements concerning physico-theological proof which require direct reference to the argument from design.

Paul Guyer addresses two paradoxes which arise from Kant’s account of teleology in his paper “Freedom, Happiness, and Nature: Kant’s Moral Teleology”. The first one arises from Kant’s conflicting claims about the status of freedom: freedom is non-natural, but it is a final end of nature (and should be accomplished within nature). Guyer shows that this paradox can be easily resolved by Kant’s account of culture, which is the final end within nature, but it is a preparation for freedom. The second paradox is about Kant’s account of happiness: second *Critique* teaches that the final end of nature is the highest good, and the third *Critique* says that it is exclusively freedom. For resolution of this paradox Guyer provides much more interpretative effort pointing out that we have to take happiness for all human beings in account and that Kant holds that nature – if accompanied with right

moral choice – enables us to work for maximum happiness.

Ernst-Otto Onnasch, in “The Role of the Organism in the Transcendental Philosophy of Kant’s *Opus postumum*”, investigates Kant’s concept of organism as it is understood in one of the most obscure of all Kantian texts. He argues that exactly in *Opus postumum* Kant most clearly articulates the idea that experience as such is possible only if it is assumed that an organism has that experience. As an epistemic subject an organism is always enrolled in construction of experience and exactly this cognition makes the strongest claim for the actuality of organism as such. It enables us to conceive other organisms as organisms.

Third part is titled “Kant’s Theory of Biology in the Present Time” and brings two papers. Both of them explore the relevance of Kant’s theory for contemporary biology and philosophy of biology.

In “Oughts without Intentions: A Kantian Account of Biological Functions” Hannah Ginsborg defends her famous interpretation of Kant’s view on organisms as natural purposes which can give a basis for biological functions in terms of normativity. She shows that such interpretation can avoid difficulties the other theories confront by introducing necessary design (such as historical and etiological understanding of functions) and simply relying on the normative notion of function: function as something what ought or should work in some way. She further explains that her notion of normativity is taken as a primitive awareness of normativity (based partly on Wittgenstein’s preconceptual rule following) which saves the notion of function for contemporary use in biology without any odd ascriptions to it: it provides ascribing oughts without any intention.

Siegfried Roth, in “Kant, Polanyi, and Molecular Biology”, shows the relevance of Kant’s account from the standpoint of contemporary molecular biology. At the beginning he summarizes Kant’s antireductionist account of organism and similar Polanyi’s view arising from his investigations in molecular biology. Roth argues that despite the differences in terminology Kant and Polanyi go together and Kant’s account should be seriously taken in contemporary biology.

Some technical parts should be especially highlighted because they make book much easier for reading and highly useful for wider audience interested in Kant. Firstly, easy for grasp and logically settled tripartite content is wisely chosen. It brings immediately before the reader’s eye three wider areas of Kantian scholarship: philosophico-historical exami-

nation of the context of Kant’s thought, thorough examination of Kant’s opus (here primarily *Critique of the Power of Judgment*) and Kant’s relevance for contemporary science (specifically biology here). Secondly, system of citations and abbreviations of Kant’s works on the one side, and the system of footnotes on the other, altogether followed with the list of used references at the end of every paper makes the following of the literature much easier for reader. Thirdly, unified “Bibliography” and the “Index of Names” additionally makes book much usable, especially for the beginners in the field or students. Fourthly, a short note on every contributor at the end of the book shows most briefly the quality of the people behind the written lines and widens the perspective of the reader by presenting their most important contributions in the field.

A book is an irreplaceable literature for anyone dealing with Kant’s philosophy of biology in particular or his philosophy of science in general. Moreover, as a compendium of papers written by first class Kantian scholars which deals with one of the most important and in the same time the most neglected part of Kantian opus, this book is a must read and must have book for every Kantian scholar. This is because teleology as such is a “corner stone” of Kantian project and gives a final key for understanding of his entire opus.

It should be stressed from a standpoint of Kantian scholarship that besides the “old school” scholarship and so many times heard topics, there are some new faces in premium Kantian scholarship what shows a never fading interest for Kant’s thought. On contrary, those new lines of thought brought some novel and original interpretations, with provocative implications not just for Kantian scholars concerning the reading of the rest of his opus, but for every philosopher of biology, or more general, philosopher of science.

According to that, this book has a special relevance for making Kant’s thought actual in contemporary scientific context. Contrary to the traditional views that Kant has made something quite odd by inclusion of teleology in his critical project, it seems that Kant’s foresight and prudence was far too big for previous interpreters. Modern science reveals that Kantian thought has much more to say in turn than it is usually expected. It is not just a (one more) monument to ingenuity of a great thinker, but it is a monument to a great thought, a thought which puts in question the sharp distinction of “exact sciences” and other sciences. Kant’s theory of biology shows in probably the best way why the greater picture should always be taken into account.

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