

- self-sacrificer failed to express respect for his rational capacities (p. 49). But there is an obvious tension here: it is only insofar as the self-sacrificer valued his life that extinguishing it was a sacrifice – and considered reflection might reveal that it is only insofar as it was a sacrifice that it is regarded as praiseworthy.
- 4 Wood (1999: 152–3) and especially Wood (1999: 372 n. 37), where he seems to endorse one of Kant's examples of a permissible suicide. See also Wood (2008: 87): 'at times people are in terrible situations where living up to the dignity of their rational nature even requires them to sacrifice their continued existence. There may also be situations in which moral rules grounded on the worth of rational nature as end in itself require that human beings be killed, or even entail that the continuation of a human life should no longer be set as an end at all.'
  - 5 Kerstein's attack against the respect-expression account does not end in ch. 2. But the later attacks seem to face even more serious challenges than the challenges articulated above. For example, Kerstein argues that the respect-expression account would prescribe flipping a coin to determine whether to give a scarce, life-saving medicine to a young patient or to an old one (pp. 155–8). But he arrives at this result by doing exactly what Wood tells us not to do: Kerstein tries to reduce the respect-expression account to other things like sharing an end. Yet Wood tells us to rely on intermediate, hermeneutical premises about what an action in a given context would express. The final attack is confusing: Kerstein comes to the conclusion that the respect-expression account proscribes an action that Kerstein says is permissible because it is expressive of respect for humanity. He calls this result 'ironic' (p. 186) but it seems more indicative of a deep misunderstanding of the account he is trying to criticize.
  - 6 Not entirely true: one could attack the notion of a maxim itself as incoherent. But, puzzlingly, Kerstein does not do that, either.

## References

- Baron, Marcia (1999) *Kantian Ethics Almost Without Apology*. Ithaca, NY: Cornell University Press.
- Wood, Allen (1999) *Kant's Ethical Thought*. Cambridge: Cambridge University Press.
- (2008) *Kantian Ethics*. Cambridge: Cambridge University Press.

Jennifer Mensch, *Kant's Organicism: Epigenesis and the Development of Critical Philosophy*

Chicago: Chicago University Press, 2013

Pp. 256

ISBN 978-0-226-02198-0 (hbk) \$45.00

doi:10.1017/S1369415414000107

In this concise and tightly argued monograph, Jennifer Mensch has demonstrated, first, Kant's continual and critical attentiveness to the work of the emergent life sciences across the eighteenth century. She shows a clear grasp of what that scientific work took up and what its philosophical implications were – both for the scientists and for Kant. Others have

mentioned this aspect of his intellectual background. Long ago, the great Kant scholar Erich Adickes developed an extensive treatment of *Kant als Naturforscher*. But more recent interpreters of Kant have taken a more limited view of Kant's scientific interests. Restriction to the so-called 'exact sciences' has, whether deliberately or tacitly, downplayed this life-science dimension in Kant's intellectual development. Much that was missed by this election Mensch has succeeded in bringing to light. Central, here, is the notion of *epigenesis* in the emergent life sciences, articulated by thinkers like Buffon, Maupertuis and C. F. Wolff, and contested by such figures as Haller and Bonnet. Mensch traces carefully and compellingly Kant's study of this question from the 1760s to the 1790s. Her account of how Kant came to understand the thinking of the naturalists over the course of the eighteenth century and relate it to his own quest for a transcendental ground of reason in self-generation is very well wrought.

It is this second aspect of appropriation that is most striking and original in the work. That is, Mensch contends that Kant was not only aware of the development of the idea of epigenesis in the theory of biological generation and development, but that he systematically exploited the potential of this way of thinking for his transcendental philosophy. Thus, she argues that the first *Critique* is most fruitfully read from the closing passages of the work, which develop an extensive analogy between the architectonic of reason and the form of living organisms (A833/B862). Hence her title, 'Kant's *organicism*'. Mensch presses this analogy to the very centre of the transcendental philosophical endeavour in Kant, as the ultimate grounding for the transcendental argument itself: 'the overriding importance of organic models for Kant's conception of reason' (125). For her, one must underscore, this is a *metaphysical* conceptualization of the nature and self-developmental force of pure reason. 'Ultimately, Kant was a *metaphysician* with respect to reason, and because of this he was able to think about reason as something self-born' (159 n. 13). Mensch notes Kant's unique but important usage of the term *Selbstgebärung* of reason at A765/B793 (133 n. 280, 212). Kant believed metaphysics could only be renewed if it could free itself from the reciprocal weaknesses of empiricism and innatism in the theory of rational process and warrant. Mensch contends that Kant could accept neither the Lockean claim that concepts arose reflectively from sense experience nor the Leibnizian notion that they were in some sense fully 'preformed' or pre-established in the mind, with echoes of the 'innate ideas' of Descartes and the 'intellectual intuitions' of the Platonic tradition. Neither empirical experience (nature) nor God could account for reason's force without compromising Kant's essential commitment to human freedom. 'The fact of human freedom, according to Kant, meant that the basis of our particular cognitive unity had to be generated by us' (107).

Mensch contends Kant was attracted to the crucial importance of *self-formation* as a theoretical idea in the life sciences. That was the essential feature of epigenesis: ‘the very basis of Kant’s long-standing attraction to epigenesis was its ability to position the mind’s independence from both sense and God as suppliers of mental form’ (214–15 n. 283). Thus Mensch’s historical reconstruction of Kant’s Critical turn moved ‘From Original Acquisition to the Epigenesis of Knowledge’ (8off.). ‘Only once intellectual concepts and the ideas of reason could be traced back to their birthplace in reason, only after reason could itself be identified as “self-born” and containing the “germs of its self-development,” only then could knowledge be secured and the dogmatist and the sceptic alike refuted’ (139). ‘Only ... appealing neither to experience nor to God but only to itself, could [reason] serve as the true ground of experience’ (139).

Most obviously, Mensch aims to make sense of the provocative passage at B167 of the first *Critique* where Kant wrote of an ‘epigenesis of reason’. She argues that, while Kant never believed that as empirical life science such an approach could be recognized as objective, paradoxically it could be used to explain the self-constitution of reason and the warrant for knowledge. The key argument of Mensch’s work is: ‘Kant embraced epigenesis as the model for understanding the *metaphysical* generation of reason and the categories alike’ (214 n. 283). Indeed, ‘the epigenesis of reason ... was far more radical than the one Kant was willing to accord natural organisms’ (15). That is a remarkable finding, and one that is, to the best of my knowledge, quite original. I think it makes sense of many elements in Kant that otherwise seem incongruous. Her work should rouse a lively discussion in Kant studies and in the history of the life sciences.

But what about the life sciences themselves? ‘Kant was consistent ... in rejecting positive discussions of epigenesis as a phenomenon of nature ...’ That is, ‘while Kant seems to have thought it was reasonable to choose from organic models of generation when describing the epigenesis of reason, he would never have suggested that such a model was definitively at work in the actual generation of natural organisms’. He ‘did not believe we could make anything like an identical claim regarding the laws by which an actual organic being might work’ (141). Thus, ‘Kant credited Buffon with having provided a “natural system for the understanding” ... But his account had not achieved the status of a genuine natural history ... Buffon’s mistake, from Kant’s perspective, was concentrating on a physiological explanation of the origin, degeneration, and even potential reversion of varieties’ (100–1). That is, Buffon was trying to *do* life science, while Kant took it to be an impossible endeavour. ‘He was pessimistic regarding any possibility of progress in generation theory ... embryogenesis ... simply exceeded the limits of our claims to knowledge of such things’ (53). That is, ‘the operating

principles of the organism would simply never be revealed in an empirical investigation' (144). Hence, in my terms, what Mensch demonstrates is that Kant arrogated a biological theory from its own precinct as empirical science, which he declared theoretically unjustified, for a *metaphysical* theory of pure reason, where he took it to be not only justified but indispensable. Indeed, he came to allege that the very biological formulation he annexed had all along been parasitic on reason's own self-conception, thus working by illicit analogy, or, in his terms, 'subreption'. As Mensch puts it, 'when reason saw organic activity in nature, according to Kant, what it was really looking at was itself' (144).

In the course of her account, Mensch draws an intimate connection between the 'unity of reason' and what she calls the 'unity of race' in the context of the publication of Kant's first essay on race (1775/77). Quite correctly she highlights the multiple perplexities in accounting for this publication in the context of Kant's notoriously 'silent decade' (95–6). She asks: 'What had Kant discovered in 1775 that he felt it necessary to announce?' (96) and she replies: 'the discovery worth announcing in 1775 was ... the positive explanatory role that could be played by teleology in a rationally unified order' (106). This is interesting, perhaps even plausible, but it does not suffice, in my mind, to account either for the course announcement of 1775 or, *a fortiori*, for its revised republication in 1777. Moreover, I find myself sceptical of her acceptance of Kant's description of his theory of *Keime* and *Anlagen* as 'merely advancing an "idea" intended for "useful academic instruction," a mere preparatory exercise contributing to an enlarged "pragmatic knowledge of the world" ...' (99). Mensch suggests 'Kant was adopting a new methodological stance ... capable of philosophical speculation into the forbidden territory of biological origins ... while yet avoiding the epistemic pitfalls of subreption' (99–100). Here, rather, I think we need to take Kant's pretensions as a *Naturforscher* a bit more seriously. As his controversies with Herder and above all Forster in the 1780s betoken, Kant took himself to be making a *scientific* claim, not just a pedagogical gambit. Mensch herself notes: 'According to Kant, *the only way to explain environmental adaptation* was to suppose the pre-existence within species lines of "germs" for new parts and "natural dispositions" for proportional changes to existing parts' (111; my italics). That was a *scientific* hypothesis, and Kant reacted fiercely in the 1780s to defend it as such. Raphael Lagier, *Les races humaines selon Kant* (2004), seems more apt on this score.

Finally, I am not as sanguine as Mensch appears to be that Kant is the best philosophical lineage with which to connect recent work in epigenetics and emergent properties. As she herself puts it, 'Kant was in the end a metaphysician, and his own species of organicism would therefore have to

be nonnaturalistic' (124). Moreover, his attitudes about the possibilities of empirical biology were excessively restrictive. I cannot agree with Mensch about the prominence of 'boundary maintenance' for the emergent sciences of the late eighteenth century or as the 'key to their successful embodiment in each case' (216 n. 287). I take this for less a 'vanguard' posture than a *conservative* one. It was not a failing that the life scientists of his time and thereafter ignored his insistence upon the constitutive/regulative distinction and his warnings against any 'daring adventure of reason' in conceptualizing or empirically pursuing genealogical or organic development. From Blumenbach through Goethe to Darwin, as Mensch herself acknowledges, life science would need to free itself from Kant's constraints to undertake its empirical and theoretical work. And that, I submit, is still more the case today.

**John H. Zammito**

*Rice University*

*email: zammito@rice.edu*

Oliver Sensen, (ed.), *Kant on Moral Autonomy*  
Cambridge: Cambridge University Press, 2013  
Pp. 311  
ISBN 978-1-107-00486-3 (hbk) £55.00  
doi:10.1017/S1369415414000119

*Kant on Moral Autonomy* is essential reading for scholars of Kant's moral philosophy. This is so because of a wide range of insights offered by the contributors, not only those immediately concerning autonomy. The volume contains fourteen chapters written by an international set of established Kant scholars. There are few surprises regarding who writes about what and how. The authors do the kind of work for which they are well-regarded, sometimes clarifying or expanding on positions originally developed elsewhere.

The collection honours Onora O'Neill, who has done so much to elucidate Kant's distinctive conception of autonomy. Although many contributors allude to O'Neill's work, few discuss it at length. Karl Ameriks does, engaging with O'Neill throughout his chapter. Paul Guyer situates his discussion in relation to theses for which she has argued. Several contributors, including Thomas E. Hill, Jr., Katrin Flikschuh and J. B. Schneewind, follow O'Neill in contrasting Kant's conception of autonomy with contemporary accounts.

The book is divided into three parts: 'Kant's Conception of Autonomy' (part I, chapters 1–4), 'The History and Influence of Kant's Conception of