Book Reviews

Repenser le vitalisme. Histoire et philosophie du vitalisme. Sous la direction de Pascal Nouvel. Paris, Presses Universitaires de France, 2011. 228 p. (Science histoire et société, n 1). € 17.50. ISBN 978-2-13-058296-0

Packham, Catherine: **Eighteenth-Century Vitalism:** Bodies, Culture, Politics. Basingstoke, Macmillan, 2012. 264 p. £ 50.–. ISBN 978-0-230-27618-5

Vitalism today allows of different approaches, particularly the metaphysical and the historical. The latter can mean contextualization in a historical epistemology of the life sciences, yielding distinctions between 18th century Montpellier vitalism, a more embryological German vitalism in the 19th early 20th centuries (Blumenbach, Driesch), but also, the medically tinted doctrines of Diderot, Erasmus Darwin or in a more literary vein, Coleridge, as discussed in Packham's monograph. In addition, the word 'vitalism' is also used in humanities discourse, in a markedly unclear and undefined manner.

The two works reviewed here are respectively, a collection on vitalism in the history and philosophy of the life sciences (with a look at contemporary theoretical biology), and a monograph on vitalism in literature, political economy and medicine primarily in the Scottish Enlightenment, with chapters on English figures like Mary Wollstonecraft and Erasmus Darwin. Nouvel's edited volume is, as often happens, uneven but quite interesting, with various useful papers by senior and junior scholars, not all specialists of vitalism. Packham's monograph is well written, with a sophisticated discussion (presumably, for it is not this reviewer's field) of 18th- and 19th century literature, and a less original discussion of Adam Smith's moral philosophy and political economy. It is not convincing on vitalism in the life sciences, for it fails to take account of much recent work on the topic, it does not define its terms, and overall argues for a vague, somewhat strained interpretive thesis. One might have expected Packham to pay even cursory attention to the Montpellier context, not least given that 'vitalism' is a Montpellier medical coinage, according to one of the two major works on the topic (Roselyne Rey's).

I shall discuss the two volumes separately and then make a concluding comparative comment.

Squarely Francocentric, Nouvel's volume begins with Canguilhem's vitalism, discussed by a former student of his, D. Lecourt, who emphasizes the subtleties and concealed commitments in Canguilhem's approach, including how a Goldsteinian philosophy of life is hidden in a scholarly project. Lecourt hints at the viability of this approach today (a sentiment we find in several of the chapters).

J. Gayon extends an analysis he has proposed elsewhere, on the emergence of philosophy of biology as a discipline, and its relation to competing models like ‘bio-philosophy’ (Continental philosophy of biology), focusing on word frequency in major journals. The usage and frequency of ‘vitalism’ seem to coincide negatively with philosophy of biology’s emergence as a discipline: the term ‘vitalism’ seems to disappear when this discipline emerges.

D. Raynaud uses SST-derived methodological tools to study the 19th century controversy (more of an ideological polemic, really) between the Paris and Montpellier Medical Faculties, with the former being associated with a materialist, reductionist program and the latter an increasingly dogmatic, almost anti-naturalist brand of vitalism.

T. Lavabre-Bertrand studies Barthez’s reception in 19th century Montpellier vitalism, asking how far it evolved from the Enlightenment, or if Barthez can be read conversely as a materialist (59). Or is there real continuity between the earlier period and e.g. Jacques Lordat? We learn that the focus grows less physiological, closer to a medical anthropology, open to conservative politics and religion. Later figures seek to defend vitalism as a Montpellier program, but now, biology- and neurology-centred – without any real unity of content.

F. Duchesneau asks if Blumenbach’s purported vitalism isn’t perhaps just mechanism, despite his vital force concept? At issue is the ontological status of the *Bildungs-trieb*, as a Newtonian-type unknown. Haller’s physiology of fibres is in the background: a sophisticated mechanism yet one which stresses irreducible vital forces such as irritability. Blumenbach’s *Bildungstrieb* is thus not naïve ontological vitalism but sophisticated induction, positing forces to explain observed phenomena. His vitalism influenced further elaboration of functional biological models, including *Entwicklungsmechanik*.

F. Delaporte revisits the forgotten 19th century Montpellier vitalist Jacques Lordat, particularly his writings on senescence, but provides no context or argument for his discussion. Lordat’s holistic hostility to vivisection in the name of the living organism is discussed (94–100) without mentioning the *Encyclopédie* debate on this topic (e.g. Ménuret’s article Observation), or Claude Bernard. Delaporte concludes with a mysterious Gallic flourish: Lordat’s reflections, which were out of date in their time, are relevant for us to today, faced with bioengineering and genetic enhancement.

T. Martin examines the case of Cournot’s problematic vitalism. Cournot understood vitalism as the “philosophical modality of biological knowledge” (115), entailing both an ontological insistence on the autonomy of biology and the irreducibility of biological entities to physics/chemistry, and an epistemological insistence on the specificity of the concepts *appropriate* to such entities (vital force, etc.).

The next two chapters study the vitalism-chemistry relation in the 18th century. C. Lehman asks of G.-F. Venel (who was close to the Montpellier physicians) if it is “enough to frequent vitalists, in order to be a vitalist?” (117), and answers that Venel was not opposed to Montpellier vitalism but anticipates it, proposing a new “chemical vitalism” (130). F. Pépin discusses vitalism, chemistry and philosophy in the *Encyclopédie* and Diderot, and describes 18th century chemistry as non-reductionist: Venel’s goal is understanding “the specificity of life” (131); “chemistry and vitalism” worked together “in an open, mutually beneficial and non-hierarchical relationship” (133). Lehman and Pépin differ on vitalism and chemistry as ontological commit-

ments. Between Stahl and Venel, with Bordeu in between, is a whole spectrum of views on whether chemistry justifies the specificity of life, or whether a science of life has to defend itself against chemistry's (reductionist?) encroachment. Venel seems to hold the former view, Stahl the latter, and Bordeu worries about both.

C. Lebreton offers a short, condensed essay on sensibility in Enlightenment vitalism, less a particular textual analysis or defence of an argument, and more the illustration of the complexity of the Montpellier vitalist sensibility concept (contrary to one's expectation that vitalism and sensibility might be interchangeable and thus uniform).

C. Warman, analyzing the "life and soul" of organs in Bordeu, Diderot and Bichat, suggests we read Diderot 'with' 18th century medical vitalism, not just as a 'philosopher' or scientific 'commentator'. In discussing organs as parts (including the bee-swarm image), she curiously claims Bordeu has a mechanistic approach to the part/organ ("abeilles rouages," 161) while Diderot has a more ... vitalistic approach, where the parts are fully animalized and polypous – but she relates this nicely to Diderot's distinction between spatial continuity and organic continuity. Her rather speculative conclusion: 19th century medical science with Bichat has a clear debt to Diderot beyond medical vitalism (165) – tricky to maintain historically, interesting otherwise.

O. Perru gives a rather unclear analysis of Bergson's vitalism in *L'évolution créatrice* as partly critical of vitalism. Bergson is definitely not 'biologistic', nor is he particularly interested in medicine, although he wrote on Cl. Bernard (but precisely, as the source of an epistemology). Instead, his vitalism is a "durational vitalism" (quoting Andy Wong).

A. Brenner analyzes the mostly forgotten pre-war Bergsonian Edouard Le Roy, a collaborator of Teilhard de Chardin. Le Roy's vitalism was meant to connect his work on mathematics with his work on religion, with a Bergsonian emphasis on a vital impulse, not specifically biological or medical, but involving 'invention' (in mathematics) and 'spirituality' (in religion).

The volume concludes with two essays in contemporary theoretical biology, of differing quality. P.-A. Miquel provides a series of unargued-for formalisms on life as a "relational category", invoking Simondon and Wittgenstein with a dusting of biophysics. In contrast, P. Huneman provides an excellent overview of emergence as a challenge for understanding the mind, nature, and biological life. Both vitalism and emergence (variously defined) have a complex relation to mechanistic models and ontology. Rather than a mysterious, supernatural appeal to a vital force, emergentism *sensu* Huneman is also associated with phenomena such as evolutionary transitions, novelty; entirely *kosher* biological transformations.

Catherine Packham's volume has a more literary focus in contrast, even though it discusses some medical and economic concepts, with a rather metaphoric appeal to ideas of vital force, vital impulse, and self-organizing activity. It primarily treats the Scottish Enlightenment, but also figures such as Mary Wollstonecraft and Erasmus Darwin, not 18th century Continental forms of vitalism. One curious effect is a usage of the term 'vitalism' where it does not seem really applicable, certainly not in a biomedical context, contrasting with the absence of the Montpellier School, where the word 'vitalist' was used with a specific medical dimension, as Rey and Williams have shown.

In addition Packham doesn't really define vitalism. Those accustomed to the history of the biomedical sciences will find more detail here on literary and social notions, and a solid discussion of early feminist notions of sensibility. But the connection between medical and social/economic themes is too metaphorical (e.g. 'oeconomy' talk in medicine and economics, 125f.). Whytt, Cullen, Hume and Smith are not all invoking a shared concept of an immanent vitality; Smith's appeal to Nature's self-curative powers in his advice to the dying Hume [103f.] is less a specifically 18th century vitalist motif than a very old, notably Hippocratic one: if Packham wishes to claim that the healing capacity of Nature was a new idea she needs an argument for this, which she does not supply.

Similarly, the "science of man" has nothing to do with vitalism (contra 31), nor does the economics of the *Wealth of Nations* (83f.). Hume's metaphor of the anatomist (35–36) in fact runs counter to most vitalist intuitions, which are explicitly hostile to the dissective, analytic implications of anatomy. Further, Smith on sympathy (like Hume) explicitly brackets off physiology and the mind-body problem! (contra 53): he focuses on the mind's representational and imaginative workings, as a social entity. Is sympathy really "Smith's 'vital principle' of social feeling" (64)? For Packham, sympathy was only discussed vaguely in Scottish thought before Smith (60), a judgment which would come as a surprise to Hume, whose reflections on sympathy were both original and important for Smith.

Overall the history of science is treated quite generally, with some imprecisions e.g. on Newton. Packham's opposition between mechanism and sensibility/vitalism is a bit rough (compare Steinke on Haller). Thus while sensibility is difficult to explain mechanistically, Packham should have considered Haller, who does precisely that, influencing European, including Scottish medicine (e.g. Hunter, Cullen). The claim that "sensibility shares with (or borrows from) vitalist physiology a body narrative which emphasizes the same forms of automatic, unconscious physical response. [...] Sensibility [...] addresses the same mysterious terrain of unconscious and immediate bodily activity" (54) is unclear.

Again, Packham's literary focus leads her to partly neglect the history of science or medicine, as in the rather ahistorical final contrast between vitalism and "organicism" (209). Many vitalists defended organicism, and a core Montpellier vitalist idea, the animal economy, is organicist. Scholarship such as T. Cheung's on organism might have been more useful than Cunningham's generalizations (211). Equating Locke on Life, substance and personal identity (27) with vitalism seems mistaken, as does relating thinking matter to later vitalist ideas. A missing figure in this story is Margaret Cavendish, who is a more explicit bridge between vitalism (*sensu* Packham) and panpsychism.

Packham's volume describes vitalist echoes in different disciplines, including the Scottish Enlightenment "science of man" and the discourse of sensibility (a topic treated with a better balance of literary and HPS scholarship by A. Vila). Nouvel's volume also seeks to present a "vitality of vitalism", more *épistémologie*-centred. Both contribute to our increasingly diversified understanding of Enlightenment vitalism.

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