

Greek thinking between Thucydides and Demosthenes, which made the latter's Realist arguments less objectionable both to the average Athenian and to the modern Realist theoreticians (who are likely to reject amorality in internal affairs): 'the distinction between amorality between states and morality within a state became more explicit' (163, cf. 165-6). In any case, it was (and is) difficult to base a foreign policy exclusively on either interest or justice (158). One particular type of calculation well-attested in fourth-century Athens was the notion of a balance of power (168-182). 'This often meant that Realist arguments were in line with the long-standing Athenian ideal of helping the weak and the wronged' (155). Chapter 8, 'Reciprocity' (185-214), deals with the idea that states, like people, need to repay in kind the benefactions or the wrongs they have received. Here, too, the moral and the pragmatic attitudes could coincide: reciprocity was relatively advantageous in the long run, as Game Theory confirms (206-8). Chapter 9, 'Legalism' (215-36), argues that, despite the lack of authoritative sanctions in the international arena, the conception of states as bound by laws played a significant role in Athenian deliberations: many Athenians hoped to duplicate in the Greek world as a whole the success of law in restraining violence within their own society.

Attitudes towards war and peace are considered in Chapter 10, 'Peace' (237-69). Generally, peace was as preferred in classical Athens as it is today, but the ancient Greeks 'never produced the principled and compelling condemnation of all wars seen today in pacifist thinking' (268). Whereas today pacifism is often associated with the Left, ancient anti-militarist pronouncements are mostly attested among wealthy intellectuals critical of democracy. The author reminds us that even nowadays pacifism in the strong sense of the word is far from being the dominant attitude.

This clearly written book, accessible to a wide audience, provides more than its title promises: by comparing interstate attitudes of 'democracies ancient and modern' H. contributes to a more profound understanding of the thinking of the latter as well as of the former.

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Sabine Föllinger, (ed.), *Was ist 'Leben'? Aristoteles' Anschauungen zur Entstehung und Funktionsweise von Leben*. Akten der 10. Tagung der Karl und Gertrud Abel-Stiftung vom 23.-26. August 2006 in Bamberg, Stuttgart: Franz Steiner Verlag, 2010. 420 pp. ISBN 13: 978-3-515-09244-9.

Aristotle's conception of life, like ours, is a deeply problematic one. The philosophically and scientifically fascinating and still highly relevant issues that revolve around this conception are the subject matter of this volume, edited half in English and half in German by Sabine Föllinger. The volume contains the proceedings of a conference on the same topic held in Bamberg in 2006. The conference, which was part of a series of conferences on Aristotle's natural philosophy funded by the Karl and Gertrud Abel Foundation, brought together eighteen scholars: classicists, philosophers and biologists, from Germany, Italy, Great Britain, the United States and South Korea. Among them some of the most distinguished experts on Aristotle's biology.

The volume is divided into four sections of approximately 100 pages each (with the exception of the 50 pages of section IV): I 'The Soul as Principle of Life', II 'Criteria of Life and the Scala Naturae', III 'Individual and Species', IV 'Reception'. The book represents a valuable contribution to the study of Aristotle's natural philosophy. Its eighteen essays present a great variety of different, partially incompatible, and even heterogeneous, methodological approaches towards Aristotle. I shall very briefly go through the sections one by one.

Section one, which deals with Aristotle's conception of the soul as the principle of life, is not the strongest section of this interesting book. Uwe Voigt's ('Von Seelen, Figuren und Seeleuten', pp. 17-33) main point seems to be that Aristotle solves the problem of conceptual unity of the

different faculties (or sub-principles) of the soul by way of the homonymy of an ordered series. This is not entirely innovative, and it would have been desirable to learn something about the precise notion of homonymy at work here, especially since Aristotle seems to presuppose that the phenomena of life do somehow present a sufficiently unified subject matter to be treated by a single science. Noteworthy is Voigt's attempt to give a solution to the longstanding conundrum of the passage about the sailor in the ship in *De an.* 413a8-9 where Aristotle, right after stating his groundbreaking hylomorphic definition of the soul, irritatingly says what sounds like the implication of an arch-dualistic statement, namely that 'it is still unclear whether the soul is the actuality of the body in the same way as a sailor is of the ship'. Voigt suggests understanding this analogy as an illustration of Aristotle's solution to the problem of the unity of the soul by way of the 'homonymy of an ordered series' (pp. 31-2). That seems a bit far-fetched. Diana Quarantotto ('Aristotle on the Soul as a Principle of Biological Unity', pp. 35-53) approaches Aristotle's conception of the soul by carefully examining his conception of the unity of compound living bodies. I cannot fathom what exactly she argues for in the first part of her paper (the second part contains good argumentation in favour of seeing Aristotle's hylomorphism as compatible with his cardiocentrism), though what she says about the circularity and directionality of life-processes sounds very interesting. This may be due to a certain untidiness in her terminology: Formulations such as 'the process goes from the whole to the parts' (p. 50) sound like metaphors, whereas '[the soul] ... albeit a dynamic entity in the strong sense, etc.' (p. 47, fn. 46) doesn't sound like Aristotle, who took pains to prove the immobility of the soul — though fairness requires to mention that in the immediate sequel of this statement Quarantotto hastens to distinguish the soul from the life processes it is supposed to explain. Maria G. Miller and Alfred E. Miller ('Aristotle's Dynamic Conception of the Psyche as Being-Alive', pp. 56-88) do not observe this distinction, though. Their paper is a conceptually ambitious attempt to dynamise Aristotle's conception of the soul in such a way as to make it suitable to account for the homeostatic processes typical of concrete living organisms in a direct way. The authors see a close parallel between their view of the Aristotelian soul as the being-alive of an organism and what biologists today regard the 'self-maintaining physiological process as how an organism exists' (p. 61). I must say that I do not find their attempt very convincing, in spite of the great conceptual effort they have invested. It seems implausible that Aristotle would subscribe to a conception of the soul as a process (as the authors explicitly claim, e.g. on p. 88). Thomas Buchheim ('Was sind *logoi enhyloi* bei Aristoteles?', pp. 89-111) asks what the 'enmattered accounts' (*logoi enhuloi*) in *De anima* I 1 are. It would be impossible for me to do justice to his remarks here and I am not sure whether I understood everything well. He seems to argue for a view according to which *all* goal-oriented physical processes are *logoi enhuloi*. "Psychological" processes such as those described in *De anima* I 1, would be, according to this view, but one instance of such processes. It seems only logical, then, that later in the paper Buchheim extends the notion of *logos enhulos* to the soul and also to the composite of body and soul (p. 108).

Section II deals with the criteria of life and the *scala naturae*. It starts with the contribution of Wolfgang Kullmann ('Übergänge zwischen Unbeseeltheit und Leben bei Aristoteles', pp. 115-35) who, since his well known *Wissenschaft und Methode* (1974), has been vastly and continuously contributing to the understanding of Aristotle's natural science. His work culminated in his truly monumental 2007 German translation of and commentary on The *De partibus animalium* in the Akademie series. Kullmann's contribution to this volume challenges what he identifies as a general tendency in Aristotle scholarship, namely to explain his natural philosophy by means of his metaphysical conceptions in a somewhat narrow-minded fashion. He does so by first stating a metaphysical problem into which Aristotle gets himself by defining the soul in the *De anima* as the first entelechy of a natural body potentially having life (412a27f.) on the one hand, and defining the natural body as an instrumental body, on the other hand (413a28f.). For how, asks Kullmann on p. 118, can the soul be informatively defined as the entelechy of its own instrument?

Kullmann then turns to the biological works where he detects an important tension between the conception of vital heat and pneuma as instruments of the soul and some of Aristotle's statements in the *Parva naturalia* which sound as if he were giving priority to vital heat and pneuma over the soul (pp. 125-32). He concludes by stating a profound difference between the *De anima* and what he calls the more empirical works, adding that Aristotle was always disposed towards changing his metaphysical views if empirical research so demanded. It is very interesting to observe the great scholar raising such profound doubts, but the cogency of his argumentation is not inescapable (for vital heat see e.g. below R. King's contribution; regarding the metaphysical problem, one might equally well register the circularity deriving from overlapping explanations which Kullmann finds uninformative ['schwer zu verstehen', p. 118] as a typical concomitant of teleological explanations). Stephan Zierlein ('Anatomische und Physiologische Merkmale in Aristoteles' theoretischer und praktischer Bestimmung von "Lebewesen"', pp. 137-60) explores the depths of the animal / plant distinction in Aristotle's works in a clear and well-informed way. He concludes (as one would expect) by saying that it is unclear where exactly Aristotle did want to draw this distinction (as he seems to work with overlapping criteria in both directions) and that Aristotle cannot sustain his seemingly clear-cut distinctions of his zoological works in his empirical descriptions of particular animals. Aristotle's and Theophrastus' work on plants is the subject matter of Georg Wöhrle's contribution ('Dieselbe Seele der Art, wenn auch nicht der Zahl nach (Arist. *de An.* I 5, 411b19ff., pp. 161-70), in which he emphasizes the great importance of Aristotle's *De plantis* for our understanding of his conception of life, notwithstanding its extremely awkward textual transmission. Richard King ('The Concept of Life and the Life-Cycle in *De Juventute*', pp. 171-87) gives a thorough analysis of Aristotle's concept of life and the life-cycle in *De juventute*. King, who is known for his complementarity thesis regarding the *De anima* and the *Parva naturalia* (cp. his *Aristotle on Life and Death*, 2003) finds complementarity also in this case: *De juventute* explains what was mentioned in the *De anima*, namely youth and old age. Meanwhile, we get a highly instructive reconstruction of the deep structure of argumentation of this widely neglected Aristotelian text. The next and longest contribution to the volume, by Arbogast Schmitt ('Leben ist Denken (*Metaphysik* XII 7, 1072b27', pp. 190-224), contains an interpretation of Aristotle's claim in *Metaphysics* XII 7, 1072b27, according to which the actuality of thought is life. In thirty-five pages he argues for a most unusual interpretation of the passage that is reminiscent of Plotinus' *Enn.* III 8: Schmitt proposes to understand the passage as meaning that *all* forms of life are (somehow) thinking. Very roughly, the argument is this: (i) Thinking is a sort of differentiating / discerning (*krinein*); (ii) all forms of life are based on some mechanism of differentiating / discerning or other; therefore, all biological forms are somehow kinds of thinking. Sabine Föllinger ('Das Problem des Lebens in Aristoteles' Embryologie', pp. 225-36), in a more sober vein, ably investigates the notion of life, and especially the notion of human life, in Aristotle's embryology. She notes that, unlike in his ethical works, in the *De generatione animalium* (and in *Politics* VII 16) Aristotle is making use of a unified and biological notion of embryonic life common to all animals, including humans, which is tied to the possession of the faculty of perception. The biological basis of human thinking is one of the most fascinating topics in Aristotle's philosophy. It is a pity that Föllinger is quite brief when it comes to the question of where exactly Aristotle draws the boundary between the biological and the intellect. One would like to hear more on this subject.

The other great master of Aristotle's biology next to Wolfgang Kullmann, participating in this volume, James Lennox ('Bios, Praxis and the Unity of Life', pp. 239-59), opens up the third and most brilliant section of the volume with a treatment of the notion of *bios* in Aristotle's biology. He argues that *bios* ('way of life') is part of the essence of living beings and that it is not to be identified with one single activity (*praxis*) of the living being, but rather with a certain combination of their *praxeis*. The paper throws new and fascinating light on an important concept of Aristotle's biology. The biologist Armand M. Leroi ('Function and Constraint in Aristotle and

Evolutionary Theory', pp. 261-84) shows, with reference to what modern biologists call 'resource allocation trade off', the astonishing degree to which Aristotle, in spite of his completely outdated chemistry and physiology, can justly be regarded as a precursor of the organising principles of modern biology. David Depew continues with a paper on spontaneous generation in Aristotle ('Incidentally Final Causation and Spontaneous Generation in Aristotle's *Physics* II and other Texts', pp. 285-97). I cannot summarize its contents here, but it is a treatment of the issue as clear and to the point as one could wish. It also includes an exceptionally lucid and straightforward account of chance in Aristotle. Dae-Ho Cho's paper on Aristotle's notion of biological species ('Beständigkeit und Veränderlichkeit der Spezies in der Biologie des Aristoteles', pp. 299-313) is no less clear and instructive. It shows that neither typological essentialist nor evolutionist conceptions can make a legitimate claim to capturing Aristotle's views and explains why. Particularly informative are his considerations as to why Aristotle, in spite of being in possession of a great deal of the evidence that later led Darwin to formulate his thesis of the development of the species, did not draw similar conclusions (p. 312). The section closes with Christian Pietsch's treatment of the relation between the concept of nature (*phusis*) and human action in Aristotle's ethical writings ('Menschliche *Physis* und menschliches Handeln in den ethischen Schriften des Aristoteles', pp. 315-27). Pietsch's analysis does not go further than stating that human action for Aristotle is the result of the interplay between invariant (biological nature) and variant factors (i.e. historical, social and free choice; p. 327). I particularly missed a discussion of the role that habituation (Aristotle's 'second' nature) plays in the shaping of human behaviour.

The last section opens with Hellmuth Flashar ('Urzeugung und/oder spontane Entstehung', pp. 332-37) who briefly discusses the treatment of spontaneous generation in two of the pseudo-Aristotelian *problēmata physica* (X 13 and 65). He shows that these represent the first instances of the analogy, to achieve subsequent importance, between a cosmogonical beginning of the world and the spontaneous generation of animals. Robert Bees' ensuing paper on the reception of Aristotle in the natural philosophy of Zeno ('Rezeption des Aristoteles in der Naturphilosophie Zenons: Die kosmische Lebenskraft im Rahmen der Gottesbeweise bei Cicero, *De natura deorum* 2.20-44', pp. 339-66) makes skilful use of the means of Quellenkritik to argue that Aristotle did have a wide-ranging influence on early Stoic physics. The trouble is that Bees, in order to make his point, seems to rely on rather superficial similarities. Just to cite two of them: Zeno's argument for the intelligence of the universe as reported by Cicero in his *Natura deorum* II § 21-22 does not contain 'the same kind of argumentation' as Aristotle's *Metaphysics* XII 7, 1072b24ff. (as Bees claims on p. 343). It is also hard to see how the fact that Aristotle's *De caelo* used the expression *aphtharton kai agetēton* with reference to God and Aether, and that Zeno is reported to have used the same expression with reference to the *pur technikon*, can show that Zeno adopted and modified Aristotle's doctrine (p. 351). The section closes with an excellent and concise overview on Thomas Aquinas' views on life by Christian Schröer ('Von der antiken Seelenlehre zur empirischen Biologie', pp. 367-84).

The book ends with a highly informative bibliography, and indexes. All in all, this is a commendable book. It presents a great variety of approaches towards Aristotle's concept of life and its reception in a rich and highly instructive way. Some of its papers present substantial contributions to the study of Aristotle's biology.