Anna Marmodoro, *Aristotle on Perceiving Objects*. New York: Oxford University Press, 2014; pp. x + 291; ISBN 978-0-19-932600-6 [hb]; Price: £47.99.

This rich and thought-provoking book can be divided into three parts. In the first part (Chapter 1), Anna Marmodoro attributes to Aristotle a metaphysical position according to which the physical universe is a giant network of causal powers that depend on one another for their activation ('Aristotle holds a *pure* power ontology', p. 65). Change occurs when a power to produce some type of change in the agent and a power to undergo that type of change in the patient get simultaneously activated. And they get simultaneously activated in an underlying process or activity that takes place in the patient. Aristotle's contribution, according to Marmodoro, is that he understood causation in terms of an active and a passive power that depend on one another for their activation, both preserving their identity in activation, and both sharing the same substratum (either a process that takes time to find its accomplishment in an end product, e.g. a house, or an activity that is its own accomplishment at every moment, e.g. seeing) that takes place in the patient.

In the second part of the book (Chapters 2 and 3), Marmodoro applies the metaphysics of causal powers to Aristotle's treatment of perception. Sensible properties of objects, such as colours and sounds, are active powers that depend for their activation on the senses, understood as the corresponding passive powers. The activation of the active power (e.g. actual sounding) and the activation of the passive power (e.g. actual perceptual experience of hearing) have the same substratum, that is a certain 'disturbance' in the ear. Marmodoro thus steers a middle course between the literalist and the spiritualist interpretations of Aristotle's theory of perception, subtly differentiating her own position from similar proposals of Scaltsas, Caston and Shields.

More to the point, according to the outlined view, sensible properties are real features of the world which we perceive by their causal impact on our sense-organs. This causal impact gives rise not only to our perceptual experience, but also to the full actualization of the sensible qualities: the world is coloured even when no one looks at it, but when one does, the world's colourfulness gains its full degree of realization. This is what Marmodoro calls 'Aristotle's subtle realism': sensible qualities are real and observer-independent at one level of activation, but fully activated only when observed.

Up to this point Aristotle's theory of perception can explain only perceptual awareness of simple sensible qualities—colours, sounds, smells, flavours and tangible qualities—gained through each one of the five special senses. However, Aristotle insists, contrary to Plato in the

Theatetus, that our perceptual awareness is richer and structured, so the real challenge for Aristotle is to explain *complex* perceptual content. To address this challenge, Aristotle introduces a common sense, a further perceptual power which unifies and structures the reports of the special senses. In the third part of the book (Chapters 4-7), Marmodoro discusses the varieties of complex perceptual content and explores the metaphysical underpinnings of the common sense and its relation to the special senses. One of her central claims is that the common sensibles—such as shape, size and motion—are qualitative features of objects which determine how the special sensibles are clustered together and how they behave in time and space. Perception of the common sensibles, which are grasped only partially by the special senses and fully by the common sense, Marmodoro plausibly argues, is a 'crucial contribution towards the perceiver's awareness and identification of *objects*, rather than arrays of disjointed perceptible qualities' (p. 177).

To explain the common sense, its relation to the special senses and its mode of operation, Marmodoro identifies six 'metaphysical models' which she presents as Aristotle's progressive exploration toward a satisfactory account of the common sense. The first two models, the 'Mixed Contents Model' and the 'Multiple Sensors Model', are found in Aristotle's De Sensu 7, and they are found to be lacking for obvious reasons: the former because mixed perceptual contents are fused into unarticulated wholes, and the latter because dividing a single sense into sub-senses only replicates the problem of the unity of the senses, as one would have to explain how perceptual content provided by two sub-senses is unified. The third, 'Ratio Model', is found in *De Anima* III.7; it is a genuine improvement that avoids the problems inherent in the first two models, but it yields a too abstract conception of unity to provide a satisfactory metaphysics for the common sense. The 'Relative Identity Model', introduced at the end of *De Anima* III.2, is a major step in the right direction, as it shows how one thing can be many at once, but it cannot explain how the common sense functions. The last two models combined yield the satisfactory account. The 'Substance Model', from the end of De Sensu 7, adequately explains the unity of the common sense, and the 'Common Power Model', from De Somno 2, explains 'the status of the common sense as a perceptual power itself, over and above its unifying role in relation to the five senses' (p. 275).

Although a lot of philosophical ingenuity went into Marmodoro's construal of the six models, offering many valuable insights, I am not convinced that the story of their progressive exploration corresponds to Aristotle's own efforts, or that he would think of the last three as distinct models, rather than as three different descriptions of the same model, each tailored to its context. Indeed, it seems to me that the subtle metaphysics that

Marmodoro employs to develop her 'robust interpretation of the common sense' is predicated on the assumption that Aristotle's account of the constitution of the body and of the processes therein is entirely irrelevant for an explanation of the unity and operation of the common sense—an assumption that follows from the general metaphysical position she attributes to Aristotle.

For instance, Marmodoro repeatedly claims that the common sense has no organ, but then does not hesitate to state that the common sense in *De Somno* 2 is 'described' or 'presented' as the 'primary sense organ' (p. 255). I expect that one would have to pause at that point and explore in some detail the link that Aristotle establishes between the common sense and the 'common part of all the sense-organs', that is the heart as the central organ whose affection by the digestive processes explains simultaneous shutting down of all the special senses in sleep. Nor does Marmodoro consider Aristotle's observation in *De Sensu* 2 that if the connection between the eyes and the heart is severed, no visual perceptual occurs, suggesting that *all* perceptual experience takes place in the heart, as is required by Aristotle's subsequent explanation of imagination, desire and locomotion. To put it in a nutshell, an account of Aristotle's theory of the common sense that pays no attention to the material cause is bound to be incomplete at best and inadequate at worst.

In my view, therefore, Marmodoro's book fails as an interpretation of Aristotle's theory of the common sense, although it raises good questions, teases out some interesting aspects of Aristotle's metaphysics, and offers insightful takes on various parts of Aristotle's theory. I cannot judge whether the book will succeed in putting Aristotle on the table of contemporary power metaphysicians, which seems to be one of Marmodoro's aspirations, but I trust that it will stimulate further research on Aristotle's theory of complex perception and higher non-rational abilities. I also hope that the paperback edition will eliminate incorrect or incomplete cross-references (e.g. pp. 42, 70, 71, 182, 260), introduce uniformity in referring to the titles of Aristotle's works (e.g. the same work is sometimes cited as 'Sense and Sensiblia' and abbreviated as 'SS', sometimes as 'De Sensu' and abbreviated as 'DS'—which is the abbreviation used also for De Somno), print Greek passages that correspond to the provided translations (e.g. pp. 23-24, 54, 90, 92, 223), and at least occasionally indicate which translations of Aristotle's works are being reproduced or modified.

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