

Andrew Newberg. *Neurotheology: How Science Can Enlighten Us About Spirituality.* Columbia University Press 2018. 328 pp. \$35.00 USD (Hardcover ISBN 9780231179041).

In this book neuroscientist Andrew Newberg announces a new field that he calls ‘neurotheology’ and predicts what it will achieve in the near future: it ‘might revolutionize our understanding of ourselves and of the world’ (1); it may ‘dominate our world over the next century’ (1); it ‘might bring humanity closer to a deep and fulfilling understanding of ourselves and the world’ (3); it ‘might shed new light on the mind-brain relationship’ (4); it ‘might be able to forge a new path...that can help people find meaning, purpose, and wisdom in their lives’ (4); it will help us determine ‘whether religion is really a delusion’ (8); it is a ‘unique’ discipline with a ‘virtually unlimited future’ (5); it has an ‘opportunity to help science, religion, and all of humanity’ (5); it ‘might help answer fundamental questions regarding the nature of God, the nature of existence, and what it means to be human’ (11), and ‘perhaps ... will even unlock the mysteries of the nature of consciousness’ (11). ‘Neurotheology’ will, he claims, help us ‘contribute to the epistemological understanding of reality’ and ‘know what is really real’ (259) – i.e., to solve the problem of the existence of the world outside the mind. Through ‘neurotheology,’ we ‘might have an opportunity to better answer some of the truly ‘big questions’ that have faced humanity since its dawn’ (40). This new field might even ‘point toward a new type of faith that might create a link between science and religion different from anything that has come before’ (280). There is, Newberg insists, ‘no limit to how far this field’s various avenues of study and scholarship can go’ (284).

These extraordinary claims are all the more surprising, given that the field that does not even really exist yet, let alone have any substantial accomplishments (though Newberg is already talking about ‘subfields’ in the discipline and a branch of ‘applied neurotheology’). Nor is it indeed even clear just what ‘neurotheology’ is. Newberg tells us that it is ‘neither simply the neuroscientific study of religion and spiritual phenomena, nor a religious or theological dissertation on science. Rather, neurotheology strives to carve out ‘an integrated approach to the nature of the human person by combining the physical and the spiritual’ (37); it is the study of the ‘relationship between the brain and religious or spiritual phenomena’ (38). Newberg insists that this field is not merely a neuroscientific analysis of religion, but a ‘two-way street’ (38), involving both the scientific approach to religion but also the religious approach to the world: ‘the best of what religion and spirituality can offer’ (11), an approach that may even ‘transcend scientific endeavors’ (12). It is, however, unclear how this two-way approach is supposed to work, given that Newberg himself will focus on one side, the ‘scientific side’ of ‘neurotheology’ (38). He thus leaves us wondering just how the religious side of ‘neurotheology’ is supposed to work, who will be doing it, and why Newberg limits himself to only half of his declared field, the scientific half – particularly if the field may ‘transcend’ science itself.

Why should we believe (and why does Newberg believe) that this new field of ‘neurotheology’ will revolutionize our understanding of religion, not to mention solve all the great philosophical puzzles about human nature and reality? How would using fMRI machines or analyzing neurotransmitters give us ultimate insight into reality itself? As far as this reviewer can figure, Newberg’s reasoning is simply that ‘the two forces of science and religion are both products of the human brain’ (3), hence a neuroscientist is in a privileged position to study the very origins and source of all human behavior and belief systems. If this is his position, the fallacy is almost too obvious to need mentioning. The brain is the tool by which we engage in all human endeavors, but it does not follow that we can understand all those endeavors simply by looking at the brain. That would be like saying that we

can understand the central principles of physics by studying how the brain works when it does physics. The brain provides the material basis for thought and action, but it is an extreme reductionistic position to think that ideas can best be understood by looking at their material substratum.

Newberg's extreme reductionistic commitments pervade the book. He suggests that one may be able to explain why the 'symbol of the cross is powerful' by noting that there are neurons in the occipital lobe of the brain that respond to a vertical line, and other neurons that respond to a horizontal line (57). The wildly unlikely assumption of course is that the meaning and significance of a religious symbol can be explained merely as a matter of how many neurons are stimulating (does he think the letter 't' is more powerful than the letter 'l'?). Elsewhere Newberg notes the widely attested profound significance of the idea of unity of opposites in religious and mystical thought, but he thinks this can be explained by claiming that the temporal lobe 'helps establish pairs of opposites,' while the parietal lobe 'helps resolve them' (174), as if 'establishing' or 'resolving' pairs of opposites were simply mechanical brain operations. Newberg also attempts to provide a neuroscientific explanation of religious extremism and terrorism by tying it to a strong reaction in the amygdala, which he claims may 'foment great anger and hostility, with the person ultimately coming to the logical conclusion that eradication is the only logical choice' (137). This claim is particularly difficult to fathom, since the amygdala is involved in many different sorts of emotions, including happiness, arousal, and even sexuality; and furthermore, going from an emotional reaction to a commitment to religious terrorism will involve the whole brain, not merely a reaction in the amygdala.

What is troubling is not just the reductionism but Newberg's apparent unawareness that there might be any problems with such an approach. Nowhere does he indicate any familiarity with contemporary debates in the philosophy of mind, or any appreciation of the many objections to his method. But in fact it is highly unlikely that high-level mental operations can be understood by examining brain processes, even apart from the well-known limitations of neuroimaging techniques. The brain provides a physical substrate for thought, and while examining the substrate might provide some insight into the nature of mind, in all likelihood such insight will be small and marginal. To understand terrorism will require an understanding of the logic of religious extremism, the structure of ethical reasoning, as well as social and environmental influences, not merely the functioning of the amygdala.

Another oddity of Newberg's extreme reductionist approach is that he seems naively unaware of the extent to which it serves to debunk rather than support religion. One of Newberg's principal aims, he repeatedly tells us, is not to replace religion with science, but to integrate them in a new worldview that incorporates both (282). 'Neurotheology' is a field from which 'both science and religion benefit' (284). Yet he does not seem to see that his relentless reduction of religious behavior to brain mechanisms implies that religion (unlike science) is in fact a delusion. Thus Newberg believes that 'because of how our brain functions, religion and the concept of God' will be 'with humanity for a very long time,' and we 'would expect these beliefs to persist until the brain begins to operate in a fundamentally different way' (279). That is just to say that religion is merely a product of the brain, not a response to a genuine transcendent reality and hence has no claim to truth, let alone equal stature with science. Similarly, Newberg uncritically adopts an evolutionary adaptationist model of religious behavior. Religion, he suggests, might function as a 'placebo effect' that evolved to quell our anxiety and reduce stress responses. Remarkably, he seems to think that this theory is not a threat to religion, as 'the placebo effect should not be denigrated' (119). But this is to miss the point entirely, which is not about 'denigrating' the placebo effect, but rather pointing out that its effects are entirely psychological. If religion is a placebo, then at most it may be useful to believe in

God, but there is in fact no God. The persistent double standard of this book is evident in that Newberg subjects religion but never science to his reductionistic analysis.

Perhaps the biggest surprise is found at the end of the book, where Newberg announces his greatest ambition: to create a new, universal religion for all of mankind. He calls this, with unsurprising lack of humility, a ‘megatheology.’ Now what makes him think that ‘neurotheology’ can overcome religious differences and meld all of mankind together in a new world religion? His argument is simply this: ‘Since neurotheology applies to the human brain, and since the human brain is similar in the more than seven billion people on the planet, from the start, it would seem at least possible for neurotheology to be embraced by everyone’ (287). So now, we see the real meaning of the term ‘neurotheology’: it is not just a study of religion, it is a new religion entirely! It is perhaps needless to point out that the mere existence of a vague ‘similarity’ in the human brain by no means entails that all people will agree on a single religion. Moreover Newberg gives us no idea what this religion will look like. His argument displays again his extreme reductionist assumption: that a neuroscientist’s knowledge of the brain will suffice to enable one to construct a religion, as if building a religion is a matter of determining which brain regions to stimulate. There is furthermore the additional assumption that constructing a religion has nothing to do with responding to an actual, existent transcendent dimension, but is merely a matter of knowing how the brain is constructed. As if creating a new religion were not enough, Newberg further predicts human evolution to a newer, higher state: a ‘new, multidisciplinary, and integrative mindset based on neurotheology’ (288).

There is no doubt that the field of neuroscience and its brain imaging techniques will produce some interesting and helpful results in understanding how the mind works. Even these results will require careful interpretation, given the limits of neuroimaging techniques as well as the intrinsic limits of the reductionist approach. There is thus little reason to believe in a distinct field of knowledge called ‘neurotheology,’ let alone an entire new universal religion. Equally unlikely are the wild and even outlandish claims made by Newberg as to what his new field could do in the future. One is simply mystified at how the question of ‘whether miracles exist’ could be a question for ‘neurotheology,’ as if examining brain processes could tell us whether supernatural events are real (139). Similarly, one wonders at Newberg’s conviction that ‘neurotheology may be the ultimate approach toward a solution to the knotty [!] problem of knowing what is really real’ (278). It is hard not to see this book as a symptom of overexcitement about a new experimental technique, resulting in a condition variously known as neuromania, neuro-imperialism, or neurocentrism. Neuroscience has much promise as an exciting new field, but one thing it does not need is a series of extravagant and unachievable promises that are bound to be disappointed, thereby discrediting or distracting attention from its real, if modest, accomplishments.

Whitley Kaufman, University of Massachusetts Lowell