



Are beautiful theories better theories?

Devon Brickhouse-Bryson: Judgements of beauty in theory evaluation. Maryland: Lexington Books, The Rowman & Littlefield Publishing Group, 148 pp, \$90 HB

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Theories are often praised for their simplicity, elegance, and beauty. But can aesthetic judgments properly enter the evaluation of theories? Or are aesthetic values irrelevant when it comes to assessing whether a theory is true? In *Judgments of Beauty in Theory Evaluation*, Devon Brickhouse-Bryson addresses these questions, offering a defence of judgments of beauty in the evaluation of theories. He takes the reader beyond the discussion of aesthetic values in science to consider the connection between the beauty and the truth of a theory more generally, drawing on debates in aesthetics and metaphilosophy to do so. The book is clearly written and accessible for researchers new to the topic and presents an exciting and nuanced contribution to a growing literature. In what follows, I will summarize the chapters of the book, noting some points of criticism as well as possible avenues for further exploration along the way.

Aside from providing an overview of the chapters, the introduction explains the need for “indirect” methods of theory evaluation since the truth of a theory cannot be assessed directly. This leads to the statement of the central thesis of the book: Theories are “systems of thought” and should be evaluated as such. As Brickhouse-Bryson states, “A system is a good system if it is, for example, simpler, more unified, more economical, more coherent, more elegant, etc.” (xix). In other words, good theories, understood as systems, are *beautiful*.

Chapter 1 addresses the claim that beauty is relative or, as it is commonly expressed, is “in the eye of the beholder”. If this were true, Brickhouse-Bryson argues, then the overall project would be undermined; truth is not relative, and hence, the connection between a theory’s beauty and its truth is implausible. Brickhouse-Bryson sketches out various possible understandings of this perspective but ultimately argues, via an analogy with moral relativism, that, however understood, relativism results in problematic implications.

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In Chapter 2, Brickhouse-Bryson outlines his positive “mid-level” account of beauty which is rooted in Kant and Mothersill. On this view, judgments of beauty are made without reference to principles, i.e. “there are no true, informative generalizations about what makes something beautiful” (19). At the same time, it is possible to have genuine judgments of beauty. That is, we can truly state that some object is beautiful. The chapter ends with a discussion of the various kinds of objects—nature, artworks, architecture, theories—that we judge to be beautiful, raising the difficulties with pinning down what they all have in common. Brickhouse-Bryson argues that we can find a unifying thread once we see that central to judgments of beauty is the evaluation of systems *as systems*. Since much of the aesthetics of science literature, where the beauty of theories has received most attention, is somewhat detached from theories of aesthetic value, Chapters 1 and 2 present a welcome discussion that, especially in the endnotes, shows sensitivity to issues in philosophical aesthetics.

Chapters 3 and 4 get to the heart of Brickhouse-Bryson’s account. He carefully outlines two well-established methods of theory evaluation with the aim of showing the relevance of beauty in each. The first, presented in Chapter 3, is “reflective equilibrium”. The term was coined by John Rawls and denotes a back-and-forth process in which “commonsense judgments, principles, and background theories” are adjusted until coherence between them is achieved (31). In Chapter 4, the focus is on simplicity; when deciding between two competing theories, we ought to choose the simpler of the two. Brickhouse-Bryson argues that judgements of coherence and judgements of simplicity share the same structure as judgments of beauty and therefore should be seen as species of the latter. That is, both are also unprincipled yet possible; we clearly judge theories to be coherent, or one theory to be simpler than another, but we do this without appeal to principles. Instead, “we render a holistic all-things-considered judgement” of coherence or simplicity “over the structure of a system” (61). Brickhouse-Bryson also appeals to the fact that coherence and simplicity are also used in the judgments of beauty of more readily accepted objects of aesthetic evaluation, i.e. works of art.

In Chapter 5, Brickhouse-Bryson argues that the connection between beauty and epistemically better theories is not only justified in the two “pervasive and powerful methods of theorizing” presented in the previous chapters but can instead be generalized. He proceeds via two arguments. The first is a transcendental one: judgments of beauty are a necessary condition for theorizing, given the systematic nature of theories. The second draws an analogy with the scientific realist’s argument regarding the importance of perception for learning about the world. Judgements of beauty are a component of our evaluation of systems *as systems* and “our preference for systematic explanations and understanding is so central to our epistemic endeavors that the burden of proof is shifted on to skepticism about using judgments of beauty in our epistemic endeavors” (87). It ends with a brief discussion of the ways in which a theory’s beauty can “draw us in”, making us “form an allegiance” to it (89). This is an interesting way of presenting the book’s project, but the epistemic and/or rhetorical significance of such a “pull” is left unexplored.

The main body of the text is free from detailed references and discussions of existing debates which were instead saved for the notes at the end of each chapter.

The notes indicated that the book was well-researched and written with wider debates in aesthetics and philosophy of science in mind, but it would have been useful to have brought into the main text some of the issues hinted at. This would have offered a deeper sense of how the proposed view fits within the literature cited. Brickhouse-Bryson aims to look beyond scientific theories to consider philosophical theories and theorizing more generally, yet it is within philosophy of science that the beauty of theories has been most closely analyzed, and more could have been made of this literature. For example, it would have been illuminating to have seen the implications of the proposed view for accounts of theoretical virtues more generally and for the ways in which aesthetic criteria might overlap with such virtues (see, e.g. Keas 2018). Relatedly, it would have added to the force of Brickhouse-Bryson's account if there was a direct engagement with discussions on the relation between the aesthetic and the epistemic, including the sceptical view that perceived aesthetic judgments in science or other cognitive domains are not genuinely aesthetic but are ultimately epistemic in nature (see, e.g., Todd 2008).

Finally, in the coda, Brickhouse-Bryson sketches out areas for future research. This is a great addition to the book, raising further questions and indicating possible fruitful expansions of the project. This includes the role of aesthetic judgments in achievements of understanding, as well as the role of beauty in theory evaluation in specific areas, namely politics and science. There is a natural connection between understanding as an achievement of unification and Brickhouse-Bryson's argument for the relevance of beauty in the evaluation of systems. If these projects are taken up, it will be interesting to see how the account developed in *Judgments of Beauty in Theory Evaluation* integrates with recent developments concerning aesthetic values in the understanding of scientific theories as discussed by, for example, Breitenbach (2013, 2020), who also offers a Kantian view, and Ivanova (2017). In addition, I hope that Brickhouse-Bryson's broadening of the aesthetics of theories literature will open the way for an account of the aesthetic properties of philosophical thought experiments. While thought experiments are widely used in (political) philosophy to aid the grasping of theories, their "beauty" has only been considered in the context of science (Murphy 2020).

Overall, this is an insightful addition to the aesthetics of theories literature that advances the debate in a myriad of ways.

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