

PREFACE TO PAPERBACK EDITION OF *NO FREE LUNCH*

By William A. Dembski

Five years have elapsed since the publication of *No Free Lunch*. In that time, intelligent design (ID) has gone from a little-known and marginalized alternative to standard evolutionary theory to a national and international phenomenon that everyone with an interest in the biological origins debate is talking about. Gone is the former dichotomy between creationism and evolution. Leaving aside creationism's insistence on treating Genesis as a scientific text and treating the detection and application of design as a research tool for science, ID has carved out its own conceptual space and place at the table of scientific discussion. Five years ago critics of ID regularly leveled the charge that ID has no peer-reviewed publications in the biological literature. That charge is no longer supportable, with pro-ID research appearing in such journals as *Protein Science*, *Journal of Molecular Biology*, and *Proceedings of the Biological Society of Washington* (for details, see my expert witness report for the Dover case at www.designinference.com)

Intense discussion of ID's intellectual and scientific merits has also widely impacted the political and public policy sphere. Should ID be taught in public schools? If so, should it be taught as philosophy and religion or as science? What precisely is ID's scientific status? ID proponents say it is science, defining ID as the study of patterns in nature that are best explained as the result of intelligence (thus putting it in the company of archeology, the search for extraterrestrial intelligence, and the engineering sciences). ID critics, on the other hand, see it as slipping religious ideas into science. By discovering evidence of purpose in biological systems, ID is supposed to be overly friendly to religious belief in a way not appropriate to the natural sciences.

Thus, on December 20, 2005, in *Kitzmiller v. Dover*, the first court case to address ID and widely billed as "Scopes II," federal judge John E. Jones III declared ID to be a religious doctrine and therefore unconstitutional as a subject for the public school science curriculum. This decision, however, is hardly the last word. The Dover school board has since rescinded the controversial policy leading to the trial. As a consequence, the case won't be appealed to the Supreme Court and thus has limited value as a precedent. At the same time, rejecting Jones's ruling as the ploy of an activist judge who had no business deciding scientific questions by judicial fiat, grass roots organizations throughout the United States are continuing their efforts to make room for ID in the schools. In contrast to the educational establishment and media elite, the great majority of Americans are favorably disposed toward ID and skeptical of standard evolutionary theory (as Gallup polls over the last twenty-five years have consistently shown).

In light of this ferment surrounding ID, including a very public 2005 endorsement of ID by President George W. Bush, where does that leave *No Free Lunch*? At the risk of immodesty, I want to suggest that this book remains a seminal text for the intelligent design movement. As the sequel to *The Design Inference* (Cambridge University Press, 1998), which initially laid out my method of design detection, *No Free Lunch* will never attain the importance of that first book. But as a text for recapping my method of design detection, sketching out its connection to information theory (a point mentioned in

passing in the epilogue of *The Design Inference* but first developed here), and then situating ID within the broader concerns of both science and philosophy of science, *No Free Lunch* has yet to be superseded. This is not to say that scholarship and research over the last five years have not improved on individual aspects of the book. For instance, Angus Menuge's *Agents Under Fire* (also with Rowman & Littlefield) greatly extended the work here on the nature of intelligent causation. Even so, *No Free Lunch* remains, in my view, the best single overview of intelligent design as an intellectual and scientific project.

As I indicated in the preface to the original hardback edition, this book attempts to straddle two audiences, providing enough technical material for experts to fill in the details but also enough exposition and examples to help nonexperts understand what's at stake. Insofar as a balancing act like this can be carried out, I think this book did so admirably. Nonetheless, this aspect of the book gave experts an opening to criticize it. The most widely discussed review of the book came from David Wolpert, one of the originators of the No Free Lunch theorems (these theorems inspired the book's title). In the review (see www.talkreason.org/articles/jello.cfm), Wolpert criticizes the book's sketchiness of mathematical detail, suggesting that this prevents the technical reader from properly assessing its claims. I've since taken Wolpert's criticism to heart, advancing my own technical work on conservation of information, displacement, and the No Free Lunch theorems (see the articles on my designinference.com website under the rubric "Mathematical Foundations of Intelligent Design").

Ironically, the very sketchiness of mathematical details that Wolpert claims prevents one from properly assessing the book does not prevent him from offering just such an assessment. In his review, he writes: "Neo-Darwinian evolution of ecosystems does not involve a set of genomes all searching the same, fixed fitness function, the situation considered by the NFL theorems. Rather it is a co-evolutionary process. Roughly speaking, as each genome changes from one generation to the next, it modifies the surfaces that the other genomes are searching. And recent results indicate that NFL results do not hold in co-evolution." Since one of my main claims in this book is that NFL results do apply to co-evolution, it would seem that, coming from the inventor of the NFL theorems, this criticism should be devastating. But it is not. In Wolpert's 2005 paper with William Macready titled "Coevolutionary Free Lunches" (*IEEE Transactions on Evolutionary Computation*), the authors acknowledge, in both the abstract and the conclusion, that "in the typical coevolutionary scenarios encountered in biology, where there is no champion, the NFL theorems still hold."

I highlight this contradiction not to gloat but simply to point up that the issues raised in this book remain very much alive and under discussion, and that the key players are still quite far from reaching a consensus. *No Free Lunch* is a transitional text, not the final word. When evolutionary biology finally dispenses with its outdated Victorian myth (Darwinism) and embraces a new synthesis in which both material and teleological processes receive their proper due, I expect the value of this book will be seen in its role as a stimulus to thought. Indeed, that was my hope for this book from the start, to spark new directions of biological inquiry free from materialistic and reductionistic ideology.