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In this monograph, William Dembski joins his successors in the intelligent design movement to summarize three decades of publications. Their conclusion remains the same as in each of those publications: analysis of computer models of evolution show that evolution can succeed only with the input of “active information,” which can come only from an external intelligent agent.

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Dembski is well known to readers of this journal for his active role in promoting the concept of intelligent design. He holds a PhD in philosophy, a PhD in mathematics from the University of Chicago, and an MDiv from Princeton Theological Seminary. He is a Senior Research Scientist at the Evolutionary Informatics Lab.

Winston Ewert holds a PhD from Baylor University and is now a Senior Research Scientist at the Evolutionary Informatics Lab.

The authors have published numerous technical articles in the last few decades on mathematical and logical algorithms related to evolutionary searches. This book is not intended to provide any new ideas but rather to summarize and present their published work in a manner easier to understand by a larger audience than that of technical readers.

The eight-page preface provides a synopsis of each chapter and the conclusions of the book. For many, this will suffice, but others will look for the more detailed explanation in the text. In the authors’ own words,

This monograph serves two purposes. The first is explanation of evolutionary informatics at a level accessible to the well-informed reader. Secondly we believe a la Romans 1:20 and like verses that the implications of this work in the apologetics of perception of meaning are profound. (p. xiv)

Their conclusion is that “… all current models of evolution require information from an external designer in order to work” (p. xiii).

The first chapter is a six-page introduction with some general observations on the nature of science and the role of models and probability analyses.

The second chapter is an introduction to the concept of information. The authors make it clear that they are not limiting themselves to Shannon information which Claude Shannon developed to focus on communication. Rather, they are interested in the meaning of information, which Shannon explicitly pointed out was excluded from his engineering perspective. The authors claim to have made progress in measuring both meaning of information and design difficulty. They ignore Rolf Landauer’s insight that “information is physical”; this foundation underlies the scientific field of information theory for which Shannon provided the basic tools of quantification of information entropy and communication channel capacity. Landauer’s principle, pertaining to the lower theoretical limit of energy consumption of computation, has been theoretically and experimentally validated in the past 55 years. The authors favor Norbert Wiener’s quote that “information is not matter; information is not energy.” They interpret Wiener, the father of cybernetics, to mean that information is “… an independent component of nature” (p. xv). This chapter discusses two ways to measure and quantify information: Shannon for internal information, and Kolmogorov-Chaitin-Solomonov (KCS) for complexity, or lossless compression. Several examples are presented to show how these equations are applied. Neither approach satisfies the authors’ desire to focus on meaningful information, leading them to suggest a new approach in chapter seven.

The third chapter discusses the role of search algorithms and design in evolution. Extensive discussion is offered of examples in which the goal is to design an optimal product, such as finding an optimal recipe for making pancakes and designing an optimized antenna. They introduce the concept of “active information” as the knowledge about the goal that must be provided during the search process in order to...