

**Sandra D. Mitchell**

## **Evolution and the Mechanisms of Complexity**

In Darwin's day the complexity of the structure of organisms, the interconnected workings of their parts, the adaptedness of multiple species to each other, and the diversity of life was taken as evidence by the natural theologians, Like William Paley, that God had designed all life in its complexity and beauty. Darwin agreed that life was diverse and ingeniously adapted to its environment, but disagreed on the necessity of invoking God as the only explanation for the complexity of life on earth. Darwin sought a naturalistic scientific account for these forms of complexity, appealing most significantly to natural selection as the primary, but not exclusive explanation. Contemporary debates about Darwinism continue to invoke complexity as a source of difficulty for Darwinian explanations of nature. New scientific theories of the mechanisms of complexity have expanded the scientific resources for understanding nature. At the same time, I will argue, the new explanations of natural complexity require some revisions in our understanding of science itself.