Creation: Life and How to Make It

Steve Grand
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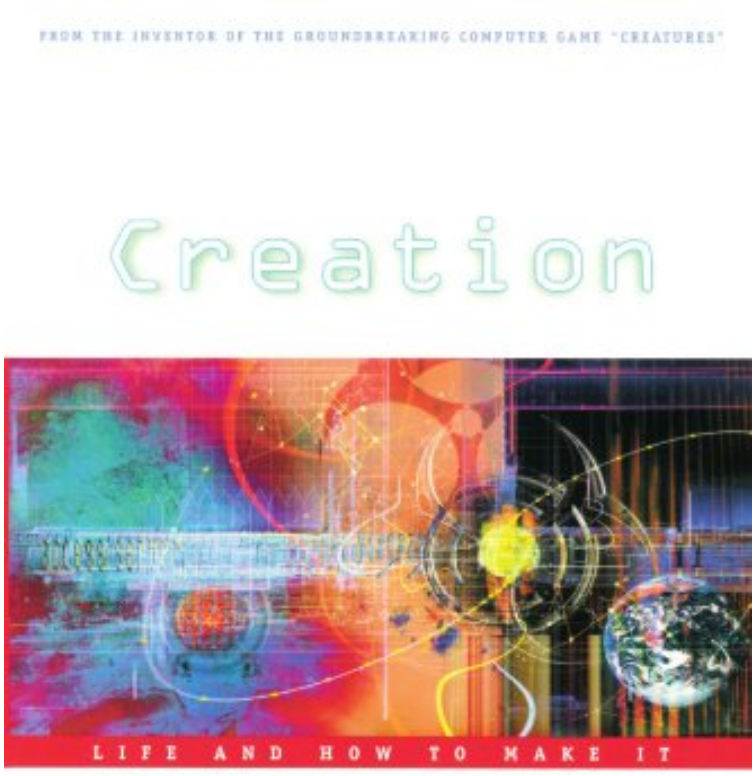

#993529 in Books Harvard University Press 2003-05-30 2003-03-25Original language:EnglishPDF # 1 9.25 x .60 x 6.13l, .76 #File Name: 0674011139240 pages | File size: 62.Mb

Steve Grand : Creation: Life and How to Make It before purchasing it in order to gage whether or not it would be worth my time, and all praised Creation: Life and How to Make It:

13 of 13 people found the following review helpful. Best digital biology/artificial life book I've seen yet.By asceticThis book is fantastic. I wasn't really sure what to expect when I got it, but was pleasantly surprised. Before this I read 'Digital Biology' by Peter Bentley, and this book was much more interesting. No, they don't cover exactly the same subject matter, and Bentley's book covers a broader range of subjects, but if you're looking at both of them, I

think this is a better intro to artificial life and digital biology.Grand is obviously a great programmer and scientist, and he's an excellent writer to boot. I've never played Creatures (in fact, I'd never even heard of it before reading this book) but now I really want to get my hands on a copy to try it out. I can hardly wait for his next book about his current project.1 of 1 people found the following review helpful. Philosophy behind A-Life - AmazingBy CustomerAs a computer science student who played in his childhood with Creatures, I found the book fascinating. This book changed radically my understanding of life. It even motivated me to write my own A-Life software. This book is a must-read for anyone interested in the field.0 of 0 people found the following review helpful. Interesting conceptsBy M. K. LoveSteve Grand's introduction to artificial life for the non-scientist is nothing if not an interesting read. While he may go out on an intellectual limb from time to time, he does put forth a convincing, and somewhat radical, definition of what constitutes life. I was quite impressed with his approach to creating a synthetic life form. Rather than just attempting to animate a cartoon with a limited repertoire of behaviors, he practically starts at the sub-atomic level. From there he builds his creatures molecule by molecule, system by system until he has a credible model of what an artificial living being might be like. This guy is thorough! My only disappointment was that he expended this amount of well directed thought and work to create "creatures" that look like they were designed for a kids' Saturday morning cartoon. They could have been so much cooler...

Working mostly alone, almost single-handedly writing 250,000 lines of computer code, Steve Grand produced Creatures, a revolutionary computer game that allowed players to create living beings complete with brains, genes, and hormonal systemscreatures that would live and breathe and breed in real time on an ordinary desktop computer. Enormously successful, the game inevitably raises the question: What is artificial life? And in this booka chance for the devoted fan and the simply curious onlooker to see the world from the perspective of an original philosopher-engineer and intellectual maverickSteve Grand proposes an answer.From the composition of the brains and bodies of artificial life forms to the philosophical guidelines and computational frameworks that define them, Creation plumbs the practical, social, and ethical aspects and implications of the state of the art. But more than that, the book gives readers access to the insights Grand acquired in writing Creaturesinsights that yield a view of the world that is surprisingly antireductionist, antimaterialist, and (to a degree) antimechanistic, a view that sees matter, life, mind, and society as simply different levels of the same thing. Such a hierarchy, Grand suggests, can be mirrored by an equivalent one that exists inside a parallel universe called cyberspace.

.com Though its title brings to mind the hubris of Frankenstein, Steve Grand's Creation: Life and How to Make It is just humble enough to keep its readers hooked. Best known as the developer of the Creatures series of artificial-life software, Grand has quite a following among devotees of playful complexity. The book ranges from deep ruminations on the nature of life and mind (artificial and biological) to fairly concrete advice for future creators, and his writing is just as elegant and compelling as his software. Sometimes his cleverness gets the best of him, but for the most part, his wordplay is used to serve his ideas, which are thought-provoking even for readers who have no intention of creating life. Many will be surprised at the strength of Grand's antireductionism, but he makes his case vigorously and may win a few converts to the emergent-phenomena camp. Creation is essential reading for those of us who want to think through the consequences of our actions before we imitate Frankenstein's mistake. --Rob LightnerFrom Publishers WeeklyBlending aspects of philosophy, computer science, artificial intelligence, biology and computer gaming, Grand attempts to define life, discuss the nature of the human soul and demonstrate how it is possible to create entities that demand to be called both living and intelligent. A tall order indeed, and to wonderful effect, Grand draws heavily on his experience writing computer code (he developed the popular computer game Creatures, e in which cyberbeings "live," learn and reproduce). He is at his best describing the problems encountered and the solutions used to animate his virtual universe. While at first glance Grand's definitions of life ("patterns that persist by metabolizing and reproducing" or "high-order persistent phenomena, which endure through intelligent interaction with their environment") might be off-putting, he explains his terms clearly and carefully, guiding the reader comfortably through various levels of discussion. He argues persuasively that life, both real and artificial, is an emergent property, arising inevitably from the interactions of its component parts and, as such, is something much greater than and qualitatively different from the sum of its parts. This view leads Grand to assert that most scientists working in the field of artificial intelligence are taking the wrong tack when they attempt to program intelligence into machines. Published last year in England, this is an enjoyable and thought-provoking volume. Copyright 2001 Cahners Business Information, Inc. Steve Grand is the creator of what I think is the nearest approach to artificial life so far, and his first book, Creation, is as interesting as you would expect. But he illuminates more than just the properties of life; his originality extends to matter itself and the very nature of reality. (Richard Dawkins The Guardian)If youve heard about A-life but arent quite sure what it is or where its going, Grands book is an excellent place to enter one of the more exciting areas of twenty-first-century science. (John L. Casti Nature)When Steve Grand developed his artificial-life computer game Creatures nine years ago, he never dreamed that 1 million people would play it and come to care deeply about the lives of their virtual pets. Creatures allowed players to design these pets, or norns, and observe how

they interacted with their environment and with other norns. The norns have computer-simulated hormones and DNA. They eat and breed. They fall in love. According to Grands book CreationCreatures was probably the closest thing there has been to a new form of life on this planet in four billion years. Thats a pretty startling claim, but as Grand explains in his strangely accessible and consistently surprising book, whether or not you believe it depends on your definition of whats alive. Grandnow two years into building a 4-month-old robot orangutan named Lucyargues that our traditional notion of life is just now beginning to change. (Suzy Hansen Salon 2002-01-02)Grands entertaining but highly educational, historical, and intensely philosophical book on artificial life takes readers inside the mind of the creator of one of the more popular games, Creature[s], and its follow-ons. This personal account of the developmental steps of the game and its lifelike artificial creature in a rich cyberworld not only highlights the magic of how the creatures are programmed, but also provides a glimpse into the philosophy, implications, perspectives, and dilemmas in making them. This book is written not only to detail the highly technical aspects of the inner world image of the game, but also to enrich, incite, and promote the general awareness of synthetically generated beings Delightful to read, easy to understand, and interesting to gamers and nongamers alike. (J. Y. Cheung Choice 2002-03-01)[Creation is] the latest word on computer intelligence, from the designer of a popular computer game On the whole, Grand succeeds in providing useful hints to computer-savvy readers without drowning laymen in details of programming. At the same time, he gives an entertaining glimpse of the game itself, with descriptions of Ron, the first creature he programmed for the computer game. Smoothly written and thought-provokingworth a look for anyone curious about computer intelligence. (Kirkus s 2001-07-15)Blending aspects of philosophy, computer science, artificial intelligence, biology and computer gaming, Grand attempts to define life, discuss the nature of the human soul and demonstrate how it is possible to create entities that demand to be called both living and intelligent. A tall order indeed, and to wonderful effect [Grand] is at his best describing the problems encountered and the solutions used to animate his virtual universe. While at first glance Grands definitions of life might be off-putting, he explains his terms clearly and carefully, guiding the reader comfortably through various levels of discussion [E]njoyable and thought-provoking. (Publishers Weekly 2001-09-10)Very occasionally somebody from outside academia comes along and shows us academics how to do something weve been working on for years. Steve Grand showed us how to build a universe of evolving creatures, without the prevailing academic biases. This delightful book is a fresh and inspiring account of how to succeed in creating artificial life. (Rodney Brooks, Director, Artificial Intelligence Laboratory, MIT)A giant leap forward into a new and unknown worldawe-inspiring. (Douglas Adams, on the computer game Creatures)