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Time, Love, Memory: A Great Biologist And His Quest For The Origins Of Behavior





Synopsis

From the author of the Pulitzer Prize-winning The Beak of the Finch, the riveting story of a biologist's search for the foundations of behavior.Looking over the shoulder of some of the premier scientists in the filed, Jonathan Weiner takes us into their laboratories to show us how pieces of DNA actually shape behavior. He focuses on the work of Seymour Benzer, who, decades ago, with James Watson and Francis Crick, helped to crack the genetic code. Then, in a simple experiment using a few test tubes, a light bulb, and 100 fruit flies, Benzer invented the genetic dissection of behavior. Now we see how he and his students find and study genes that build our inner clocks, genes that shape the way we love, and genes that decide what we can (or cannot) remember. These breakthroughs help explain secrets of human behavior and may lead to advance treatments for behavioral disorders ranging from rage to autism to schizophrenia.In a narrative that sweeps from the first years of the century to the present, Weiner makes the process of scientific discovery and understanding almost tangible on the page. Time, Love, Memory is a brilliant work of scientific reportage.

Book Information

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Customer Reviews

Far, far back in time, a group of molecules, tangled in crystals of clay, learned the trick of replication. Over time, joined by other molecules of similar talent, they grew complex, finally forming organisms. Seeking food, needing rest, hiding from hungry fellows, developing sex as an offshoot of replication skills, patterns of activity emerged - behaviour. The molecules altered form as external environment changed. Successful changes were kept, while others were left inert in storage. None were discarded, and those controlling basic body structure and fundamental behaviour patterns remained intact across the wide span of living things. After over 3 billion years of life traversing this path, one of the organisms set out to determine how it all worked. Jonathan Weiner's relation of a century of research teasing into view DNA's mechanisms for guiding behaviour is a brilliant piece of science writing. His focus is Seymour Benzer and his research team studied flies, recording how changing conditions modified conduct. It became clear that 'dumb' animals could adapt through learning. Not only adapt, but retain memories to repeat the new behaviour when needed. By the end of the 20th Century, the research began to identify where along the structure of DNA the operational level of these behaviour codes resided. As often as not a single 'letter' change in the gene was found to trigger the change. More immediately, the information revealed in fruit flies was repeated in other animals. Duplicating the finds in mammals has overwhelming implications for humans. Weiner's account is forcefully presented in a clear, direct style. This book is a supreme example science writing at its very summit. He offer no judgements of his own.

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