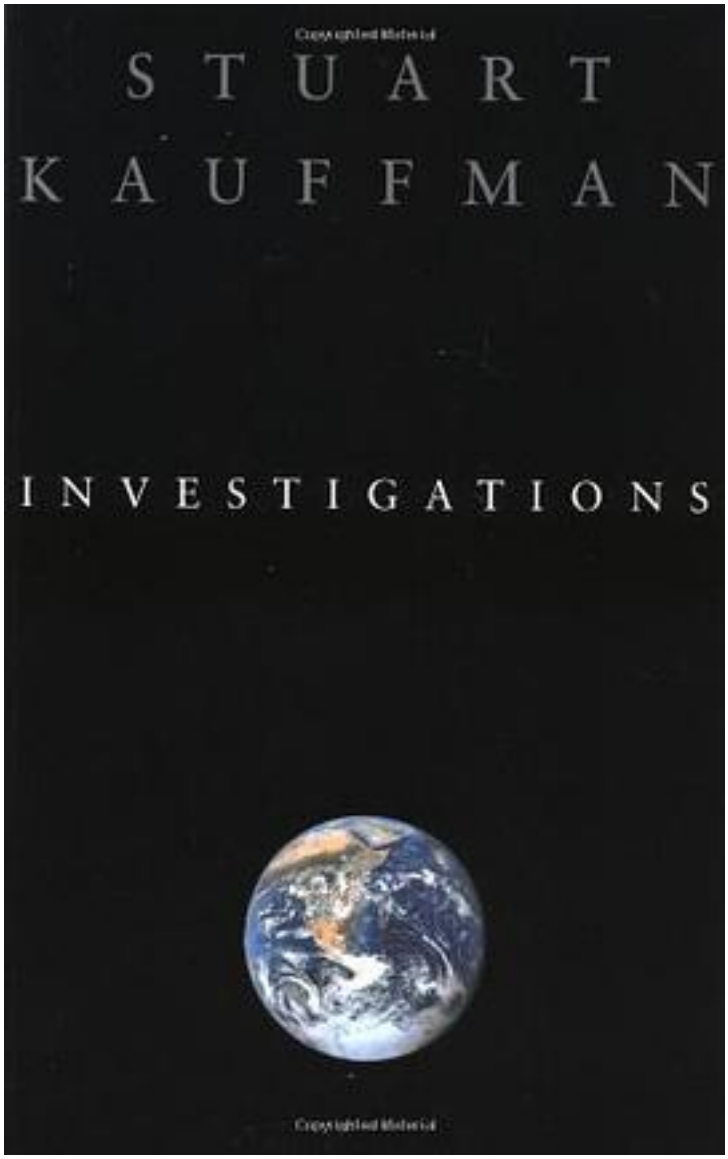
Investigations



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In the tradition of Schrodinger's classic What Is Life?, this book is a tour-de-force investigation of the basis of life itself, with conclusions that radically undermine the scientific approaches on which modern science rests-the approaches of Newton, Boltzman, Bohr, and Einstein. Kauffman's At Home in the Universe, which The New York Times Book Review called "passionately written" and nature named "courageous," introduced pivotal ideas about order and evolution in complex life systems. In investigations, Kauffman builds on these theories and finds that classical science does not take into account that physical systems--such as people in a biosphere--effect their dynamic environments in addition to being affected by them. These systems act on their own behalf as autonomous agents, but what defines them as such? In other words, what is life? By defining and explaining autonomous agents and work in the contexts of thermodynamics and of information theory, Kauffman supplies a novel answer to this age-old question that goes beyond traditional scientific thinking. Much of Investigations unpacks the progressively surprising implications of his definition. Kauffman lays out a foundation for a new concept of organization, and explores the requirements for the emergence of a general biology that will transcend terrestrial biology to seek laws governing biospheres anywhere in the cosmos. Moreover, he presents four candidate laws to explain how autonomous agents co-create their biosphere and the startling idea of a "co-creating" cosmos. A showcase of Kauffman's most fundamental and significant ideas, Investigations presents a new way of thinking about the basics of general biology that will change the way we understand life itself--on this planet and anywhere else in the cosmos.

作者介绍:

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标签

complexity

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复杂

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评论

best philosophical-scientific account of life from one of the world-leading Santa Fe researchers

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书评

是《宇宙为家》的一个延续，书中的很多结论都不能算是精确的科学理论，而是作者的一些猜测，然而该书已经表明的确存在着某种比复杂系统更加深刻的理论。对于复杂系统感兴趣的读者可以有所收获。

现代社会学科前沿，应该从“自组织”入手，从现代物理学，生物学的角度，去探求“一生三，三生万物”的道理。有此兴趣的朋友请联系，互相探讨

以前看物理科普不少，分子生物科普基本没看过 结果很多一头雾水
看到后面。。。说到量子物理方面了，还是说得不浅
我分明看时间简史、果壳宇宙都蛮明白，看这个还是很糊涂。。。 嗯，功力不够啊

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