

## *Preface*

This book is about a confluence of images from six fields of biology, photography, and four branches of physics. Things are hard to bring together those fields that belong together, and this book is an attempt to mingle just enough to show how they are already intertwined without losing sight of their irreducible differences.

The images I am interested in show us things we cannot see: things so far away, so faint, so large or soft or bright that they possibly be contained in the rectangular frame of a picture. These are pictures of objects that literally don't exist as they are pictured—but somehow do. They are abstractions, feeble symbols for objects that have no reality. They are formless things, blurred until they are unrecognizable, or made up of almost nothing, of single sparks of light, of inexplicable patterns of thin lines and dots that stand for objects that cannot be seen.

First and last, this book is about images that I love. It started with photographs on my desk that seemed to belong together. Some were reproductions of artworks and others were from science journals. I had no articulate theory about them, but they fell into my miscellaneous category. Eventually it became clear that they were the results of investigations into the limits of representation. Some contained sharp or well-defined objects, and in others I tried to understand what was being taken as adequate representation. They seemed to have a common theme: they were images that could not depict objects, but demonstrated how some objects resist depiction.

son this book is not a contribution to the history of science. The consequences and meanings are only in the images were made between the two media. It often matter exactly when. More than philosophy or aesthetics, because I have written in chapters 1 and 2—guide the reader.

The book's primary purpose is demonstrating that they are all at work in their respective media and technologies. I am uninterested in whatever counts as an ordinary representation. What is made at the limits of the institution, at the ill-defined borders shared by science and conceptual art. For me these are the products of the past several decades, the ends of representation than anything that give us things in full color. The whole world is visible and the boundaries would even hazard a generalization. The most important images of the past are most fully preoccupied by the scientific. It is my theme in this book. I have an agenda, which is set out in the

A word about the science and the artists. Nonscientists may find painting. I would emphasize, however, that painting has its own discipline. Painting has its own discipline. Philosophy can be just as exacting. We have difficulties, but glossing them over where it is important to be precise. See the Introduction.

Because many science images

wide value range of computer screens, and should be original.

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