

The  
Universe  
in a  
Handkerchief





The  
UNIVERSE  
in a  
Handkerchief



*Lewis Carroll's  
Mathematical Recreations,  
Games, Puzzles,  
and Word Plays*

MARTIN GARDNER



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To Clarkson N. Potter, friend and former publisher,  
who in 1960 had the foresight to think it worthwhile  
to annotate Lewis Carroll's *Alice* books.

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# Preface

I must confess that I did not become interested in Lewis Carroll until my undergraduate days at the University of Chicago. As a child, my greatest reading delights were the fantasies of L. Frank Baum. I tried hard to read the *Alice* books, but was put off by their abrupt transitions, the lack of a consistent story line, and the unpleasant characters in Alice's two dreams. And of course I missed all of Carroll's subtle jokes, word play, logic paradoxes, and philosophical implications. Unlike many Carrollians, I still believe that the *Alice* books should not be read by children, at least not by American children, until they are well into their teens.

When I reread the *Alice* books in my twenties, I was astounded by what I had missed. Two decades later, while writing a column on recreational mathematics for *Scientific American*, I discovered that Carroll not only shared my enthusiasm for play mathematics (puzzles, paradoxes, games, and so on), he also shared my hobby of conjuring. The more I learned about his life and opinions, the more I came to feel a spiritual kinship with him.

It occurred to me some 35 years ago that it was impossible for an American reader today, so far removed from Victorian England in both time and space, to appreciate fully the hundreds of hidden jokes in the *Alice* books without the aid of footnotes. I proposed the idea of an *Annotated Alice* to several

publishers. They found the notion ridiculous. Scholarly notes on two simple children's books? What is there to say?

Clarkson Potter, then with Dial Press, was the first editor who did not think my proposal absurd. When he left Dial to form his own company, Clarkson Potter, Inc. (now a subdivision of Crown), he took my manuscript with him. *The Annotated Alice* was an instant success and has remained in print ever since. In 1990 I followed it with *More Annotated Alice*, with all new notes, with illustrations by Peter Newell instead of John Tenniel to distinguish the book's format from its predecessor.

Two books have been published about Carroll's mathematical and verbal play: *The Magic of Lewis Carroll*, by magician John Fisher, and *Lewis Carroll's Games and Puzzles*, by Edward Wakeling. Although there is overlap in what is offered in those two books and this one, I have organized the topics differently and included, as the other two books do not, the full texts of Carroll's privately published pamphlets and leaflets. I have also covered in detail the recreational aspects of Carroll's fiction, verse, letters, and magazine articles.

Literature about Carroll shows no signs of abating. Morton Cohen's long-awaited biography, issued in 1995 by Knopf, is packed with startling new revelations. One continues to be amazed by how much there is yet to learn about the life and writings of this shy, stammering teacher of mathematics, who for so long was regarded as little more than a scribbler of outlandish nonsense tales for children, an author too unimportant for scholars to take seriously.

