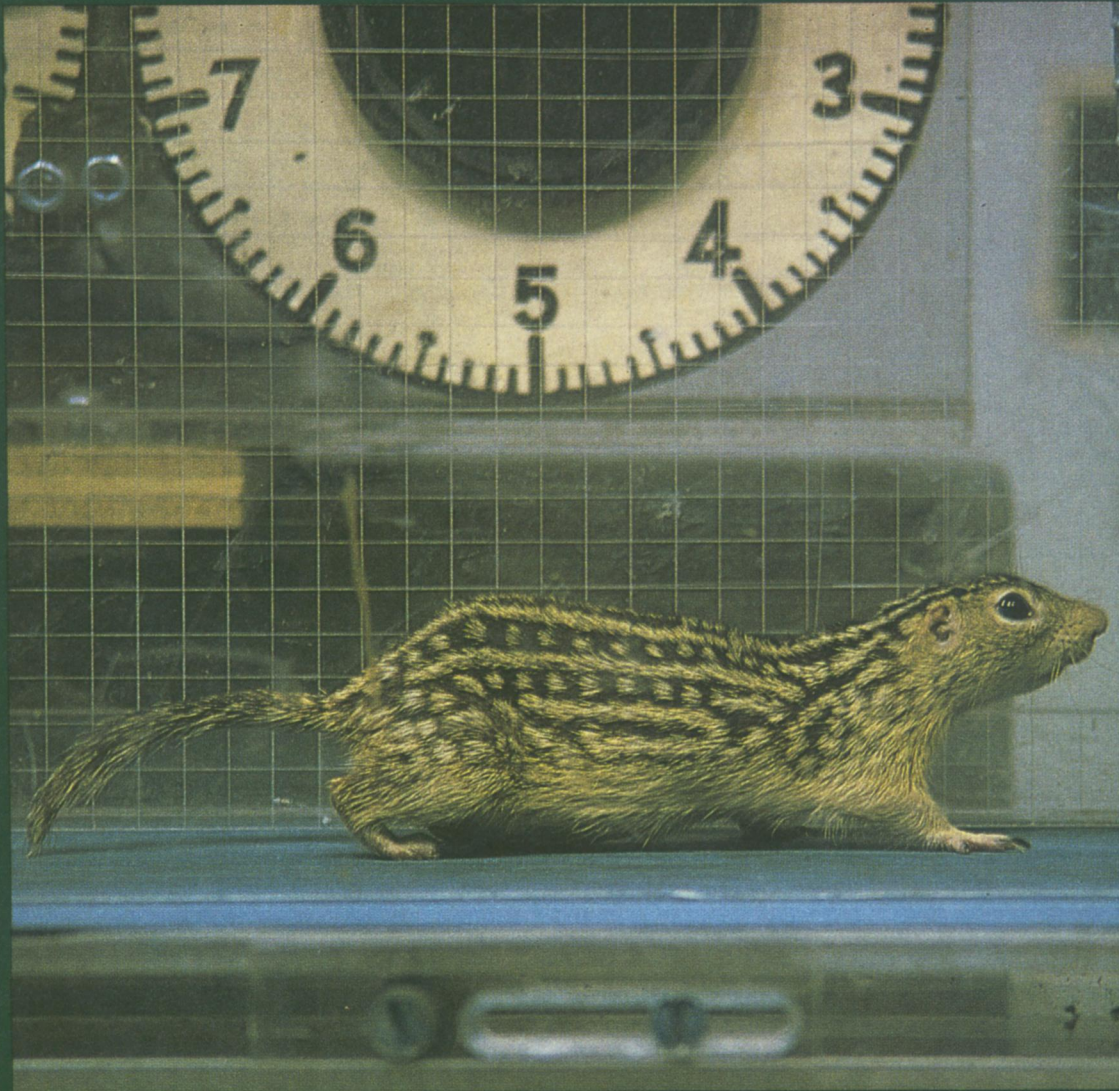


The Weekly Newsmagazine of Science

# SCIENCE NEWS

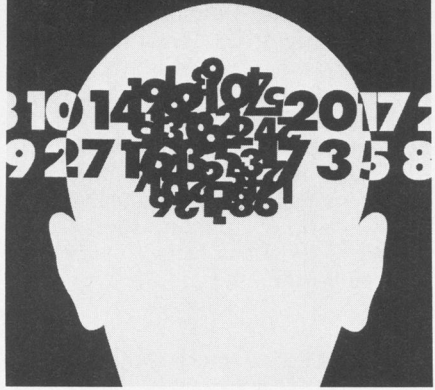
June 17, 1989  
Vol. 135, No. 24  
Pages 369-384



## Physics Gone Wild

# INNUMERACY

## MATHEMATICAL ILLITERACY AND ITS CONSEQUENCES



"A book meant for the numerate and innumerate alike, chock-full of examples taken from current events, conveyed in a style so lucid that one wonders why no one ever explained it this way before."

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Why do we know so little about mathematics? And what is the social cost of our "innumeracy"? In this entertaining book, Paulos argues that our inability to deal rationally with very large numbers, or with the probabilities associated with them, results in misinformed governmental policies, confused personal decisions and an increased susceptibility to pseudo-sciences of all kinds. *Innumeracy* lets us know what we're missing, and how we can do something about it.

Sprinkling his discussion of numbers and probabilities with quirky stories and anecdotes, Paulos ranges freely over many aspects of popular culture, from stock scams and newspapers psychics to diet and medical claims, sports records, elections, sex discrimination, insurance, lotteries and drug testing. The result is a romp through some intriguing concepts in mathematics that will appeal even (and perhaps especially) to those who have difficulty balancing their checkbooks. Readers of *Innumeracy* will be rewarded with scores of astonishing facts, a fistful of powerful ideas and, most important, a more quantitative way of looking at their world.

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Hill and Wang, 1988,  
135 pages, 9" x 6",  
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ISBN 0-8090-7447-8

# Understanding the Alcoholic's Mind

## The Nature of Craving and How to Control It

### By Arnold M. Ludwig

Oxford Univ. Pr, 1988, 188 pages, 8 1/2" x 5 1/2"  
paperback, \$8.95 ISBN 0-19-505918-2

Ludwig has worked with over 1000 alcoholics from all walks of life and within many different settings — hospital clinics, Alcoholics Anonymous meetings, detoxification centers and private homes — about one fourth of whom had quit drinking for significant periods of time. Incorporating the findings of other researchers into his own and including many clinical vignettes and personal anecdotes, he explores the basic principles necessary for achieving a successful recovery. Ludwig describes the techniques that can help individuals to conquer their urges and also to lessen the chances of relapse. Despite the immense obstacles they face, many alcoholics do manage to recover. The question is "how?"

In most instances, Arnold Ludwig has found that a lasting recovery can only begin after certain crucial attitude changes. Regardless of the motivation of alcoholics, powerful forces lure them back to drink. To remain sober, alcoholics must recognize these forces and the dangerous frame of mind that fuels them. Then, they must use a variety of techniques that have been demonstrated to be effective for resisting temptation, particularly during the early phases of recovery. In time, individuals will need to develop a set of attitudes, values and behaviors — which the author describes in detail — that perpetuate and strengthen their sobriety. Being sober is far more than simply not drinking; it is a new way of life.

— from the publisher

"A very helpful book, with a brand new slant on the alcohol problem, a book that people with this problem can really benefit from. It's perhaps the best book on the subject I have read for a long time."

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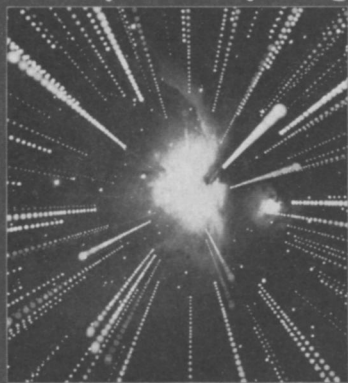
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# Superstrings and the Search for The Theory of Everything



By *F. David Peat*

Peat explains the development and meaning of the superstring theory in a thoroughly readable, dramatic manner accessible to lay readers with no knowledge of mathematics. The theory states that everything in the universe — matter, forces, even space itself — consists of minuscule strings of ten dimensions, six of which are so tightly curled up that only four dimensions are visible to us. Many physicists have concluded that the building blocks of the universe — including protons, neutrons and electrons — are not elementary particles, as long believed, but rather tiny *superstrings* that both vibrate at specific frequencies (like a guitar string) and rotate (unlike a guitar string) in ten-dimensional space. The consequences of the superstring theory — the theory of everything — are nothing less than astonishing.

— from the publisher

Contemporary Bks, 1988, 362 pages,  
9 1/4" x 6", hardcover, \$19.95 ISBN 0-8092-4637-6

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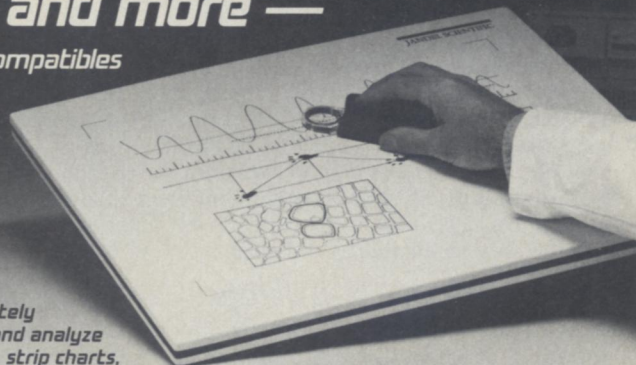
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