

## Table of Isotopes

**C. Michael Lederer and Virginia S. Shirley (Editors)**

Edgardo Browne, Janis M. Dairiki, Raymond E. Doebler, Adman A. Shihab-Eldin, Leslie J. Jardine, Jagdish K. Tuli, and Audrey B. Buyrn (Authors)

New York: John Wiley & Sons, Inc., 1978, Seventh Edition, 1525 pp.

**Reviewed by**

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The *Table of Isotopes*, seventh edition, by C. Michael Lederer and Virginia S. Shirley has changed a great deal since the *Table of Isotopes*, sixth edition, by C. Michael Lederer, Jack M. Hollander, Isadore Perlman. The contents have changed from 448 pages of radioisotope data and level properties to 1523 pages of isotopes with a nine page isotope index, and half-life or abundance list. This is partly due to the increase in number of nuclides from under 1900 to more than 2600. I find the new lists more complete in level information but also more difficult to use for finding a particular branching ratio. This is compensated by the increase in the significant figures for the gamma decay energies. The mass chains are now reduced in size and the amount of information in lists on each page is very much increased. The density of levels has increased significantly for particular nuclides due to use of several experiments for each nuclide. A great many more high energy states are shown in the new edition, as well as more spins, parities and branching ratios. Comparisons are given for levels which may be observed by different reactions, a result which is useful in understanding the particle or hole nature of the state involved. The deformed shell model assignments are given for many deformed nuclei which is a change from the sixth edition. The references are now by journal and date rather than by author name for most cases although some retain the identity of authors in proceedings of conferences. The author name loss is somewhat compensated by the smaller size of the reference; but it is hard to remember the paper; for example, PR 97 1092 (55). With all its limitations, I would recommend this new *Table of Isotopes*; I have a hardbound copy for my office and a soft-bound copy for the lab.

The appendix is much the same with an extensive increase in the tables of nuclear moments.



## **The Ecology of Human Development: Experiments by Nature and Design**

**Urie Brofenbrenner**

Cambridge, MA: Harvard University Press, 1979.

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Dr. Brofenbrenner's contributions to the field of psychology and to developmental psychology in particular have a very long and very fine history. This book seems to be the latest contribution and represents his thinking and synthesizing about the development of human beings probably over much of his professional life. The book has a tremendous appeal in reflecting some of the recent trends towards looking at humans not as entities onto themselves but as being only one part of a very large and complex system. To quote from his own introductory work, he says "The present work is motivated by my conviction that further advance in the scientific understanding of the basic intrapsychic and interpersonal processes of human development requires their investigation in the actual environments both immediate and remote in which human beings live. This task demands the construction of a theoretical schema that will permit the systematic description and analysis of these contexts, their interconnections and the processes through which these structures and linkages can affect the course of development both directly and indirectly." Brofenbrenner has taken on a very large task indeed. Overall, it seems that he has done an admirable job of attempting to develop such a system.

In the first section of the book he talks about some general underlying principles and offers some basic definitions of the concepts which he discusses in detail later. The first thing that he does is to expand the realm of the environment that has an influence on the development of a human being. He distinguishes between structures and systems, and he distinguishes between looking at subjects one at a time versus looking at subjects in dyads or groups or larger systems. It's pretty easy to follow his reasoning that the inferences one makes about a person will be different when you look at them singularly versus when you look at them in relationship to another person or as a system. He defines what he calls "ecological transitions" which represent shifts in a person's roles or a