

Dowsing: New Light on an Ancient Art by Tom Williamson. London: Robert Hale, 1993 (c), 219 pp. (15 illustrations), £16.99.

The mystery and mysticism usually associated with this subject take a back seat as Williamson brings dowsing down to earth by applying his knowledge of geology. In his attempt to put dowsing on a more scientific footing, he makes a firm distinction between 'dowsing' and 'divination,' the latter being the asking of questions to determine *what* exactly has been located beneath the earth's surface. Most dowzers I know combine dowsing and divination, but the author insists that this is an 'embellishment'; real dowsing, he says, is strictly the response of the dowser's instruments to an underground anomaly. According to Williamson, the dowser does not know the exact nature of what he has detected with his rods.

This book is a useful compilation, bringing together the history of this fascinating subject and past scientific research into it. The reason, the author suggests, that science has not accepted dowsing is not that it does not work but that there has, so far, been no satisfactory explanation for it. His book is an attempt to explain and explore dowsing success and to answer the all-important question: "Can dowzers really detect things underground?" Williamson also throws out a challenge to the scientific community, to encourage further investigation.

Years of painstaking research have gone into producing this readable and well-referenced book. It has a notably long bibliography that includes references to many papers from scientific journals. The author gives a fascinating and erudite account of the history of dowsing: from the search for minerals in the 15th century, through its heyday in the 18th century when dowzers enjoyed a status higher than that of surveyors, to the gradual decline of the art during the 19th century. This decline he attributes to the lack of a theory or scientific explanation for the phenomenon, in an increasingly science-oriented world. Before the 15th century, Williamson says, there was only divination rather than dowsing. Dowsing was resuscitated briefly in the 1960s in what was then the Soviet Union, when Russian geologists found it useful in locating rich mineral veins and concealed faults and fracture zones; but they failed to stimulate any Western scientific interest in dowsing. This was partly owing to a lack of properly controlled experiments and partly to the failure to make the important distinction between dowsing and divination.

The book also considers research into water fissures and mineral veins that emit such harmful substances as radon gas, gamma radiation and fast neutrons, all of which have been linked to such serious illnesses as cancer. Dowsing instruments have been used to detect dangerous rays in houses where occupants have died of cancer and other ailments, and recent research is confirming the findings. For example, Pierre Cody in France has used a gold-leaf electro-scope to detect the presence of radon gas in such homes; in Germany, Dr.

Joseph Wust (a physical chemist) has detected gamma rays with an electro-scope; ionizing radiation was picked up by a scintillation counter by Jakob Strugle (a German engineer), and Wolfgang Maes used a supersensitive scintillation counter to detect fast neutrons in a similar environment. This recent work awaits further confirmation, but it does point to a link between disease and dangerous substances emitted from cracks in rocks deep beneath the earth's surface, first detected by means of dowsing.

In exploring how dowsing works, Williamson examines the 'supersensory' theory, that is man's ability to detect minute fluctuations in heat, smell, magnetism and electromagnetic waves. Only in the absence of obvious visual clues do these supersenses come into play to aid the dowser in detecting underground anomalies. Apparently, the findings of dowsers correlate well with maps of known geological faults and water-carrying fissures beneath the earth's surface. Some dowsers perform better than others because their supersenses are more highly developed. Those dowsers who claim to pick up lines of energy across the countryside (ley lines) are really picking up the geological faults and fissures in close proximity to them, according to the author. Stone-age man appears to have known about these underground anomalies and positioned his stone circles and megaliths close to them.

Williamson also suggests a link between these faults and fissures emitting gases, and earthquakes, light balls, crop circles and UFO sightings, all of which occur with greater frequency in the vicinity of such faults. When I first heard the idea that crop circles could be caused by whirling vortices or balls of plasma, I must admit that I roared with laughter, but the idea becomes slightly more plausible in the context of the theory of stressed underground rocks having an electromagnetic component which often manifests as balls of spinning light. This book includes well-referenced cases of eye-witness accounts of crop circles being created and other strange encounters with spinning balls that emit high-pitched noises in the vicinity of crop-circle formations. Japanese scientists (Professor Y. Ohtsuki and Dr. H. Ofuruton) seem to be taking some of these ideas seriously, testing the theory by creating artificial fireballs with microwaves under laboratory conditions.

As for much-publicized accounts of people being abducted by beings in UFOs and subjected to physical examinations and experiments, Williamson suggests that powerful magnetic fields associated with balls of light interact with the brains of witnesses, causing them to hallucinate. This idea is taken from the work of Professor Ruhenstroth-Bauer, who has made a study of atmospheric phenomena and their effects on man, and the writings of Professor M. Persinger, who has studied the details of UFO encounters and micro-seizures in the brain.

The author has brought together into one volume much of the previous scientific work in this interesting field. This book is a must for those who dowse as a hobby and would like to know more about how it works, stripped of some of the mysticism and superstition that often surrounds this subject. It is also

important for those who want to make further scientific investigations into dowsing or earth energies. And for others too, this book has a lot to offer, peppered as it is with fascinating stories and anecdotes as well as informative geological fact about the various rock structures in the earth beneath our feet.

Patricia Law
6 Burnham Drive
Bournemouth, ENGLAND BH8 9EX

The Left Hand of Creation: The Origin and Evolution of the Expanding Universe by John D. Barrow and Joseph Silk, revised and updated, Oxford: Oxford University Press, 1993, 262 pp., \$10.95 trade paperback, ISBN: 0-19-508676-7.

Old books sometimes present publishers with the same dilemma as the rest of us face with old cars: at some point it stops making sense to make repairs.

In the case of *The Left Hand of Creation: The Origin and Evolution of the Expanding Universe*, Oxford University Press has bought new tires when it really needs to buy a new car. Instead of commissioning a new book on cosmology, it has published a revised and updated version of a well-regarded classic.

Those familiar with *The Left Hand of Creation* may recall that when it was first published, in 1983, cosmology was in the midst of re-inventing itself. A field that had been a specialty of astronomers and mathematicians was now a branch of physics. Since then the launch of the Cosmic Background Explorer satellite, improvements in light-detection technology, and the marriage of the computer and telescope have confirmed theoretical expectations voiced in the original edition and produced several new and unexpected discoveries as well.

Authors John D. Barrow, Professor of Astronomy at the University of Sussex (England), and Joseph Silk, Professor of Astronomy and Physics at the University of California (Berkeley), bring us up-to-date by adding to their original text a 16-page introduction and roughly that amount of new material in the form of footnotes. Were cosmology a less dynamic or more easily understood field, this solution would have worked better.

As popular science books go, *The Left Hand of Creation* is clearly written, but not exceptionally so. What makes it accessible to non-technical readers is that the authors have divided complex concepts into intellectually digestible bites. Individual chapters are constructed from brief essays that fit neatly together, like rods and hubs in a set of old fashioned Tinker-Toys.

This comfortable format has been damaged, however, by the way new information has been added to the original text. If, for example, you want to know why the distribution of lithium is more important to cosmologists in 1993 than in 1983 you must turn to the back of the book, find footnote 9, then read an essay-length explanation in fine-print type. By the time you return, you've