

**Uncommon Sense: The Heretical Nature of Science** by Alan Cromer. N.Y.: Oxford University Press, 1993, xii + 240pp., \$23.00, ISBN 0-19-508213-3.

The central thesis of this well-written book is that the roots of modern science are in ancient Greece, when objective thinking replaced animistic egocentrism. While this view is hardly radical, Cromer insists that no other culture could have done the same.

He writes, for example (p. 100), "The glory of Greek mathematics was almost lost in the turmoil of the ages, and if it had been totally lost, it probably would never have been reinvented." Can this be any more than an opinion, when "never" includes a great deal of time yet to come?

My main criticisms are not with this but the view that science is the result of superior cogitation. Cromer says that non-Greek cultures were marked by egocentric thinking, a term I find annoying... for who is more egocentric than a reductionist trapped in a rigid, artificial orthodoxy that belittles modes of thought that come naturally to us? Cromer writes (p.21):

All nonscientific systems of thought accept intuition, or personal insight, as a valid source of ultimate knowledge. Indeed [...] the egocentric belief that we can have direct, intuitive knowledge of the external world is inherent in the human condition. Science, on the other hand, is the rejection of this belief, and its replacement with the idea that knowledge of the external world can come only from objective investigation — that is, by methods accessible to all.

How does this square with Roger Penrose's demonstrations that intuitive humans can solve problems when there are no formal algorithms for computers?

Cromer writes that personal insight (mysticism) can't convince others and change the world, at least as far as technology is concerned (this ignores the mystical insights that have enabled scientists to make breakthroughs) and those trying to attain a oneness with the universe are on ego trips, lusting after absolute power:

...the Hindu believes that [...] his *atman* — his soul, or essential self — will become one with the Absolute and will obtain perfect mystical knowledge of the universe. The belief that one can, by concentrating on the space between one's eyes, obtain ultimate cosmic power is egocentrism at its most grandiose [p. 107].

Well! I had thought that attaining oneness was a matter of surrendering one's ego; now I find that it's a road to Realpolitik.

Following John Ziman, Cromer writes (pp. 143-44) that "Science is the search for a consensus of rational opinion among all competent researchers." (He adds a disclaimer to this, saying that more than a majority vote is neces-

sary: There has to be something "real" out there [are gravitons real?] in order to establish an objective truth.) There is a problem, however, in defining what is rational (nuclear weapons?) and deciding which researcher is competent. If all "competent researchers" are color-blind, anyone with normal vision is wrong and won't get published. This results in many phenomena that scientists ignore, in order to conform. According to a reductionist like Cromer, reality is only that which is amenable to rigorous research protocols. This, of course, is the old mistake of confusing the map with the territory, the theory for reality. As Bockris wrote in a recent review (p.416):

**This little book is the expression of workers who really do try to penetrate into the darkness, instead of singing the old song in a new style. But scientists like [these] will never win a Nobel Prize. They ask too many disturbing questions to obtain the support of the establishment scientists (Bockris, 1995).**

Defining science, Cromer claims that cosmology, parity violation, relativity and quantum mechanics are examples of good science, while channeling, chiropractic, ESP and homeopathy are pseudo-science. Scientists, he says, don't reject paranormal claims *per se*; it is the lack of evidence that is vital. If that is the case, how can he call homeopathy unscientific when a number of scrupulously researched papers, showing positive results, have been published in reputable journals?

Cromer "demolishes" *psi* phenomena by citing some loose research done by Joseph Rhine in the thirties. Choosing this ancient example is enough for Cromer, who doesn't mention the careful work done at PEAR (Princeton Engineering Anomalies Research). Another criticism of Rhine's work is that card-guessing experiments, with different procedures, often had similar above-chance outcomes. Cromer feels it is impossible for any force or field to accommodate such results, so the experiments must be flawed. An explanation — which Cromer would never accept — could be that at times a card-guesser's ego was dissolved. Things such as distance and time vanish when a person is enfolded in universal oneness.

A further case of non-science, says Cromer, is cold fusion. Once again the approach is shallow, and this time there is emotion, for he obviously dislikes the claim that two chemists on a miserable budget (their own money) allegedly achieved a feat that an army of physicists spending billions couldn't do! He ignores the hundreds of published papers and the pragmatic Japanese, who are investing millions in cold-fusion research.

If I understand him correctly, Cromer argues that we must rise above our "animal" origins — the history of our species — in order to be objective and scientific. This seems a harsh choice for us, if in fact we have the ability to be making a choice, for Cromer posits two types of intelligence: A higher one, possessed by an elite, that can "analyze highly technical data using sophisticat-

ed mathematical techniques" (p. 185) and a common intelligence shared by the rest of us, from insects to artists.

Stephen Hawking recently said that he'd changed his mind about the possibility of time travel, and now feels it may one day be possible; there is still a great deal of physics for us to discover. On the other hand, Cromer seems to feel that we'll not make any more dramatic findings, as the basics are already known. History, of course, is riddled with examples of "experts" who felt everything important had been found.

Cromer sees the universe as machine, not miracle; he insists we accept only an external, objective, solid reality (something never proven to exist) and ignore claims made by people who have experienced other dimensions and spiritual mansions. In this regard, Zohar and Marshall have observed:

Mechanism stresses the single point of view. In an absolute space-time framework there is only one way of looking at things. In Newtonian physics, there is only one reality at a time. The *either/or* of absolute choice becomes the favored way of dealing with reality. A statement is either true or it is false, a course of action is either good or it is bad. There can be only one truth, only one best course of action. Neither nuance nor paradox, neither multiplicity and difference nor plurality can be accommodated (Zohar & Marshall, 1993).

In Buddhist philosophy, clinging to something, whether material or mental, is an attachment that stops us from realizing our higher being. The holistic human is both Yin and Yang, female and male, scientist, poet, engineer, and perhaps even a mystic. In contrast, Cromer's "higher intelligence" seems limited, a narrow specialization that creates unbalanced people who lack traditional survival skills — for humans have long been the supreme generalists! In asking us to reject the traits that made us so successful, Cromer perhaps confuses cleverness and wisdom. To illustrate what I mean with a crude analogy, think of our omnivorous diet compared with the narrow, two-leaf diet of the koala, doomed to extinction. Cromer's path, I think, is the one poet Robert Frost avoided taking, as it leads to lean times for our souls.

It may be apt to end with lines written by William Blake — artist, poet, mystic — who opened himself to the universe rather than choosing only the narrow segment of it that is quantifiable:

May God us keep  
From Single vision & Newton's sleep!

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### References

- Bockris, J. O'M. (1995). Review of Peter Graneau & Neal Graneau. *Newton versus Einstein: How matter interacts with matter. Journal of Scientific Exploration, 9,415.*
- Zohar, D., & Marshall, I (1993). *The Quantum Society*. London: Bloomsbury, 6.

### Additional Remarks:

There is nothing that I would wish to contradict in Eldridge's review, but some things I would wish to add with respect to history of science, science education, and the like.

Chapter 10, "Education for an Age of Science," appears to be the *raison d'être* of the book; the author's main interest seems to have been science education. This chapter is well worth reading; and it also gives the reader a better appreciation of chapter 3 which, when first encountered, appears as needless speculation. Chapters 5 to 7, too, are — with a few exceptions — sound stuff about the history of science. The introductory material in chapter 8 ("Science and Nonsense") is also good; though what Cromer says about specific bits of "nonsense" may not be, for example on cold fusion. Another good point about the book is that references are quite up-to-date.

But as a whole it is nowhere near as good as chapter 10; rather the book is a hodge-podge of sound stuff on the one hand and idiosyncratic stuff on the other, some of it plausible and some of it unacceptable. Thus the Preface (vii) says that there are just two views of how we acquire knowledge: one that science originated in ancient Greece and the other that it develops in every civilization — but there will be few historians of science, or philosophers or other students of science, who would agree with that. Nor that "with the rise of Christianity, egocentrism replaced objectivity throughout Europe" (ix). And what warrant is there for claiming that "Any activity as complex as toolmaking... requires the prior development of... culture" (45)? Is it agreed that "the Pueblo Indians... adopted a gentler [sic] matriarchal social order" (48)? Or that "The Bible exemplifies egocentric thinking at its purest," "Homer is the world's first exemplar of objective thinking" (65), and "Greece's unique discovery of objective thinking" (79)?

"Scientific thinking didn't — and couldn't — evolve from the prophetic tradition of Judaism and Christianity," asserts Cromer (70). But mainstream history of science sees their monotheism as an essential step toward the scientific concept of Laws of Nature; and Robert Merton recognized in 17th-century Protestantism much that seemed a direct precursor of the scientific ethos.

The "European development" (the 17th century Scientific Revolution) was not "directly stimulated by the work of ancient Greek mathematicians, astronomers, and natural philosophers" (103): the stimulus was indirect via Islamic scholarship; moreover Babylon, ancient India, and Islam are generally recognized not only as having contributed some bits of substantive science and mathematics that we still use nowadays but also quite crucial elements of mathematics (the concepts of zero and of infinity, say).

Cromer blames the "anti-intellectualism of Christianity" for destroying "virtually all traces of Greek rationality in Europe for 1,000 years" (103); but mainstream history of science recognizes the Church as having provided many of the crucial players in early modern science.

Even on the subject matter of science itself, there are such unaccountable errors as describing hydrogen and other elements in Group I of the Periodic Table as "alkali halides" (8); or ascribing the discovery of isotopes to the late 1930s (9) or "just sixty years ago" (10) though Soddy had received a Nobel Prize for that in 1921.

In Chapter 2 and throughout, Cromer relies on Piaget's ideas as unquestionably true, which just may not be the case. And chapter 4 is exegetical of the Bible and Homer without benefit of scholarly citations.

Cromer would have served himself better by publishing only an expanded Chapter 10. I was surprised that so uneven a work was published under so distinguished an imprint.

*Henry H. Bauer*  
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**The AIDS War: Propaganda, Profiteering and Genocide from the Medical-Industrial Complex** by John Lauritsen. New York: ASKLEPIOS, 1993, 480 pp. \$20 ISBN 0-943742-08-0 [Pagan Press/Asklepios, Box 1902, Provincetown, MA 02657-0245].

**Poison by Prescription: The AZT Story** by John Lauritsen. New York, NY: ASKLEPIOS/Pagan Press, 1990 (4th printing 1992), 192 pp. \$12 (p). ISBN 0-943742-06-4.

**The Myth of Heterosexual AIDS** by Michael Fumento. New York, NY: Basic Books, 1990, 432 pp. \$22.95.

**Rethinking AIDS: The Tragic Cost of Premature Consensus** by Robert S. Root-Bernstein, New York, NY: Free Press, 1993, xvii + 512 pp., \$35.

**Why We Will Never Win the War on AIDS** by Bryan J. Ellison & Peter H. Duesberg, Inside Story Communications (190 El Cerrito Plaza, Suite 201, El Cerrito, CA 94530), 1994, x + 292 pp. ISBN 0-9646475-0-8 [available from Inside Story Communications, 1512 E. Noble, #102, Visalia, CA 93292, at \$19.95 (p) plus \$3 s&h].

Only dead fish swim with the stream (*AIDS War*, 263). That defense of unorthodox venturing is but one of several points of interest for anomalists in