not occipital spikes were present. They previously had suggested that both spikes and exaggerated P2 components were the result of alterations in postsynaptic inhibition, but this finding suggested to them that the two must occur by means of independent excitatory mechanisms.

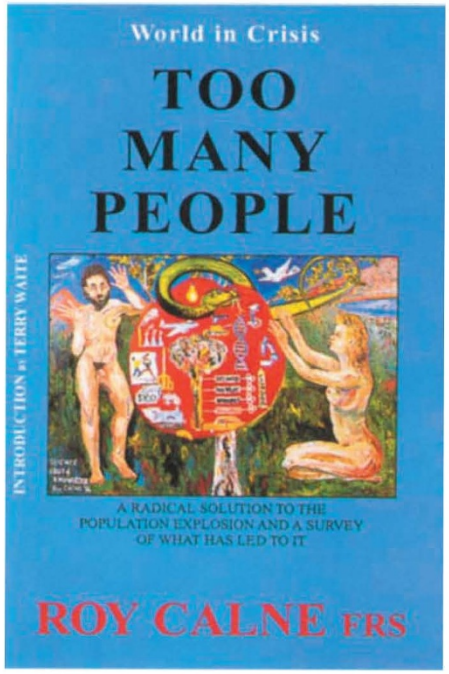
There are plenty of questions left to answer. What is the tuning mechanism by which certain frequencies are epileptogenic and others not? What are the physiologic mechanisms that explain the many variations among patients with photosensitive epilepsy? Can a DNA locus be found, as has been described for several families with various forms of myoclonic epilepsy? Are there visual cortex migration abnormalities or heterotopias?

Harding and Jeavons postulate that photosensitive epilepsy preferentially affects the magnocellular portion of the visual system, and they find sodium valproate (and clonazepam) effective treatment for the seizures. How does sodium valproate work in these patients? Presumably not via calcium channels (at least not those in the thalamus), since ethosuximide is relatively ineffective for photosensitive epilepsy. Is there a GABA receptor on magnocellular neurons that is preferentially affected in these patients? Conversely, does the efficacy of sodium valproate, if through this mechanism, tell us something about the normal functioning of the magnocellular portion of the visual system? What about lamotrigene and other drugs that also work? Are there other mechanisms for affecting photosensitive seizures, or does lamotrigene, for example, affect the GABA system?

Seizures may be completely controlled by medication, but EEGs may continue to show spikes in the occipital regions. Is the GABA system then affecting spread of activity, but not the occurrence of activity in the primary epileptogenic region? Given that this appears to be a disorder of the visual system, can other disorders in visual functioning be demonstrated? Conversely, if the mechanisms for altering P2 are separate from those affecting spikes, is this evidence that normal function and epileptogenesis occur by separate mechanisms (so that the latter need not alter the former)?

The next 30 years should be as interesting as the last.

Director
Johns Hopkins Epilepsy Center
Baltimore, Maryland 21287-7247



Too Many People

BY ROY CALNE

Riverrun Press, Inc., New York, 1995
$15.95

REVIEWED BY ADRIAN J. IVINSON

Too Many People is almost as much about the author as his subject. Knighted for his services to medicine, Roy Calne has a reputation, worldwide, as one of the best and most innovative transplant surgeons. His book, concerned with the world's population crisis, is not a run-of-the-mill account of the statistics and predictions so often recounted on this subject, but very much more personal and characterful.

Before embarking on a consideration of the solutions to the problem, Calne offers a whistle stop tour of human evolution. In doing so he hopes to persuade us that it is human nature to be destructive and aggressive, that this type of behaviour has been "programmed", throughout our evolution into our genes, and that as a consequence we are inevitably a troublesome lot. To this background of basic urges and instincts, science has added a new dimension to what is possible. We can now accomplish things on a scale never imaginable before. Thus when our behavioural failings lead us to a violent action, rather than beating an individual with a cudgel we can now drop a bomb on him and thousands of his neighbours. Science has given us an almost god-like power that we have not learnt to handle and this marriage of basic instinct and technological hedonism has brought us and our planet to the brink of destruction.

In building this foundation, so many subjects are covered that none are covered adequately. Calne throws out cursory consideration of art, nuclear power, ancient civilizations, religion, sex, sin and so much more, all to build an appreciation of how, as a species, we have arrived at the dreadful point we now find ourselves: with millions of people starving to death.

The brevity of each of these sections gives rise to generalizations and confusion. We are told that science is responsible for our current difficulties (citing wars, pestilence, terrorism and ethnic fanaticism) and that the correct application of science could solve our problems. Yet, it is difficult to see either how science is responsible for ethnic fanaticism, nor how it might put an end to wars or terrorism both of which have been with mankind for longer than science.

At other times the author takes liberties, such as when he repeats the trite assumption that the loss of mental ability associated with ageing is due to the loss of brain cells or, while acknowledging that reducing cigarette consumption will curb smoking-related deaths, he adds, astonishingly, that "smoking diminishes the risk of developing Parkinson's and Alzheimer's diseases". In each case, a far more profound consideration of the issues and principles is required before such simplistic statements could be warranted.

These are regrettable failings that weaken the author's argument. More's the pity because the real purpose of this book is to galvanize interest and cooperation to establish "The Laboratory for Population Studies". A group that would apply rigorous scientific and organizational procedures and skills to tackle the world population issue. This is, of course, laudable and an idea around which many could, and should, rally.

That Roy Calne could have adequately and thoughtfully presented the idea in far fewer words is, bearing the real purpose in mind, almost irrelevant. Some will enjoy reading Calne's very personal account of the world's problems, the occasional glimpse into the life and values of this acclaimed surgeon and his relaxed prose style. Others will simply appreciate his efforts to draw further attention to an immense problem that warrants an immediate and firm reaction.