**The Population Explosion** *by Paul R. Ehrlich and Anne H. Ehrlich* (Simon and Schuster, New York, 1990), pp. 320, $US18.95, ISBN 0-671-68984-3.

The written word is a passive medium. Books on scientific themes usually overwhelm the non-scientific audience with abstractions, terminology, and facts — all written in a passive style that either bores or confuses. *The Population Explosion* is a scientific book which explodes with lively examples and tight argumentation — all written in an active style that either entertains or illuminates. Even the most scientifically illiterate reader cannot fail to be intrigued by the interplay of politics, population, and environmental degradation that the Ehrlichs document so well.

The overarching theme of *The Population Explosion* is expressed by a simple equation, I=PAT. The I symbolises environmental impact, P — population, A — affluence, and T — technology. The variables are teased out for their relative contribution to environmental impacts. For example, the rapid depletion of the ozone layer is primarily due to T, technology. Refrigeration technology that employs chloroflurocarbons (CFCs) is inappropriate and should be banned *totally.* Why totally? The Ehrlichs provide an answer to this and similar questions through the equation I=PAT. "Note that the total impact of society can be lowered by decreasing any of these three factors, as long as the others are not increased so as to offset the reduced factor" (p. 58). So if the First World bans CFCs (reducing T) but the Third World adopts CFCs to produce cheap refrigeration (increasing A), then I (ozone depletion) will be levered by P (Third World populations) and quickly eventuate. Fortunately, co-operative agreements on CFCs are emerging between the rich and poor to achieve a total ban. The 1987 Montreal and 1989 Helsinki protocols have addressed just this issue. The Ehrlichs suggest that the ozone protocols are a model for dealing with a host of global environmental problems that need attention now.

The Ehrlichs lay much of the blame on environmental degradation at the doorsteps of economists. Their reasoning is compelling. Economists wield tremendous influence on those in power yet economists have largely ignored the environmental consequences of their recommendations. Economists perceive resource allocation as detached from biology and physics. The Ehrlichs trace the detachment to erroneous assumptions that underpin orthodox economic theory. Chief among them is the assumption that resources are infinitely substitutable in the long-run. Economists recognise that some resources will run out in X number of years — but not to worry — over those X number of years, entrepeneurs will have invented a new technology which will provide the same services as those wrought from the depleted resource. The frightening part about such reasoning is that it is partly true and its partial truth lulls us into believing it is totally true. No doubt synthetic fibres have been substituted for natural fibres, nuclear power is replacing coal, telecommunications is replacing physical communications, etc. But what about water, biodiversity, topsoil, the atmosphere? The Ehrlichs believe the price mechanism will not work to allocate dwindling supplies of these resources. So they argue that demand for these resources must be managed through a combination of variables in the equation I=PAT.

I daresay the dyed-in-the-wool economist will not concede even water, etc. to the Ehrlichs. The economist will argue that dwindling water supplies will raise the price of water and trigger substitutes like drip irrigation for crops or reverse osmosis for humans. In a similar vein, topsoil will be replaced with hydroponics, biodiversity with genetic engineering, and global warming will make

the subarctic tundra a breadbasket. Although all these substitutes are theoretically possible, none is as cost efficient as is the less exotic alternative, *viz.* conservation. Therefore, the most cogent argument for conservation is probably also the most prosaic: cost efficiency. If environmental degradation continues pell mell then the costs of transition to other substitutes will sky-rocket. In other words, conservation in the realm of water, biodiversity, topsoil, and the atmosphere is the cost minimisation solution. The Ehrlichs make this point but do not couch it in the rhetoric economists prefer.

Although the book is worthwhile reading for the specialist, it reads as if it were written for the non-specialist. This is no accident. The Ehrlichs have come to the realisation that the only way to save the planet is to persuade the public to take action. The word must get out: overpopulation is our number one environmental problem. The first 200 pages educate the reader that P (population) is the key variable in I = PAT: problems ranging from global warming to forest destruction, famine, and pollution can all be traced back to P. But the Ehrlichs are careful not to depress the readership and to despair. They offer hope. Indeed there is even a chapter entitled "What You Can Do". The short-run suggestions are broad: from small measures like planting trees to grand measures like campaigning against environmentally incorrect legislators. The long-run suggestions are narrow: birth control/planned parenthood and the inculcation of a green ethic. The suggestions are accompanied by a listing of names and addresses of environmental/population organisations and sympathetic politicians. The practicality of "What You Can Do" is refreshing; there is no pretence that this book will survive time. Like the nature we destroy, much of the useful information of this book will be short-lived and dated. This is hardly a criticism; it is a compliment. The book is timely and a must reading now. It will succeed to the extent that the reader does something to lessen the I of I = PAT.

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**Safe Blood: Purifying the Nation's Blood Supply in the Age of AIDS** *by Joseph Feldschuh with Doron Weber*
(Free Press, New York, 1990), pp. xiv + 218, $US19.95, ISBN 0-02-910065-8.

This book is a good example of the publisher's and printer's arts. It is hard-covered, clearly printed in a legible type face, and has footnotes, a glossary and an index, while each of its eight chapters is referenced. These external characteristics give the work a superficial respectability which does not stand up to critical scrutiny. It is not, as the jacket blurb suggests, "readable yet scientific."

Transfusion transmitted infection has been a recognised hazard of blood transfusion practice for at least 50 years. Successively, the risks associated with syphilis, malaria, hepatitis in its several forms and other more exotic diseases have been recognised, quantified and minimised. No clinician using blood and blood products has been unaware of these risks and has, in the vast majority of cases, made a definitive decision that to withhold blood would expose the recipient to greater risks than those associated with the transfusion itself.