

BOOK REVIEWS

BRAVE NEW PEOPLE. D. Gareth Jones. Inter-Varsity Press. 1984. pp. 221. Price: £3.95

The widespread publicity surrounding the technique of *in vitro* fertilisation and the subsequent live birth of healthy babies, must have brought hope to many childless couples. On the other hand, the enormous costs involved have made it unlikely that this technique can ever be made generally available. Less well publicised has been the low success rate and the disappointment of many couples, some of whom have had to receive psychiatric treatment. Immediately the existence of these techniques became generally known, some voices were raised, questioning whether such techniques were justified, or, if justified, expressing fears that "spare" human embryos might be used for experimentation.

"Brave New People" is thus both timely and topical in drawing attention to the issues raised by the impact of modern technology on the events before birth. If the title suggests a science fiction world, Professor Jones is careful to distinguish real possibilities from flights of fancy. Human cloning, though here placed firmly in the future, has captured the popular imagination ever since Aldous Huxley's description of "Standard men and women; in uniform batches.". The very process of making the issues public knowledge must help in avoiding the dehumanisation typified in *Brave New World*. Subjects surrounding conception and births are inevitably emotive and any scientist working in these fields must welcome informed discussion of the issues. In this volume, the educated layman will find a clear presentation of the possibilities and present limitations of the sciences involved in this area.

In order that sound moral and ethical judgements may be made, Professor Jones gives a clear description of the techniques involved. As these are explained, the questions about their application arise. Thus, on one level, the collection of a sub-fertile father's sperm in order to fertilise his wife by artificial insemination may be an obvious way in which modern science comes to the aid of a childless couple without introducing moral problems. But the availability of artificial insemination raises difficulties, which have yet to be tackled, about the use of donors. Today these problems cannot remain the preserve of medical specialists, and society is bound to demand a say in the way new techniques are used.

Medical and moral considerations notwithstanding, the law also makes an early appearance, if only at the level of providing a birth certificate and ruling on the legitimacy of a child born after artificial insemination by donor. This is particularly difficult where the donor's identity is not revealed to the mother. The possibilities for litigation must be endless. A's sperm fertilise B's ovum *in vitro*. The child is carried to term by C and will be brought up by D and his wife. If at birth the child is found to have a defect which could be of genetic origin, or have been caused by the doctors involved in the fertilisation, could he sue any of the parties involved? In the advanced countries which have developed new techniques it may be the doctors' fear of expensive court settlements which initially provides a more effective brake to the unbridled application of science than any discussion of moral principles. Contracts to protect all parties involved may have to become commonplace.

The particular contribution of this volume from a Christian publisher lies in its position on ethical issues, and whether it is read by a doctor working in this field, or by an anxious couple considering an abortion after learning of the results of amniocentesis, it will be as a Christian contribution that this book will be judged. The preface clearly outlines what Professor Jones understands this to mean. "For Christians, the aim will be to discover what light the bible can provide in this area." Many Christians may find such an approach unacceptably narrow. For he gives the impression in many cases that the problems are totally new, and that in such uncharted territory all the Christian can do is search for a text from scripture which will provide the answer. Yet at other times he introduces ethical judgements with the words "For Christians. . ." without making it clear why Christians hold such views.

On the issue of abortion he says, "It may also be relevant to observe that no biblical text forbids procuring an abortion." Abortion and the exposure of infants have been consistently condemned by the Christian Church from earliest times, and it is against this background that the current position, say in the Roman Catholic Church, must be viewed. In presenting this issue he gives the misleading impression that the Catholic view is a modern invention, which he does not relate to the Bible nor to Christian tradition. However, he later provides references to important scriptural passages which relate salvation history to individuals who *from the moment of conception* were precious to God. Having read them all, the Christian might well be left with the uncomfortable realisation that had abortion been permissible for a young unmarried Jewess some two thousand years ago. . . , and this may account for some of the feelings from the Christian side in what is a very emotive area.

Yet when today it can be discovered that an unborn child may be without a brain, a new problem and a new responsibility are created by the new knowledge. This area is explored with great sensitivity and caution. The book may be confidently commended to anyone faced with this kind of decision. What is said here could appear to some readers of I.V.P. publications to be both too tentative and too liberal, but the care taken here and elsewhere in explaining issues and possibilities should win sympathy from and give greater understanding to the reader. Professor Jones' compassion will not allow him to discard any possible benefit science can provide.

By contrast the opening chapter of the book with its lengthy exposition of the creation story in Genesis may not commend the rest of the volume to everyone. At times here Professor Jones is remarkably insensitive to the scientific community and the majority of Christians. His assertion that we "*no longer* reflect God's perfect moral character because Adam and Eve misused their freedom" (my italics) is both so unscriptural and unsound as to be out of place here. Before man became aware of good and evil he was both innocent and ignorant. Such a state is more akin to that of the animals than to that of God. Indeed, far from losing this fundamental divine attribute in the Fall, man is told, "your eyes will be opened and you will be like God, knowing good and evil". Our ability to come to moral judgements is essential to our humanity, and our being "in the image of God".

The age of ignorance of the events leading up to birth, and the innocence of moral responsibility in the application of new techniques is over. The issues at stake are of fundamental importance for mankind and Professor

Jones is to be thanked for opening the eyes of a wider public to matters in which we may have been blissfully yet culpably ignorant.

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MOLECULAR ASPECTS OF EARLY DEVELOPMENT. Edited by George M. Malacinski and William B. Klein. Plenum Press, New York and London. 1984. Pp. viii + 324. Price: \$(US) 47.50

The last ten years has seen a revolution in the technology available to study problems in genetics and developmental biology. Where we could only dream in 1974 we can act in 1984. This book, the outcome of a meeting held in December 1982 by the American Society of Zoologists, illustrates both the benefits of this revolution and, to paraphrase Mr Heath (speaking in different circumstances), its unacceptable side.

Quite properly (given its subject matter) this book includes three papers on *Drosophila*. In one Dr Judith Lengyel (and eight colleagues) describes the isolation and characterisation of genes expressed in the early embryo. After a long theoretical justification a laborious screen results in two cDNA clones, one of a sequence more abundant in the blastoderm than oocytes and one more abundant in oocytes than in the blastoderm. The former turns out to be a cDNA of a transcript of a repetitive sequence. The other is analysed in very considerable detail, using the armoury of modern molecular biology, including DNA sequencing and chromosome walking. Possible functions of this "maternal" transcript are considered. But how extraordinary that this clone's *in situ* mapping to 67B did not alert these molecular biologists—it is the well known heat shock protein gene *hsp 26*! (as inspection of the sequence shows, given a single "frame shift mutation" in the authors' translation).

By way of contrast is the previous chapter – Kaufman and Abbot's review of the genetic and developmental analysis of the Antennapedia complex. What richness this analysis has uncovered! As I write I have before me this week's *Nature* (July 5, 1984) with Scott's molecular study of *fushi tarazu*, a member of this complex. A region of this gene, coding for some 60 amino acids, shows strong homology with other homoeotic loci in *Drosophila*. Moreover, this "homoeobox" sequence is found in segmented animals from worms to man.

It is, perhaps, a bit unfair to pick on these two contributions. But they do illustrate, I hope, both the power and the weakness of the molecular approach to developmental problems.

They also illustrate the weakness of publishing symposia volumes. Too often they serve only to bolster the egos of their editors and as vehicles to publish the ephemeral and/or best forgotten. Too rarely do they include substantive reviews such as Kaufman and Abbot's.

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ISOZYMES IN PLANT GENETICS AND BREEDING. S. D. Tanksley and T. J. Orton. Elsevier Science Publishers, 1983. Part A, 516 Pp. Part B, 472 Pp. Price: \$105 per part

Some twenty-five years have elapsed since the word isozyme entered the language of plant genetics and thus it is an appropriate time to review the