dividual's personal decision and their attitude to a generalised group in society: when a mother says that she would prefer not to have a disabled child she is not saying that she prefers those without disability as persons (p 654).

Unfortunately in several places Harris merely summarises his argument as presented elsewhere, referring readers to his book *The Value of Life*. It is clear from that book that his conclusions are simply assertions based upon prior assumptions about the values of different lives. For example, in the section on selective treatment of newborns, his unpalatable conclusions flow naturally from his prior assumptions. He states, "I assume . . . that this sort of judgment (about selective treatment of newborn infants with spina bifida) . . . is unproblematic in that we can all imagine many cases in which life is so intolerable, so painful, . . . , that we would not wish to live such a life and that it is reasonable to suppose that no one would." Another part of Harris's argument for selective infanticide (in his book) rests on the claim that "bringing about a slow and distressing death would be more rather than less brutalising than would a quick and merciful killing". This, of course, ignores the ability of medicine to provide effective palliation in most circumstances, and transfers the responsibility for death and illness from nature and disease onto those physicians who are trying to ameliorate the lot of humanity. Harris's dismissal of Lorber's fears that the legalisation of active euthanasia could lead to abuses as in Nazi Germany rests on his apparent ignorance of the Nazi doctrine of race hygiene, the "mercy killing" of "biologically defective" children, which is quite distinct from their policy of extermination on the grounds of racial inferiority or of politics.

Finally, we will briefly mention the contribution by Braude (chapter 84) who offers a very readable chapter on fertilisation in vitro, noting some of the ethical issues raised and the practical consequences of developing such technologies: "the very availability of new reproductive technologies, such as IVF, is coercive and infertile couples are vulnerable to new offers whether substantiated or not" (p 988).

In summary this is a fascinating and readable collection of well edited essays for anyone interested in medical ethics. It is expensive, and the long delay between the commissioning of some chapters and final publication means that the book does not deal with some topics of current interest to clinical geneticists. In all other respects, however, we would strongly recommend it.

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In Situ Hybridization Protocols. Methods in Molecular Biology No 33. Editor K H Choo. (Pp 515). New Jersey: The Humana Press. 1994.

For once the press release appears to be true: this is indeed the only book of protocols to date to cover such a wide range of in situ hybridisation methods in such a straightforward and accessible way. Traditionally, in situ hybridisation histochemistry, and chromosome in situ hybridisation have been treated separately, presumably because the background knowledge and skills required are so different. This publication recognises that the applications for in situ hybridisation techniques are increasing over a wide range of specialist fields. The protocols presented here are accessible both to researchers who are new to in situ hybridisation, as well as those with experience who wish to diversify.

Part I consists of protocols and (appropriately) makes up the majority of the book (chapters 1–28). Part II contains reviews and applications for previously given techniques (chapters 29–33). In part I there are several chapters dealing with different aspects of fluorescent in situ hybridisation (FISH). Chapters 1–3 are all based around chromosome painting, with methods for the generation of chromosome specific paints using whole chromosome libraries and Alu-PCR of somatic cell hybrids, as well as reverse painting using DOP-PCR amplification of small numbers of flow sorted chromosomes. FISH mapping using single copy probes is dealt with in several chapters. In particular, Heng and Tsui give an excellent overview of FISH mapping techniques using a variety of cloned probes ranging in size from mega YACs to cDNAs. In addition, they present detailed discussion points for optimising simultaneous DAPI banding on hybridised chromosomes.

There are several useful chapters on the generation of probes for FISH by PCR, including alphoid DNA probes and Alu-PCR amplified YAC probes. Two chapters are given for YAC-FISH using Alu-PCR amplification. One describes a method for amplification directly from yeast colonies: this is extremely rapid and convenient, especially for laboratories without facilities for pulsed field gel electrophoresis, but its accuracy for the detection of YAC chimaerism is not known. The second chapter outlines a method for amplification from genomic yeast DNA using two Alu primers, and gives examples of applications for this technology in tumour cytogenetics. There are two chapters dealing with mapping by extended DNA preparations, both by the originators: (1) free chromatin preparations (Heng and Tsui) and (2) DNA-halo preparations (Raap and Wiegant). These techniques are an essential part of any state of the art FISH mapping repertoire, and these chapters give practical de-

tails not necessarily present in the original publications.

The technique of DNA primed in situ labelling (PRINS) is an attractive alternative to conventional in situ hybridisation, allowing simultaneous labelling of probe and hybridisation to target DNA. The advantages of this approach are the lack of a need for cloned probes, and the ability (at least in theory) to use small probes for the detection of small sequence variation. This technique is presented here by its inventor (Jan Koch), and includes the latest developments in multicolour PRINS and single copy sequence detection. There is also a chapter on RNA-PRINS, a modification of in situ transcription. This technique uses biotin-labelled nucleotides as substrate for reverse transcriptase, and has the potential for analysis of different RNA classes. The number and variety of highly specialised techniques is quite overwhelming, and too great to allow specific reference to each one here. There are chapters on hybridisation histochemistry for the detection of viral genomes (three chapters), PCR in situ, hybridisation to *Drosophila* and other dipteran species, to meiotic prophase chromosomes, and to individual chromosomes in sperm. The detection of mRNA in tissue and cultured cells is well covered (five chapters) and includes quantitative mRNA analysis, whole mount analysis, and subcellular localisation by electron microscopy. In part II, the sections I found most useful were the chapter on digital imaging and processing, an excellent summary of the principles and practice of modern CCD and confocal imaging systems, and the very comprehensive overview of the identification of human marker chromosomes.

Overall, the figures, illustrations, and diagrams are clear and easy to follow. Surprisingly, I found the colour plates a little disappointing: this may be because of their reproduction to such a small size, but in any case does not detract from the book's primary purpose as a methods book. Because each chapter is written as a separate entity, there is considerable overlap between protocols. This can become a little repetitive (there are at least six methods for nick translation alone). However, the advantage of having separate contributions from such a distinguished list of authors is in the "notes" at the end of each chapter: this type of anecdotal information is never accessible through the original publications. Although normally reluctant to change my own tried and tested methods, I found my review copy very handy, and have already been inspired to try some of the protocols mentioned. The cost is reasonable; I think that the range of techniques and the style of presentation make this an invaluable addition to any research establishment.

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