clearly the most useful portion of the appendices. This appendix would have been strengthened by the inclusion of information on how to access the latest information on current gene therapy trials, principal investigators, and guidelines from both journals (listed in appendix A) and web sites (e.g., the NIH site Gene Therapy for Human Patients at http://www.nih.gov/od/orda/cover.htm). In summary, although this book is somewhat uneven, this edition is a valuable starting point for both physicians and patients with an interest in gene therapy, and it provides a useful overview of the state of ongoing gene therapy trials.

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Life as We Know It: A Father, a Family, and an Exceptional Child. By Michael Bérubé. New York: Pantheon Books, 1996. Pp. 284. $24.00.

This is an extraordinary book. Bérubé, a professor of English at the University of Illinois at Urbana-Champaign, has written an intimate book about his family, comprised of himself and his wife, Janet Lyon, and their two sons, Nick and James. James has trisomy 21 and Nick does not.

In this beautifully written book, Bérubé explores and interweaves the intensely personal effect, on a family, of a child with Down syndrome; the effect of society on that child and family; and, in turn, the impact of that child on society. With skillful prose, always tempered with laugh-out-loud humor, Bérubé not only argues compellingly for Jamie's place at "our" table, but also demands that we look long and hard at our definition of table and at our definition of us. How do we define who and what is human? How do our societal values sculpt our willingness to engage and to embrace those who are "different," and what are our personal and societal obligations to do so?

Bérubé skillfully juxtaposes anecdotes and vignettes from Jamie's short life, with explorations of philosophy (the Wittgenstein is occasionally tough going, at least for this reader), legislation, science, and history. In the chapter "Genetic Destiny," Bérubé offers one of the clearest explanations of meiotic nondisjunction that I have ever read. He walks us through the excitement of his wife's second pregnancy, their decisions to eschew amniocentesis and prenatal diagnosis, their reactions to the birth of their son with trisomy 21, and their subsequent experiences throughout their son's stormy neonatal course and early childhood. The author's narrative is peopled with physical therapists, occupational therapists, teachers, friends, neighbors, and physicians. He discourses at length with regard to the issues of prenatal diagnosis and pregnancy termination, coming down clearly on the side of freedom of choice while, at the same time, recognizing that he and his wife have made a different choice with which they are comfortable.

I bought the book because I had heard Bérubé speak on National Public Radio and had thought that the book sounded interesting. I put it down once after I began reading, only because I needed to sleep. I have not stopped thinking about it since I first read it four weeks ago, and I expect that I will read it again. It has made me think deeply about my role, as a medical geneticist, in delivering diagnostic and prognostic information to parents. It has made me question my own values regarding quality of life and my own arbitrary assignment of humanity to others.

This is an honest book. I believe that the author has allowed me into the most intimate corners of his life and has bravely articulated his own conflicting ideas, feelings, and responses to his second son. This is a sweet book. It is laced with undeniable love. Bérubé has been most generous in sharing himself and his family with us. Bérubé states, "My task, ethically and aesthetically, is to represent James to you with all the fidelity that mere language can afford, the better to enable you to imagine him—and to imagine what he might think of your ability to imagine him" (p. 264). He has succeeded.

Buy this book and read this book. I think it should be mandatory reading for all of us who pretend to know what we are doing when we provide genetic counseling to families.

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Chromosome Abnormalities and Genetic Counseling. By R. J. McKinlay Gardner and Grant R. Sutherland. Vol. 29 in: *Oxford Monographs on Medical Genetics*. New York: Oxford University Press, 1996. Pp. 478. $59.50.

Genetic counseling in cases of chromosome aberrations can be very difficult and tricky, as is well known not only to insiders. Particularly difficult to handle are prenatal diagnoses, especially when they are based only on cytogenetic results without the support of molecular investigations. It is notoriously difficult to find adequate references and guidelines for the many unique situations that may occur. It is therefore very praiseworthy that its authors undertook the effort to dedicate a book to the issue of genetic counseling in chromosome aberrations. Indeed, *Genetic Counseling in Chromosome Aberrations* might have been a better title.

The first section of the book ("Basic Concepts) offers an introduction to the principles of human cytogenetics. The following sections are entitled "The Parent with a Chromosome Aberration," "The Normal Parent with the Chromosomally Abnormal Child," "Reproductive Failure" (due to chromosomal aberrations), "Prenatal Diagnosis," and, at the end, appendices that mainly include

an introduction into cytogenetic nomenclature. The book is easy to read and to understand. The main points are explained with the help of diagrams and instructive illustrations that should be particularly useful to inexperienced readers. The major strength of the work is that it covers almost all potential situations that could emerge from cytogenetic examinations and that would require explanation. The citations are up to date and include mainly the most recent publications relevant to each topic.

There are obviously some points that can be criticized, and there are others that are a matter of different opinions. This reviewer would not have included the fragile X and the "chromosome breakage" syndromes, since (*a*) they do not represent chromosome aberrations sensu stricto and (*b*) their diagnosis is nowadays exclusively or predominantly performed by molecular-genetic methods. On the other hand, submicroscopic deletions that are true chromosome aberrations, such as the 7q11.2 deletion in Williams-Beuren syndrome and the 22q11.2 deletions associated with different phenotypes, could have been described in much more detail. The authors are extremely cautious in their risk figures—they tend to quote the maximal (highest) recurrence-risk figures that are reported in the literature, often, however, without considering strong ascertaining biases. Thus, in some instances the risk figures are almost certainly too high (e.g., 9.4% for abnormal phenotype in de novo balanced inversions). The impact of both parent of origin and mechanism of formation of numerical and structural chromosome aberrations, in regard to genetic counseling, is not considered to the extent that it deserves. Mitotic nondisjunctions and structural aberrations due to meiotic crossovers would not implicate an increased recurrence risk at all. The chapter dealing with uniparental disomy is not exhaustive and does not adequately consider the difference, between heterodisomy and isodisomy, in the risk of abnormal offspring due to homozygosity of recessive mutant genes in the latter, but not in the former, situation. More important, there is a major lack of detail concerning techniques at least some of which nowadays are indispensable for a modern cytogenetic laboratory, techniques such as FISH, chromosome painting, chromosome dissection, and reverse painting. The separation of the genetic-counseling section from the chapters describing the particular aberrations makes it sometimes difficult and too boring for the reader to find what he or she is looking for.

However, these are all shortcomings with which one can live. The book, by Gardner and Sutherland—and this should be stressed—is very useful and should become a must for every cytogenetic laboratory that provides a genetic-counseling service.

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Molecular Biology Made Simple and Fun. By David P. Clark and Lonnie D. Russell. Vienna, IL: Cache River Press, 1997. Pp. 470. $34.95.

Molecular Biology Made Simple and Fun starts off with two sound bites. The authors provide a quirky translation of Jacques Monod's famous, brazenly reductionist dictum "What is true of *E. coli* is also true of the elephant." Then, in the margin of the first page, we read: "Roses are red / Violets are blue / Molecular biology / Is easy for you!" Leafing past these, I wondered, not for the last time, exactly what readership the authors had in mind when they wrote this very odd introductory text. The tone of the writing and the groan-inducing quips and cutesy cartoons that are found on nearly every page suggest that they want to reach a preteen audience. The content would make this an adequate text in an introductory college course—say, a first-year course on molecular biology, directed at nonmajors.

The book features brief but competent discussions of replication in retroviruses, the distinction between lysis and lysogeny, the genetics of apoptosis, and the generation of antibody diversity. Along the way, the authors provide commentary, such as "Yee-hah!" (p. 94), "Life sucks!" (p. 318), and "Wow wo woww wow woow!!!!" (p. 364). Still, some of their banter really is well done and could be useful in teaching. For instance, in the discussion of cloning the deleted gene in Duchenne muscular dystrophy, we read: "Huh?! How do you clone something that is not there?? Actually you do need a sample of DNA from a healthy person, too. It's done like this . . ." (p. 181). I recall puzzling over this point once, and I certainly would have appreciated an explanation as lucid and accessible as the one that Clark and Russell provide. For these moments of insightful pedagogy, the book may be useful to some teachers. For those who need to reach a young audience—for instance, in a high school or junior high educational outreach program—this may be the perfect resource. For most others, I think the jarring inconsistency between the tone and the content would only distract.

An introductory book that I would recommend to anyone interested in the concepts of Mendelian and molecular genetics is Gonick and Wheelis's *Cartoon Guide to Genetics*. This long-time favorite was revised a few years ago to include some updated information on split genes and some insights into biotechnology as a business. This is a book to suggest as a supplementary text for a college course or to give to a precocious ten-year-old or to relatives who wonder what you work on. Little of the detailed information in the Clark and Russell book is found here, but the writing is lively and engaging, the illustrations are charming, and the jokes are funny.

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