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Mutants: On Genetic Variety and the Human Body. By Armand Marie Leroi. New York: Viking, 2003. Pp. 448. \$25.95.

Any clinical or human geneticist will approach a book entitled “*Mutants*” with a degree of hostility. The perfectly innocent word “mutant” has become synonymous with “grotesque” and “freakish” in common parlance (and in schlock horror-film titles). The book’s cover—which shows a 16th-century portrait of a little girl with severe, generalized hypertrichosis—may reinforce the initial hostility in some. The chosen subject could easily be mistaken for unhealthy voyeurism masquerading as popular science. I am happy to report that the author has managed to produce a readable account of a complicated subject, summarized by the book’s UK subtitle, “On the Form, Varieties and Errors of the Human Body.”

Armand Marie Leroi is a developmental evolutionary biologist at University College, London. Leroi’s book is aimed squarely at a lay audience, and its goal is to communicate the author’s obvious passion for developmental genetics. There are three major sections of the book. The first section—in my opinion, the most successful and interesting—deals with specific human malformation syndromes. Leroi opens this section with a chapter that describes the religious and political significance that has been attached, since antiquity, to children born with rare, extraordinary patterns of malformations. After this, different chapters are dedicated to conjoined twins, holoprosencephaly and sirenomelia, skeletal dysplasias, and intersex states. Using these examples, Leroi is able to introduce many of the concepts that underlie modern developmental biology: axis formation, patterning, signaling, migration, differentiation, and cell death. Throughout the narrative are scattered interesting historical anecdotes and references. I recommend this section of the book to anyone who wants an easy introduction to molecular embryogenesis. The second sec-

tion of the book is predominantly a physiological description of growth and puberty. I felt that the author was less confident of his subject matter in this section, but it was an entertaining romp through dietary iodine deficiency, growth-hormone deficiency, and pituitary adenomas. I am less sure I would recommend this section as an introduction to endocrinology. The last section of the book tackles the big questions of age, beauty, and race. It seems slightly “stapled on” but is readable and factually correct.

This book is a courageous attempt to show that human developmental genetics is an important and fruitful field of study. The author should be congratulated for his (necessarily biased) choice of malformations to discuss. The footnotes, illustrations, and references are excellent. There are very few factual errors in the book, and those that I found were typographical (in one section, the pharyngeal arches are said to develop “5 months,” rather than “5 weeks,” after fertilization). Clinicians and genetic counselors may find the discussion of affected infants and children slightly cold and detached. This is inevitable in such a discourse and should not deter readers. I encourage people to read *Mutants* in conjunction with any of Josef Warkany’s writings on how malformations have been viewed throughout history. These books serve to remind us how far humanity has come since the days when theories of maternal impressions (cleft lip caused by seeing a rabbit during pregnancy) and hybridization (malformations caused by lustful relationships with animals) abounded.

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