

On Fertile Ground: A Natural History of Human Reproduction. *Peter T. Ellison.* Cambridge, MA: Harvard University Press, 2003, 358 pp. \$19.95, paper.

Harvard anthropologist Peter Ellison provides an integrated, thoughtful perspective on fertility and human evolution. A little perspective is welcome at a time when newspaper headlines shout the advent of male contraceptives, controversial long-term effects of female contraceptives, pros and cons of female and male hormone replacement therapy, and, of course, the latest fertility treatments for infertile couples. Ever since the birth of Louise Brown, the first test-tube baby back in 1978, the reproductive technology business has been booming, and people are buying. Given the great improvements in health and longevity over the past century, why do we still face obstacles in meeting our reproductive goals? Ellison attempts a convincing response. He cleverly unites ideas from life history theory, reproductive ecology, physiology, and endocrinology to describe proximate and ultimate explanations for how the "pitiless process of natural selection" shapes the details of human reproduction. It's a laudable feat to meet Tinbergen's challenge to explain fertility-related behavior in terms of its development, phylogeny, function, and proximate mechanism.

The nine chapters describe important adaptive tradeoffs which shape the stages of the human lifecourse. These reduce to questions about the optimal allocation of energy and resources for the purpose of maximizing genetic fitness in future generations. Ellison therefore ponders many interesting "why" questions, some familiar and others new for many students of human evolution: Why aren't babies born with smaller heads or women equipped with slightly larger hips to ease childbirth? Why does age at menarche decrease with better nutrition but age at menopause does not? Why does the rate of embryonic loss seem invariant across environmental conditions? Why do women usually ovulate just once a month? What determines the timing of human births? What regulates lactation and weaning age, to determine the length of interbirth intervals? Why does menopause exist?

A typical proximate explanation for the latter is that the rate of atresia on the initial supply of oocytes results in a severe reduction in viable oocytes later in life. Ellison astutely follows up by addressing the question of why females don't continuously produce new gametes (as males do), rather than establishing the complete set in early development. Ellison has much evidence to bear on certain questions and sometimes too little on others, but even when simply speculating, his arguments are logical, informed, and bound to spur a healthy dose of controversy and future doctoral dissertations. He also usefully makes it clear when his assertions are suggestive conjectures versus the results of established science.

Ellison also does a useful service by deconstructing several ideas which pervade popular and academic audiences, such as the Frisch hypothesis that critical body fat levels determine the onset of menarche in girls and the notion that nursing frequency is the main determinant of lactational duration. Most of the book's discussion centers on women, with just one chapter addressing questions about male reproductive ecology. The usual justification for this narrow focus on men is

that male fecundity is highly resilient to widely varying ecological conditions and age. However, as Ellison acknowledges, male fertility outcomes are usually more variable than female fertility in most mammals, including humans.

Ellison embellishes his theoretical discussions with detailed examples from his own research among “natural” fertility populations such as the Efe and Lese of the Congo and the Toba of Argentina, as well as other well-studied groups such as the Tamang of Nepal and Ache of Paraguay. These and other groups may give us the best insight into the ecology of reproduction because their lifeways most closely resemble those typical of our *Homo* ancestors, among whom many of our unique or exaggerated life history traits evolved. These groups are small-scale foragers and agriculturalists who live without supermarkets, physicians, hospitals, baby bottles, contraception, or cushy jobs. Ellison effectively contrasts their patterns of breastfeeding, nutrition, growth, and subsistence with those from Western populations where fertility is deliberately and effectively controlled. Surprisingly, he does not discuss the Demographic Transition, where mortality and fertility rates dropped worldwide beginning in the nineteenth century. Nonetheless, Ellison’s excellent use of within- and cross-cultural differences in diet, workloads, energy balance, and fertility-relevant social practices is an illustrative example of how variation, in both natural and controlled settings, can be utilized for making sense of the intricate workings of our reproductive system. The book is written for the educated reader and will make interesting reading for undergraduate and graduate courses. The forty pages of bibliographic references are very useful for academics interested in any of the numerous themes addressed in the book.

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Race, Nature and the Politics of Difference. *Donald S. Moore, Jake Kosek, and Anand Pandian*, eds. Durham, NC: Duke University Press, 2003, 488 pp. \$84.05, cloth; \$24.95, paper.

This remarkable book looks at the explicit and implicit relationship between race and nature and how the many ways that they aggregate help to shape the political terrain and cultural politics of identity and difference. For example, these contributors posit that discourses on race and nature are just as likely to express truth as they are to justify inequality. The core question behind the book is how race and nature work as a terrain of power to illuminate the cultural politics of race and nature. Moore, Pandian, and Kosek insist that neither race nor nature are matters of common sense. Instead, the authors say that they “follow the means by which such essences of race and nature are fashioned, and we track their echo through time and space, by attending to the struggles through which races and natures are made and