

ECONOMICS

Well-Being and Its Consequences

Lawrence Haddad

The *Changing Body* uses the “plasticity, flexibility and responsiveness” of the human body to changes in nutrition, disease, work, and warmth to generate long-term insights on human development. The opening chapter lays out a series of claims that set up the book’s narrative: (i) The nutritional status of a generation determines its longevity and ability to work. Individuals with a better nutrition status—manifest as height for age and weight for height; the result of the net accumulation of energy and nutrient intake, infection, care, and activity—have better brain development, maintain stronger immune systems, and are less likely to succumb to certain chronic diseases later in life. (ii) The work of that generation, when allied to technology (broadly defined), determines the generation’s output. (iii) A generation’s output, partly determined by its inheritance from past generations (i.e., malnourished mothers are more likely to give birth to malnourished babies), determines its standard of living through the enhanced ability to acquire material goods and to invest in technology. (iv) A generation’s standard of living determines the nutrition status of the next generation (through the ability of adolescent girls, pregnant women, and parents to get access to food, health services, and care for themselves and their children). (v) And so on...

This circle underpins the book’s central theory: “technophysio evolution,” a link between technological and physiological change. The authors explain that this differs from conventional forms of evolution in its emphasis on the control that humans have over its speed and their environment. Two chapters review the evidence behind these propositions (using equations and lots of data). The authors then devote three chapters to examining, in great detail (again providing much data), technophysio evolution in

England and Wales, continental Europe, and the United States. Over the past 300 years, adult heights and life expectancies in all three regions have responded very rapidly to improvements in diet, disease prevention, and sanitation. Today, for example, adult males in the United Kingdom are, on average, 10 cm taller than their counterparts in the early 18th century, and their life expectancies at birth have doubled.

As my own work centers on the links among income, food consumption, and nutrition; the links between nutrition and productivity; and the distribution of food and other resources within households in developing countries, much of this territory is familiar to me. Nevertheless, the book makes several important contributions. First, a number of the authors are historians, and they introduce a long view into the relationships among different variables. Too often, researchers working on developing countries neglect these intergenerational effects (from grandparents to children through to their own grandchildren). Our need to understand long-wave phenomena will only increase as we tackle issues such as aging, chronic disease, urbanization, and climate change. The authors offer some insights into how to improve our grasp on long-term links and the added value of doing so. For example, are we using short-run estimates of the responsiveness of calorie consumption to changes in income (vital in projecting food needs and potential hunger crises) when we should, as the book argues, be using time series estimates (which are much lower)? If we did, our forecasts of the numbers of hungry people would be substantially reduced, with profound implications for public policy.

Second, the authors contrast experiences from the rich and developing worlds. This does not happen nearly enough. The two spheres are quite distinct in terms of research and policy communities. Yet the issues, methods, and policy prescriptions are very similar, and so the scope for cross-learning seems immense. For example, the evidence

on how urbanization in the 19th-century United States and United Kingdom led to declines in average male heights (as disease and overcrowding overwhelmed any higher wages earned) should serve as a wake-up call to those who seem to be taking a rather casual view of the implications of the growth of cities for well-being.

Third, the book outlines a number of important questions that could shape the future research agenda. Two stand out: Why does it take more than one generation for changes in environment to manifest as improved adult height? Given that heights were not measured at the population level anywhere before the early 18th century, what lamentations will 22nd-century analysts express over variables that we should be measuring today but have not even considered?

But the book also frustrates. It fails to make the most of comparisons between developed and developing countries. The authors are not sufficiently familiar with the literature on developing countries, and their evidence relies too much on work by a small number of top U.S. academics. Thus they miss some opportunities to apply interesting findings from Europe and the United States to the developing world (and vice versa). For example, the insight about the extent to which heights can improve in one generation might explain the curious lack of response of nutrition status to sparkling economic growth in India. (The book mistakenly brackets China and India’s progress in improving nutrition status.) Nor do the authors sufficiently challenge current notions of economic growth. While effectively critiquing the partiality of income as a measure of welfare (and arguing that, as a measure, nutritional status is “analogous to measures of capability”), they remain sanguine about the capacity of current economic growth patterns to generate “bads” such as carbon emissions, obesity, and inequality. The long-term perspective afforded by the intergenerational historical perspectives is also presumably one reason that the book is very light on policy implications, but surely the long view imposes a greater obligation to think about core policy mechanisms, unencumbered by electoral cycles. At the individual level, I have a nagging worry that the authors paid insufficient attention to people’s ability to influence the impacts of long-term trends on their bodies. The body is more than a diagnostic tool, it is the servant of our agency.

Nevertheless, *The Changing Body* offers an authoritative summary of the field of technophysio evolution. The authors place the size and shape of the human body at the cen-

The Changing Body

Health, Nutrition, and Human Development in the Western World Since 1700

by Roderick Floud, Robert W. Fogel, Bernard Harris, and Sok Chul Hong

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New Approaches to Economic and Social History.

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ter of generational transitions. In doing so, they generate new insights into contemporary development processes—even if they understate our ability to do something about the trends that affect our bodies.

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ENTOMOLOGY

Lively Notes on Nocturnal Singers

May Berenbaum

Whoever decided that the singing of crickets should be called “stridulation” must have been a curmudgeon. Scientifically, the term describes the act of creating sound by rubbing body parts together, but etymologically it derives from the Latin root *strido*, “to utter a harsh sound.” It seems incongruous to call the sounds made by crickets harsh when they are among the few noises in nature that humans perceive as musical.

The musical propensities of the Ensifera—members of a suborder of Orthoptera comprising crickets, bush crickets, and katydids—provide the theme for John Himmelman’s *Cricket Radio*. An entomologist by avocation, the author has an enthusiasm for crickets that, by his own description, borders on obsession. He aims to help people find and identify night-singing orthopterans. But the book, more spirit guide than field guide, is also intended to raise awareness of these ubiquitous night sounds, explain what purpose they serve, and teach how to “tune in” and appreciate these extraordinary singers. Because of the centrality of sound to the lives of ensiferans, Himmelman can provide abundant information on cricket biology while never straying far from his central theme. Moreover, his own experiences in hunting for and learning about crickets make this potentially abstruse topic far more engaging.

Three chapters introduce ensiferan biology: one on morphology, life histories, and classification and a pair that survey katydids and crickets. Himmelman then focuses on interactions

between ensiferans and humans. In addition to disquisitions on a wide range of historical and cultural references to these songsters, he offers detailed instructions for finding and handling crickets in their natural habitats and for maintaining them at home (“assembling your cricket radio”). Liberally illustrated with black-and-white images (photographs and drawings), the book features a 48-page color insert. The many close-ups give this section the look of a (rather peculiar) family photo album assembled by an affectionate uncle.

It may seem curmudgeonly to criticize the book (clearly aimed at lay readers) on technical grounds, but the regrettably numerous errors are likely to irritate professional entomologists. Most annoying are outright mistakes. For example, Himmelman lumps mayflies in with dipteran midges and mosquitoes as belonging to “the world of flies”; as members of the order Ephemeroptera, they are “flies” in name only. Editors failed to catch various misspelled or misused terms, both technical (e.g., “tachnid” instead of “tachinid”) and nontechnical (e.g., Himmelman explains that moths are valuable “because they pollinate a large percentage of our fauna”). In addition to outright errors, there are some peculiarities

of style (such as capitalizing common names) that as an entomologist I found jarring. Most curmudgeonly, I have a personal aversion to language in books about insects that refers to “magic” or soul-stirring. However pleasant the resulting sound may be, rubbing wings together is not a magic trick.

But, again, this book is not intended for hard-bitten entomologists, so I should be more tolerant. In fact, when Himmelman ranges beyond the science to explore cultural aspects of cricket singing, I found myself entranced and in awe of his determination to track down every relevant detail. He is as relentless in chasing interesting references in litera-

ture as he is in pursuing crickets themselves in the greenery near his home. He effectively embeds his own cricket-watching experiences into often-strange history of associations between crickets and people. In “The Mighty Cricket Gladiators,” for example, he segues from his adventures as an 8-year-old who received a gift cricket farm inexplicably equipped with six tiny plastic chariots into a fascinating history of cricket fighting in China. (This includes the tale of Ming Xuanzhong, the “Cricket Emperor” of the Song

Dynasty who so prized his fighting crickets that the accidental death of a champion due to his wife’s carelessness led to a double suicide.) He also provides a lively account of tracking down the etymology of the name katydid: delving into its onomatopoeic nature and going so far as to look up the 1751 journal of botanist John Bartram to read what may be the first mention of a katydid (or, as Bartram put it, “catedidist”). I enjoyed and learned from the biographical sketches of “bug people,” which encompass not just entomologists enamored of Orthoptera but a diverse and colorful assortment of people of many professions (including a pirate), illustrative of the widespread appeal of ensiferans. Reading these stories did make me realize that not all entomologists are averse to magic and mystery with respect to crickets. So I have promised myself to cut back on curmudgeonliness (at least in the evenings) and listen to cricket sounds with a more sensitive attitude.

Cricket Radio

Tuning In the Night-Singing Insects

by John Himmelman

Harvard University Press,
Cambridge, MA, 2011. 316 pp.
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Nebraska conehead (*Neoconocephalus nebrascensis*). A male, from a West Virginia cornfield.

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