

taking eggs of protected species had been made illegal in the Imperial Hunting Decree of 1898. Egg collecting also affected the species composition of local bird communities. Schoolboys appeared to concentrate on species that breed in the vicinity of human settlements and build conspicuous and easily accessible nests. Several bird species, such as corvids, began to urbanize rapidly only after the 1960s, when television sets and motorcycles became more common, and the interest of schoolboys shifted to these more technological hobbies [6]. Thus, the relationship between children's hobbies and urban biodiversity might not be as straightforward as Miller suggests.

Values of urban wildlife appear to have changed over the past ~100 years from so-called 'resource values', such as birds' eggs, to 'non-resource values', such as the aesthetic pleasure provided by urban wildlife [9]. In addition, the recommended methods of environmental and nature education have changed considerably since the early 20th century. Few schoolteachers would now encourage their pupils to collect eggs of wild birds, although the basic objectives of nature education, that is, to teach children to value nature and understand its relevance to their lives [1], might not have changed.

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# Response to Mehtälä and Vuorisalo: Changing values or wishful thinking?

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I thank Mehtälä and Vuorisalo for their letter [1] in response to my recent article in *TREE* [2] in which they discuss my argument that a disconnect between people and nature in urban areas tends to erode support for biodiversity conservation [2]. They suggest instead that attitudes toward conservation among city dwellers in many industrialized countries are becoming increasingly positive. To support this assertion, they cite studies showing growing concern among Europeans regarding environmental degradation, high levels of support for wildlife preservation among urban residents relative to those in rural areas, and a shift in values that has resulted in urbanites favoring higher biodiversity where they live.

It is reasonable to ask whether concern for environmental degradation translates to support for biodiversity conservation and the same can be said of support for charismatic wildlife species. Kellert [3] reports that most Americans do not recognize the loss of native species as a major environmental problem and that few are familiar with the term 'biological diversity'. In this same book, also cited by Mehtälä and Vuorisalo, Kellert documents considerable

support among city dwellers for wolf conservation. He then goes on to say that this reflects a highly romanticized vision of the natural world among urban residents, who remain fixated on a narrow segment of the biotic community that typically comprises vertebrates of cultural, historical, or aesthetic significance. Meanwhile, their concern for biodiversity remains limited and superficial at best [3].

The historical data used by Mehtälä and Vuorisalo in support of the notion that people in cities have come to value urban biodiversity over the past ~100 years can also be interpreted somewhat differently. Although the newspaper survey [4] that they cite does document persecution of urban wildlife between 1890 and 1920, it is described as being mainly directed at predators, the 'bad' species. However, also evident in this survey is the active engagement of adults, and especially school children, in songbird conservation, at least in part because the benefit of these species as biocontrol agents in gardens was widely recognized. This sort of ecological awareness can also be found in the egg-collecting hobby of schoolboys described by Mehtälä and Vuorisalo [1]. The authors admit that this activity, which apparently occupied a good portion of children's free time [5], undoubtedly enhanced

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their knowledge of avian ecology. It might be that the increase in corvids during the 1960s was related to a shift in the interests of children from egg collecting to televisions, motorcycles and the like. But to say that this shift has resulted in a more aesthetic appreciation of urban wildlife, as the authors contend, is a bit of a stretch, especially when the study that they cite reports that, by the 1970s, the interest of schoolchildren in the natural world had rapidly declined and their ability to identify wildlife species 'could hardly be poorer' [4].

Aldo Leopold described the enjoyment of nature as a progression that begins at the lowest level with a purely utilitarian approach, perhaps involving hunting or fishing, and culminates at the highest level with a profound appreciation for the beauty and wonder of the natural world [6]. Are the grandchildren of the egg collectors really operating at this high level? Or is it possible that they might more closely resemble the schoolchildren in a recent study who could identify nearly 80% of images from a set of randomly selected Pokémon characters, or synthetic 'species', but fewer than half of a group of common wildlife species [7]? Or perhaps the child who said he liked to play indoors because that is where the electrical outlets are [8]?

Rather than convincingly arguing that support for the conservation of native species is on the increase among city-dwellers or that they have come to highly value urban biodiversity, Mehtälä and Vuorisalo have provided further

evidence that a larger segment of human society is more detached from the non-built environment than ever before. I believe that these authors are correct, however, in suggesting that solutions to the biodiversity crisis are more likely to be devised and supported by people who have long felt an affinity for the natural world, born from direct experience with it.

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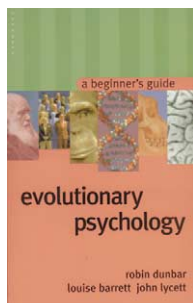
#### Book Reviews

## Why we do what we do

**Evolutionary Psychology: A Beginner's Guide** by Robin Dunbar, Louise Barrett and John Lycett. One World Press, 2005. US\$15.95, pbk (184 pages) ISBN 1851683569

### Craig Hadley

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Simple explanations that explain vast amounts of variation in human behavior across time and space, cogent theories that unlock nagging questions about sex differences and cleverly designed studies that test competing hypotheses; these are the things that make evolutionary approaches to the study of human behavior so interesting and rewarding, and they abound in

this pithy 'beginner's guide' to evolutionary psychology. The authors cover a huge range of topics without, thankfully, becoming mired in debates among social scientists about the proper way to mix evolutionary theory and the study of human behavior. The standard material, as applied to humans, is all covered here: sex ratio theory, Trivers' theory of parental investment, the gene's eye view

of the world, genetic determinism, and fluctuating asymmetry in mate choice, to name a few. An assortment of evidence from anthropological field studies and experimental psychology is reviewed to support and, more rarely, contest hypotheses drawn from first principles.

Far more novel (if less rigorously studied) however, are the sections that diverge from standard behavioral ecology and delve into uniquely human features, such as religion, story-telling and, more generally, the massive amount of cultural transmission that occurs among humans. The authors do a commendable job linking these features to the uniquely human ability to assess intentionality in others. Given the importance of Theory of Mind to many of their overall arguments, they devote an entire chapter to explaining the development of this in infants; this chapter also serves as a nice example of the distinction between different types of evolutionary questions. The other theme of *Evolutionary Psychology: A Beginner's Guide* is that many features of human psychology evolved to coordinate

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