

# Children's preferences for less diverse greenspaces do not disprove biophilia

Simone Fattorini<sup>a,b,1</sup>, Rosalina Gabriel<sup>b</sup>, Ana M. Arroz<sup>b</sup>, Isabel R. Amorim<sup>b</sup>, Paulo A. V. Borges<sup>b</sup>, and Philip Cafaro<sup>c</sup>

Hand et al. (1) make a most useful contribution to the debate on the role of urban greenspaces in providing well-being benefits for children. Their discussion of the increasing disconnection between people and nature as a result of urbanization is valuable in a context of a non-sustainable humanity. However, we challenge their claim that "Children's use of different urban habitats and their selection of habitats based on relative use and availability did not conform to the biophilia hypothesis" (1).

Children were recruited into the study from fifth and sixth grade classes (ages 9–11 y) (1). Because pre-conceptions about nature may evolve very early (2), children in the study could already have been socialized in ways that may have altered their innate biophilic behaviors. Research on public perception of the urban environment shows that the preferred format of "green" varies from one individual to the next based on cultural experience, knowledge, sense of self, and desire for security (3). In general, people who live in cities dislike disorderly greenspaces, dislike many species of wild animals, perceive parks with high tree density as unsafe (4), and consider manicured yards a status symbol (5). This means that comprehensively managed greenspaces are perceived, for cultural reasons, as better than more natural spaces.

Social criteria, including accessibility, penetrability, safety, privacy, and comfort, are more positively evaluated than wilderness (6). Thus, the preference of children for their gardens or tame yards instead of more natural places (1) is not evidence against the biophilia hypothesis, but may be just a reflection of their own culture.

Evidence of biophilia has been found in children younger than 2 y (7), but children's innate inclination to appreciate many forms of wild nature can flourish only if it's adequately stimulated. For example, young children (3–7 y) have a natural curiosity and affinity for animals (8), but if this innate attraction is not given opportunities to develop, an aversion to many animals can develop (9, 10). We agree with the authors' (1) conclusion that their "findings do not support the biophilia hypothesis," but we think that they did not really test the hypothesis, because cultural influences represented an uncontrolled factor in their study. Children's preferences for tamer, less biodiverse greenspaces could be, and likely are, driven by cultural conditioning. Given the urgency to conserve biodiversity, further research is warranted to encourage children's innate biophilia and to help develop it in a way that leads them to appreciate the natural world.

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<sup>a</sup>Department of Life, Health, and Environmental Sciences, University of L'Aquila, 67100, L'Aquila, Italy; <sup>b</sup>Centre for Ecology, Evolution and Environmental Changes/Azorean Biodiversity Group, University of Azores, 9700-042 Angra do Heroísmo, Azores, Portugal; and <sup>c</sup>School of Global Environmental Sustainability, Colorado State University, Fort Collins, CO 80523

Author contributions: S.F., R.G., A.M.A., I.R.A., P.A.V.B., and P.C. wrote the paper.

The authors declare no conflict of interest.

<sup>1</sup>To whom correspondence should be addressed. Email: simone.fattorini@univaq.it.