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Humans: Uniquely responsible for causing conservation problems, uniquely capable of solving them

Commentary on [Chapman & Huffman](#) on *Human Difference*

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Abstract: We share Chapman & Huffman’s views on the importance of promoting animal welfare and conservation. We disagree with their implication, however, that reverence for life and concern for the wellbeing of global ecosystems depend on a belief that other living things are similar to humans in any of their capacities. Humans exhibit special traits — language, cumulative culture, extraordinary capacity for cooperation when we are at our best, and ever-advancing technological developments — that enabled them to dominate the planet, resulting in the current conservation crisis. It is precisely the fact that humans have become unique that provides hope for finding conservation solutions.

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We share the views of Chapman & Huffman (2018) (C & H) on the critical importance of promoting animal welfare and conservation, but we respectfully disagree that humans should not be recognized as special. As C & H note, studies of animals in the wild and in captivity have revealed that many animals exhibit traits once considered unique to humans. Diverse groups of

animals use tools, take medicine, make complex structures, and solve complex problems. These findings are important and show that the qualitative gap between humans and other animals is narrower than people had long assumed.

However, it is not the similarity of other life to humans that matters. Plants and animals ranging from sequoia trees to coral polyps are very different from humans, but nonetheless deserve our protection. Reverence for life and concern for the wellbeing of global ecosystems should not depend on a belief that these living things are just like humans, or even similar to humans, in any of their capacities.

C & H rightly note that correcting divisive human categorizations such as gender and racial superiority has bettered society. Such divisive categorizations are illegitimate because all humans share a common humanity, which does not depend on their gender or their ancestry. We also share a common heritage with all living beings. Yet while humans are part of nature, products of natural selection, and linked to every other species on the planet in the Tree of Life, humans have become special in many consequential ways. While honeybees can communicate the location of food sources with their waggle dance, and apes, parrots and dogs can learn to use and/or understand elements of human language, human language remains unparalleled in its richness and range of expression (Fitch, 2010). Only humans have demonstrated the capacity to become literate, to record memories for future generations, and indeed to wonder about and argue about whether humans are special. Only in humans has cumulative culture resulted in the rapidly accelerating technological developments that make possible the transmission of such arguments over a technological development like the Internet.

Diverse animals have evolved the mental sophistication needed to use tools, but in humans, cumulative culture results in a recursive process that produces accelerating complexity and the sophistication of tools (Henrich, 2017). On an individual scale, humans and animals such as chimpanzees may appear to differ only quantitatively in their cognitive capacity. With language, however, cumulative culture amplifies this quantitative difference into a qualitative difference, by giving individuals access to the accumulated experience and insights of countless other people across generations. Though it may seem derogatory to chimpanzees, sea otters, and cactus wrens, we mustn't ignore reality. Stripping leaves off a twig to pull out termites differs qualitatively from stripping aluminum from the Earth's crust to create a 747. Similarly, while other animals use plants as medicines, no animal other than humans has cultured penicillin or accomplished a heart transplant. While humans have achieved the capacity for such accomplishments only recently, it accomplishes little to pretend that such capacities have not made humans unique.

The very activities that threaten the existence and wellbeing of so many other species indicate that humans are a strikingly distinctive species. Humans are uniquely responsible for the transformation of vast portions of the planet's surface into cities, towns, farms, and livestock ranges. Humans are uniquely responsible for devastating the world's oceans with industrial-scale overfishing and pollution. But humans are also uniquely able to understand the effects of their own activities on global ecosystems. Human cities, farms, and livestock ranches may have parallels in the colonies of social insects, but no one would seriously argue that individual ants or termites have minds that enable them to understand their impact on the world.

We are beginning to understand how our activities affect the world, and have taken some steps to alleviate that impact: setting aside land in national parks and other protected areas; passing and enforcing laws to protect endangered species; banning toxic pesticides and nuclear testing; and reducing pollutants that cause smog, acid rain, and ozone depletion. Many more such steps are urgently needed. This will require broad publics to change their minds and actions in many ways. People must come to realize that rhinoceros horns and pangolin scales do not have magical powers; that predators such as lions and wolves can improve ecosystem health; and that human flourishing depends on healthy ecosystems. The early experience of Biosphere II demonstrated that we currently have no viable alternative to the life support systems of earth.

We agree wholeheartedly with C & H that "it is time for our species to use our intellect to change our actions." It is precisely because humans have become unique that there is hope for accomplishing such changes.

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