Everyone agrees that biodiversity is valuable, but not everyone agrees what that value is. Is it economic, in dollars and cents? Is it non-economic, but still quantifiable? Is it intrinsic, not even quantitative? Is it all of the above and, if so, how do we sum up or compare these different values to make decisions?

Historical arguments for conservation have often emphasized intrinsic values. We conserve because of the beauty of biodiversity, the wonder and inspiration it evokes. We conserve because of moral convictions about stewardship, the belief that species have a right to exist. We conserve because of our personal experiences with nature.

Contemporary arguments for conservation have swung toward utilitarian values – specific, quantifiable benefits for society. Arguments for “ecosystem services” or “natural capital” often value habitats and their species in monetary terms, distilling human priorities into numbers readily understood by stakeholders. Despite a growing body of work in this area, there is still much debate about whether such utilitarian arguments advance conservation.

After estimating the economic value of plant species richness for carbon storage and climate protection (Hungate et al. 2017; Science Advances 3; https://doi.org/10.1126/sciadv.1601880), we recently found ourselves engaged in this debate. Our attempt to convert diversity to dollars (WebFigure 1) provoked strong reactions from many of our peers, families, and friends. “Why place a dollar value on something that is priceless?”, they said, many being the very people toward whom our message about ecosystem services was directed.

Our experience is not unique. The NatCap project (www.naturalcapitalproject.org), which helped pioneer the quantification of ecosystem services into decision making and land-use choices, has found that stakeholders sometimes object to distilling the value of species or their habitats into dollars. Entire countries resisted signing an international agreement to establish the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES; www.ipbes.net) until ecosystem services could be defined as a broad suite of human values, not just economic ones.

Why does the pushback against monetary valuation persist? First, the philosophical divide between those who believe intrinsic values are more persuasive than utilitarian ones has been reinforced by fear that as soon as economic value is quantified, nature is up for sale. There is concern that the aspects of nature that are most easily quantified (e.g., carbon storage) may also have the lowest values. Aspects that are more difficult to quantify, like aesthetic and spiritual values, are elusive and absent from most ledger sheets. With only part of biodiversity’s value considered in decisions based on economics, nature may well lose.

Second, there is growing skepticism about what economics can deliver for conservation. We have worked with many environmental economists who argue that nearly every human behavior can be distilled down to dollars and cents, including physical and mental health, individual happiness, and even the value of human life. While it may be possible, in principle, to evaluate all human decisions in economic terms, non-economists often reject the attempts to do so – either on philosophical grounds or on the basis that the models and methods required are laden with disagreeable assumptions.

Third, as a community of researchers, we have generally failed to provide compelling evidence that biodiversity can be valued through an economic lens. While a mountain of published papers have claimed that biodiversity has economic worth, we continue to be surprised at how few have produced quantitative estimates. Of those that have, we could count on one hand those that have married ecology and economics in a convincing way to develop predictive models.

Given these shortcomings, it is worth asking: Should we (1) more fully embrace utilitarian arguments and pour effort into improving economically based valuation, (2) worry less about dollars and focus more on other quantifiable but non-economic forms of human value, or (3) revert to many of conservation’s original, intrinsic arguments about the inherent values of biodiversity?

In our opinion, economic models that value biodiversity can powerfully motivate conservation. They need to be more fully embraced by conservation biologists and incorporated into the training and toolkit of future practitioners. At the same time, we feel the pendulum has swung too far toward monetary arguments. The love of beauty, wonder, inspiration, and personal experience are what led many of us to pursue our current careers, and these resonate with a large fraction of society. So even as we call for practitioners to embrace the multiple perspectives that find value in biodiversity and argue for its conservation, we also call for a rebalancing of the arguments in proportion to what best motivates people in society.