How diverse are the environmental worldviews of undergraduate natural resource students?

Diversity beyond demographics: Environmental worldviews of forestry and natural resource undergraduate students

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How diverse are the worldviews of undergraduate students in the natural resources? Is worldview another facet of diversity to foster?

Over time the demographic diversity in the natural resources has increased and academic institutions often desire to further increase diversity in these fields. A diversity of perspectives and beliefs is expected to be achieved through establishing a demographically diverse student body. However, there has been no direct evaluation of the perspectives and beliefs of students in natural resource fields. In this study, the authors investigate the environmental worldview, as they termed it, of undergraduate students in forestry and other natural resource majors.

What were the dimensions of environmental worldview and how did they differ among majors?

- The metaphysical/ethical portion of worldviews (anthropocentrism, hierarchy, dualism) differed by major category.
- In general, forestry students' beliefs were more strongly aligned with the dominant worldview, which means they are more anthropocentric, dualistic, and hierarchical in their views than non-forestry natural resource students.
- The ethics/epistemology portion of worldview encompasses the modes of moral reasoning. Students in all major categories ranked virtue first and divine command last. However, forestry students ranked utilitarianism second-highest, which differed from their peers in all other majors, who ranked utilitarianism second-lowest.

Did students in some majors indicate that including the humanities in their course of study would be positive change?

- For the epistemology measure of attitudes toward the humanities, all majors had positive views. However, the mean scores were lower for forestry students than non-forestry students and forestry students were less likely to want the humanities included in their field of study.

Where the differences among majors indicative of a completely different environmental value system, or of differing degrees of a shift away from the historical dominant worldview?

- The authors argue that although forestry students' beliefs were more strongly aligned with the dominant worldview, the nuances within their beliefs are part of an evolution of worldviews happening on a generational scale.

Do natural resource practitioners need additional training or knowledge to succeed in this new landscape of worldview diversity?

- People studying and working in the natural resources will need a groundwork in how to understand, evaluate, and discuss dominant and nondominant worldviews. Academic institutions can create space for this to occur.

How can academic institutions use these findings to support students and to evolve their programs for current needs?

- Departments in the natural resources should think about how they present their programs to prospective students because some departments may be or appear to be more aligned with the dominant worldview than potential students.
- Courses of study in the natural resources could incorporate the humanities, perhaps by including environmental philosophy, history, or ethics, in introductory or capstone courses.
- Departments should expand their definition of diversity to include demographic and worldview diversity in their pursuit and support of students, faculty, staff, and partners.

Research Approach/Methods

- The authors developed a survey to measure environmental worldviews using Likert-type questions from three established scales measuring psychological constructs related to the environment. They administered the survey to students studying forestry and a variety of other natural resource majors.
- The researchers used principal components factor analysis with a varimax twist to identify three factors: bond with nature, moral inclusion, and human role. They created composite measures of bond with nature and moral inclusion because they had high internal reliability, and two individual scores to represent human role.
- Researchers had students rank whether and how strongly they agree with each of five statements describing the appropriate way to approach environmental decisions to determine if their outlook differed from the dominant utilitarian moral reasoning mode.
- To determine how students valued other ways of knowing, the authors asked students to rate five statements about the value of the humanities. All five items loaded on a single factor with principal components factor analysis. The authors created a composite score for attitude toward humanities.
- The authors grouped majors into 4 categories, Forestry, Fisheries Wildlife and Animal Sciences, Natural Resources, and Other (which included Tourism, Recreation and Adventure Leadership, Biology, and Sociology). They then used ANOVA to compare responses among categories.

Keywords diversity, environmental worldviews, ethics, humanities, natural resources education

Images

RANK 1

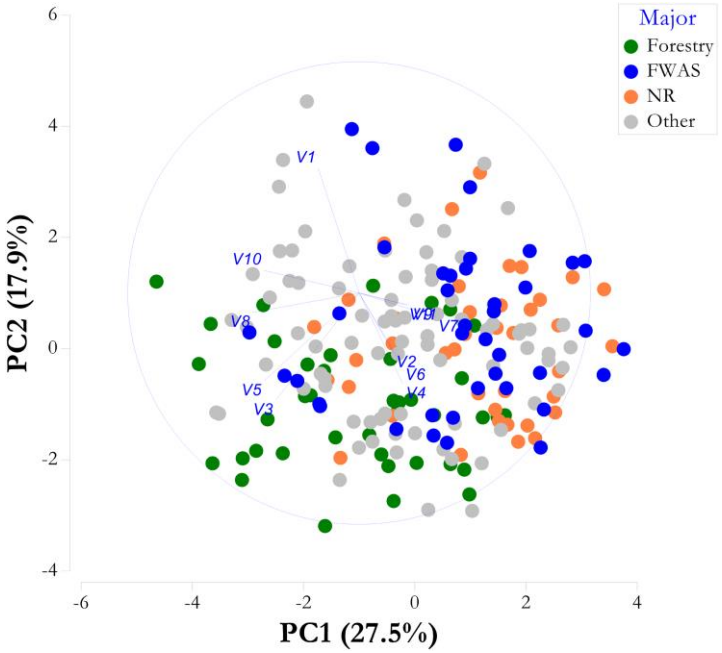

Figure 2 in Cruz et al. 2022. PCA of environmental worldview items by major Category

RANK 2

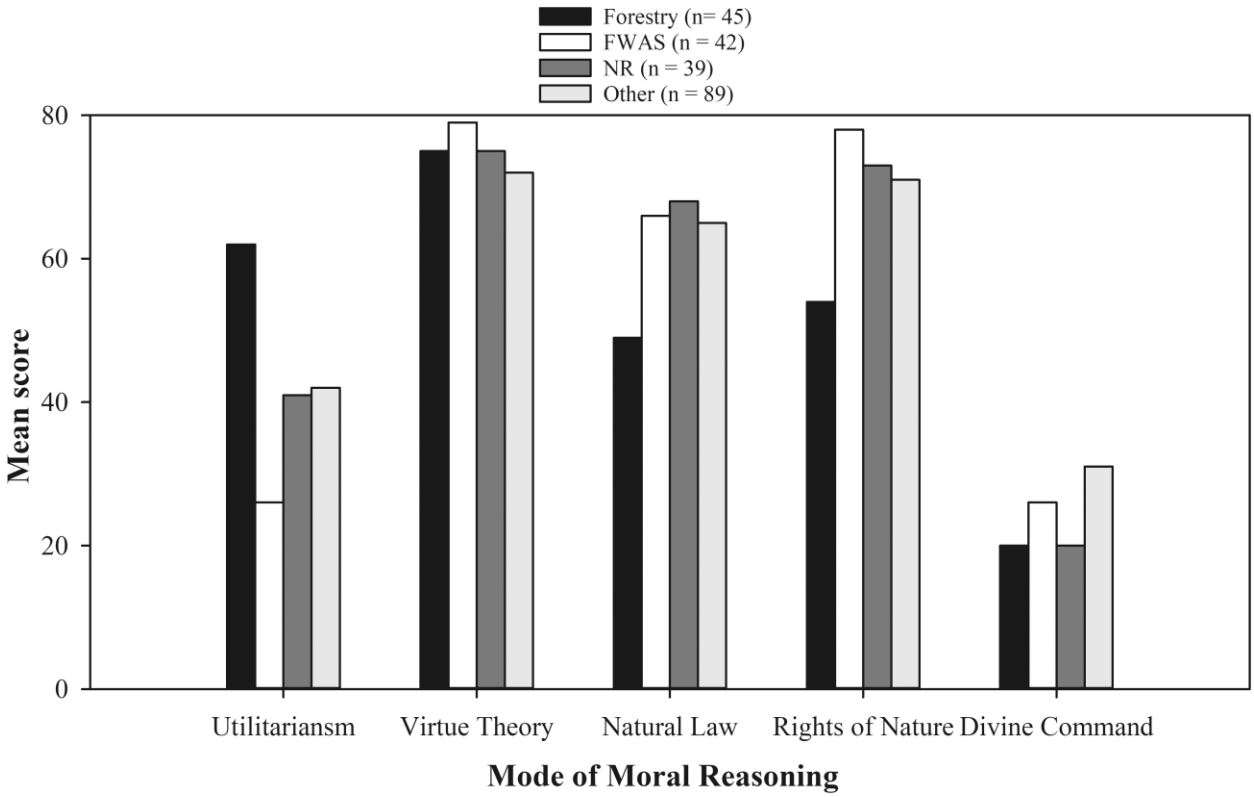

Figure 3 in Cruz et al. 2022. Mode of moral reasoning mean score by major category

RANK 3

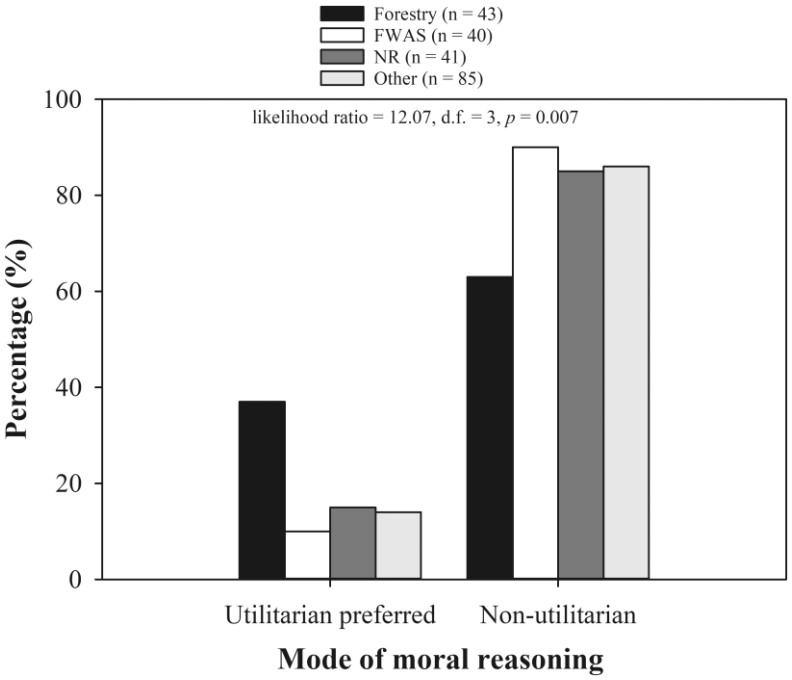

Figure 4 in Cruz et al. 2022. Percentage of students who prefer utilitarian mode of moral reasoning

RANK 4

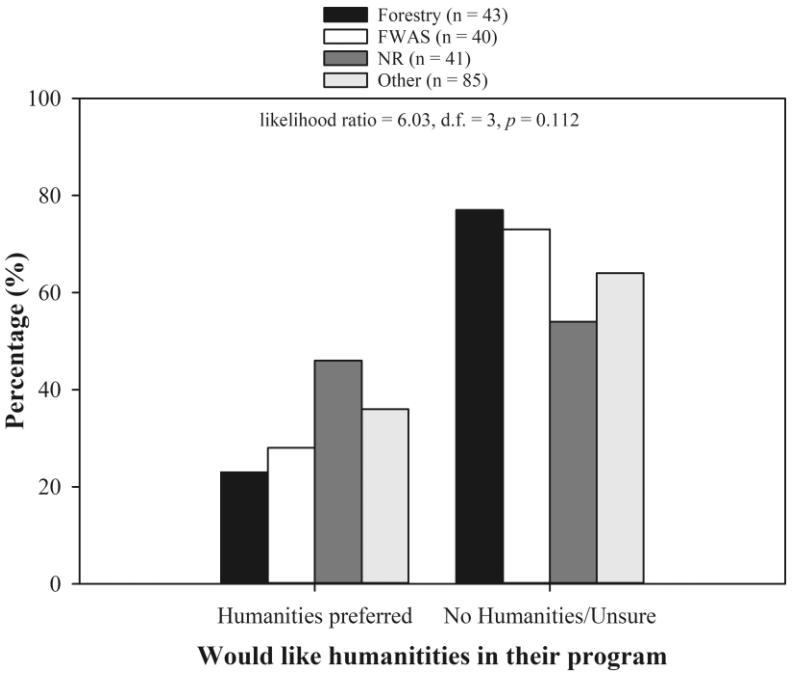

Figure 5 in Cruz et al. 2022. Percentage of students who would like humanities as part of their undergraduate program