Experience in Agriculture and Cultural Worldview May Influence Public Opinion

Tracee M. Schiebel

Kathryn A. Stofer

University of Florida
P.O. Box 110540
Gainesville, FL 32611

Tracee Schiebel, tschiebel12@ufl.edu
***Kathryn Stofer, stofer@ufl.edu, (352) 273-3690**
***Corresponding Author**

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Introduction

Risk perceptions and cultural worldviews are connected, perhaps more so than simple literacy about an issue (Kahan, 2008). Individual cultural worldview as well as experience with or exposure to an issue (Zajonc, 2001) can shape opinions and beliefs on current issues. Understanding worldview and experience with agriculture, therefore, can be beneficial to the agricultural industry who may want to understand consumer perception of environmental impact risk and acceptance of various agricultural techniques. Few Americans live on farms today (Environmental Protection Agency, 2013). Discovering effective methods to learn public opinions in agriculture is a priority of the American Association for Agricultural Educators (Enns, Martin, & Spielmaker, 2016). Our study compares two new tools, worldview and agricultural experience, as a precursor to using the scales in public opinion research.

Theoretical Framework

The Cultural Theory of Risk states that perceptions reflect and reinforce a person's "cultural way of life." Inspired by a collection of Douglas and Wildavsky's (2010) cultural theory work, Kahan's (2008) cultural worldview scale produces a grid with each quadrant defined to represent a worldview on two continua: *Hierarchical-Egalitarian* and *Individualism-Communitarianism*. The statements on the cultural cognition scale are social statements, reflecting how a person views government, society, and personal rights broadly.

Methods

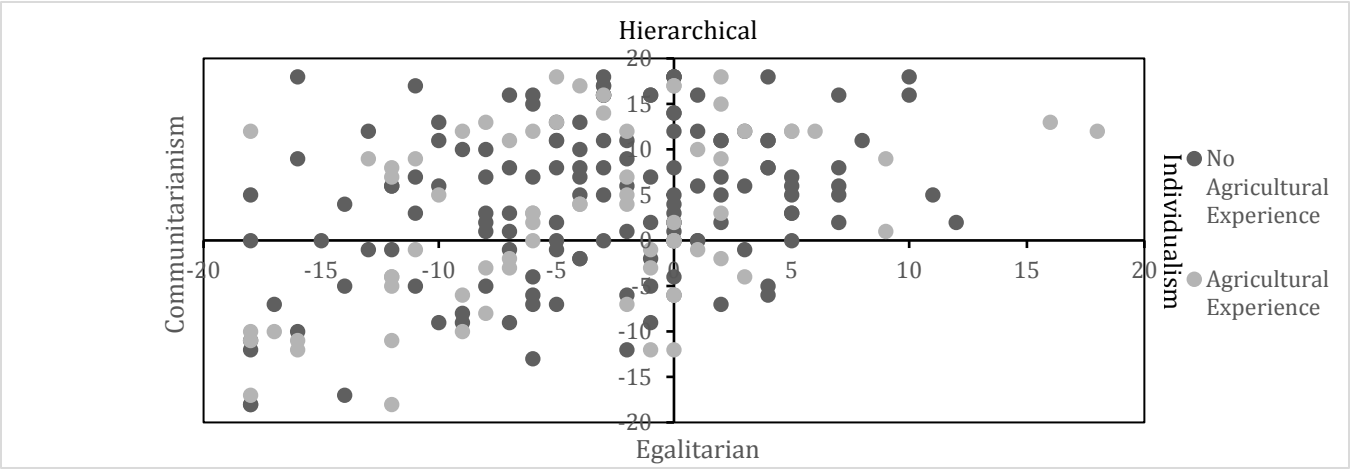
We collected responses from a sample of 216 United States adults at the end of August 2016 using Qualtrics survey recruitment. These questions were part of a larger survey including information on genetic engineering. Participants were asked the short form of the cultural worldview scale (Kahan, 2008), indicating agreement with statements using a Likert-type scale ranging from -3 *strongly disagree* through +3, *strongly agree.* We summed responses from all 12 statements to provide coordinates in one of the four quadrants for each respondent. We determined respondents' experience in agriculture using self-report on seven statements, including experience with agriculture from school, living or working on an agricultural operation, or other non-formal experience. We considered respondents who indicated experience in any of these areas to have agricultural experience; other respondents had none.

Results

Of the 216 respondents, 72 (33.3%) had experience in agriculture. Less than five percent (n = 7) of respondents were Egalitarianism-Individualism. Figure 1 includes the respondents' worldviews coded by their amount of agriculture experience, and Table 1 shows the specific Cultural Cognition categories and experience in agriculture for each. Overall, we found nearly a 2:1 ratio between hierarchy (n = 114) and egalitarianism (n = 59), and between communitarianism (n = 124) individualism (n = 49). These ratios also varied depending on whether respondents reported experience with agriculture.

Figure 1

Cultural Cognition and Experience in Agriculture



Note. The graph does not display data points where multiple have the same coordinates (n =36).

Table 1

Cultural Cognition Category and Experience in Agriculture

	Hierarchical Individualism	Hierarchical Communitarianism	Egalitarian Individualism	Egalitarian Communitarianism
No Agricultural Experience	29	49	4	29
Experience	13	23	3	23
Total	42	72	7	52

Note. The table does not include data points that fell between categories (n = 43).

Conclusions/Recommendations

Our sample revealed differences in worldview between people with and without self-reported experience in agriculture. Particularly, few people with or without experience were egalitarian individualists in our sample, and more people in both experience categories were communitarian. However, agricultural experience made a difference in the proportion of people in each quadrant of worldview. We did have almost 20% of respondents fall on the line between categories on one or more continua. Overall, a larger sample size would help reinforce findings. However, we think our results indicate a need for a better-defined experience in agriculture scale as well as better understanding of the distribution of cultural worldviews among U.S. adults.

Understanding an individual's worldview, agricultural experience, and their relationship are promising ways to understand public views about agriculture beyond simply their level of knowledge about issues such as genetic modified organisms, as well as design interventions to help promote agricultural issues among various groups. This relationship is important to discuss because an individualistic worldview includes beliefs that dismiss environmental impact and technological risk in agriculture (Kahan, 2008). Together, these measures will help our efforts to promote agricultural literacy (Enns et al., 2016).

References

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