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Viewpoint

Beasts of the field? Ethics in agricultural and applied economics[★]

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ABSTRACT

Ongoing changes to research practices and recent media attention to agricultural and applied economics have raised new ethical problems, but also created opportunities for new solutions. In this paper, we discuss ethical issues facing the profession and propose potential ways in which the field can address these issues. We divide our discussion into two topics. First are ethical issues that arise during the collection, management and analysis of data. Second are ethical issues faced by researchers as they formulate, fund, and disseminate their research. We pay special attention to issues of data dredging or *p*-hacking and potential ethical issues arising from interaction with the media.

A man without ethics is a wild beast loosed upon this world.

Albert Camus

1. Introduction

In the nearly three decades since Breimyer (1991) reviewed the history of scientific practice within the discipline, agricultural and applied economists continue to see themselves as scientists, "diverse and... disputatious," but fundamentally devoted to the scientific principle (Breimyer, 1991, p. 243). However, the field lags behind other scientific disciplines in addressing both "science and formal scientific practice" (Breimyer, 1991, p. 251), meaning both the what and the how of scientific inquiry. Peterson and Davis (1999) raised this concern two decades ago, yet only a few departments have followed their recommendation to include research ethics as a part of applied economics

training. The recent media attention to the profession has provided a useful reminder that agricultural and applied economics is not immune from the ongoing credibility crisis in science. The coverage suggests that those of us in the profession need to provide greater consideration of the issue of ethical research practices, scientific misconduct, and our responsibilities to ethical behavior in our work.

In this paper, we focus on ethical issues arising from the scientific practice of agricultural and applied economics research. Competing interests within the field, over tenure, promotion, publication, funding, etc., create incentives for researchers to engage in scientific misconduct. Though, as individuals, one might adhere to the guidelines regarding research misconduct, as a profession we do relatively little to train future generations, or discuss the intricacies of misconduct, or the ways in which economists must make ethical decisions in research every day. Our objective is to formalize the ongoing discussion of the ethical issues facing the profession and to propose potential ways in

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^{*}Authors are listed alphabetically. While we may name certain universities, individuals, or other parties, we do so only for illustrative purposes. We do not purport to be ethical arbiters of our profession, but rather we write this paper to promote discussion in the field. We are particularly grateful to Marc Bellemare, editor, and an anonymous referee for extensive advice. Nicole Ballenger, Chris Barrett, Karen Brooks, Marcel Gatto, Doug Gollin, Tom Hertel, Jayson Lusk, Will Masters, Jill McCluskey, Hope Michelson, Frank Place, Gerald Shively, Peter Slade, Tristan Skolrud, Melinda Smale, and Wally Tyner were all very generous with their time and provided helpful thoughts and comments on earlier drafts of this paper. All errors are our own.

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¹ That said, the credibility crisis seems to have been going on since 1971, when the phrase first shows up in the academic literature (Schick, 1971). Recent examples of popular media coverage of the crisis in the profession can be found on Slate and Buzzfeed, among others.

² Scientific misconduct, as defined by U.S. governmental science agencies and most research universities, includes acts of wholesale fabrication of experimental or survey data, falsification of data, and plagiarism (Wible, 2016).

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which the profession can address these issues.³ In this, our objective is similar to Kennedy (2002), who attempted to formalize behavior in applied econometrics. Many of these topics are not new, nor are we the first to propose some of the recommendations that follow. The re-examination of the state of research ethics in agricultural and applied economics is motivated by the current cultural climate, but such periodic reflections are necessary, regardless of contemporary headlines. Since the inception of what is now known as the Agricultural and Applied Economics Association (AAEA), there has been acknowledgment that establishing ethical norms for the profession is an important component of the organization's mission (Breimyer, 1991). The purpose of this article is to contribute to that mission and to again bring to mind the ethical challenges that agricultural and applied economists face at every stage of research.

We begin by reviewing the existing conversation regarding research ethics as it exists in journals affiliated with the regional, national, and international associations of agricultural, applied, and resource economists. We then discuss ethics and ethical behavior under two main topics. The first topic is data collection and analysis, including study design and implementation, data management and cleaning, and data analysis and econometrics. Increased computing power has reduced the marginal cost of running additional regressions, necessitating self-censorship of the results a researcher presents, and does not present, to the world. The second topic is the funding and findings of research, including the dissemination of results in both academic publications and mainstream media settings. Research dissemination has changed rapidly in recent years and little has been published regarding the ethical implications of these changes for the profession.

While we endeavor to provide a thorough discussion of current ethical issues, our coverage is far from exhaustive. We take as given the arguments of Breimyer (1991) and Peterson and Davis (1999) that ethics is a relevant concern to agricultural and applied economists. We also do not cover issues of plagiarism as there seems to be little disagreement within the profession regarding this topic. As a further note of caution, we do not claim to have the solutions to all the issues which we raise here, nor do we claim to be arbiters of ethical behavior in the profession. While we address several sensitive issues and provide suggestions for dealing with them, we present these ideas as a stimulant for discussion in the profession, not the final word. The goal is that this paper, like those before it, serves to encourage economists to engage in a more open discussion of the ethical principles and practical guidelines for conducting research. For without such principles, we are just beasts of the field.

2. Current views and the ongoing conversation

Agricultural and applied economics has had its own conversation regarding research ethics, tailored to the unique research questions of agricultural, resource, and other applied fields within economics. Conversations regarding research ethics frequently take place on blogs, such as the blog maintained by Marc F. Bellemare or by Andrew Gelman. They also occur as part of the scientific program at association

meetings, among journal editors, and association board meetings.⁶ Ethical issues have also been part of external reviews of social science research within the Consultative Group on International Agricultural Research (CGIAR) (CGIAR, 2004; Barrett et al., 2009). While this conversation has been active in a variety of settings, the published record of late is dormant.

To gain a sense of the present state of formalized discourse on research ethics in the field, we conducted a systematic search of the 14 journals affiliated with one of the regional, national, or international associations (see Table 1). We divided the process into three phases: searching, screening, and coding. The first phase involved searching the databases containing issues of the journals going back to inaugural issues. We conducted a Boolean search using the following terms: "ethic*", "research practice*", and "research misconduct*". Phase two involved screening the positive results from the search. The screening strategy was to read through titles, abstracts, and keywords, and to apply inclusion and exclusion criteria to determine whether or not the article was within the purview of our investigation. In the final phase, we read papers that passed the screening and coded these as either related or relevant.

The term "ethic*" appears in 657 articles across all 14 journals. Most articles containing variations on the word ethic refer to work ethic or ethical issues around food. 10 Many articles mentioning "ethics" discuss ethical behavior within the population being studied, such as Burness et al. (1983) on the ethics of allocating water rights. Forty-two articles were coded as related and these tended to discuss ethics within field work and experiments (Barrett and Carter, 2010; Colson et al., 2016; Ehmke and Shogren, 2010; Rousu et al., 2015). Some articles simply mention that the study has received approval from an ethical review board but do not discuss the nature or necessity of ethical review. Both Barrett and Carter (2010) and Goetz et al. (2018) discuss "researchers' ethical" obligations to research subjects in an experimental setting and when using data from corporations such as Facebook and Google. Some presidential addresses in AJAE touch on the topic of ethics broadly, including Pinstrup-Anderson (2005), Goodwin (2015), McCluskey (2016), and Swinton (2018).

Only three of the 657 articles were coded as relevant. They include Breimyer (1991) and Peterson and Davis (1999) in AJAE and Debertin et al. (1995) in JARE. Breimyer (1991) examines agricultural economics in the context of science, scientific investigation, and the scientific method. The focus of the paper is on moral decisions within the research process and the ethical implications of work, rather than the ethical process of work itself. Similarly, Peterson and Davis (1999) criticize "modern" applied economists and the belief that economic research can be value-free, having little to do with ethics. The authors observe that "ethics might be defined as the search for the right thing to do given the relevant facts of the matter...Applied economic analysis is often central in shedding light on the facts of the matter" (Peterson and Davis, 1999, p. 1174). Both articles build a strong case for economics as a science that should be guided by ethics, but offer few suggestions regarding what those guiding principles should be. Debertin et al. (1995) do more to offer guiding principles in research, addressing guidelines to specific research situations faced by agricultural

³ DeMartino and McCloskey (2016b) have recently edited a handbook on ethical issues in economics. While we find the handbook an extremely useful resource, the editors have targeted a broad audience, and thus many of the ethical issues specific to agricultural and applied economists are only briefly touched on.

⁴ RePEc tracks incidences of plagiarism and deals with them accordingly.

⁵ Latsis (1980), Maki (2008), and Sen (1999) are instructive examples of the broad ranging discussion of ethics in social science and economics, though this is not an exhaustive list. The *Review of Social Economy* recently dedicated an entire special issue to the topic of "Scientific misconduct and research ethics in economics." For more information on this special issue, see Yalcintas and Wible (2016).

⁶ As examples, the 2019 AAEA sessions at ASSA will include an invited paper session on "Ethics in Agricultural and Applied Economics Research" and the 2015 annual meeting of AAEA saw a track session on the topic of "Incorporating Ethics in Economic Analysis."

 $^{^7}$ Given the frequent changes in publisher and the (slightly) less frequent changes in journal name, not all back issues of a journal are accessible within the same database.

 $^{^8\,\}mathrm{We}$ also tested terms including ""research" AND "practice"" and ""research" AND "misconduct"".

⁹ Relevant indicates direct relation to our topic of interest while related indicates an indirect or tangential relationship to our topic of interest.

¹⁰ One seems to include a typo, in which the authors refer to "ethic" origin.

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