

Integrating an Ethical Perspective into Field Experimental Research

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Abstract

The drive to try and understand the world, and to use that understanding to solve the various and complex problems that humans face, has been part of human culture for thousands of years. A foundation of the scientific method is creating and testing hypotheses, and the experimental model plays a critical role in this process.. There is a long history of this kind of experimentation in biomedical research, but the use of experimental research designs in the social sciences is a relatively newer phenomenon (Deaton & Cartwright, 2018).

There has been a significant increase in the focus on experimental research by social scientists. This increase is discussed in Druckman, Green, Kuklinski & Lupia, A. (2006): “Although a steady stream of experimental articles appeared in the 1980s, more than half of the articles whose research fits the conventional definition of an experiment appeared after 1992... *Research satisfying the modern definition of experiment is a relatively new phenomenon in political science.*” (629) This same trend is highlighted by Desposato in his presentation slides “Ethics in Experimental Research” for the BITSS Summer Institute, June 2015. He notes that not only are social scientists conducting more experiments in general, they’re also conducting more experiments in the field (not just the lab), and not only in the United States, but abroad (slides 5-8).

There is tremendous emphasis placed on the importance of research design, particularly for researchers who wish to draw causal inferences from their data (Rubin 2008), and there is, of course, no argument against this perspective. However, in addition to the technical aspects of research design, there are ethical considerations that researchers must take into account but often are not documented in the final product of the research, the published article..

The overall ethical treatment of human research subjects has, of course, been a long-standing topic of salience for researchers across many disciplines. Work to codify standards of treatment and rules of conduct has been on-going. Post-World War II, as evidence of the atrocities committed by the Nazis was uncovered, the Nuremberg Code was developed as a set of guidelines for researchers for treatment of human subjects. The Nuremberg Code in particular serves as the foundation for many other codes of ethics, including the Helsinki Declaration, adopted by the World Medical Association originally in 1964, and amended in 2013 (World Medical Association, 2013). In 1974 in the United States, the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research was signed into law. In 1978, the Belmont Report was released. “The Belmont report attempts to summarize the basic ethical principles identified by the Commission in the course of its deliberations.” (The Belmont Report Summary) In addition to the basic principles, the Belmont Report also offered guidelines for applications thereof.

While much of the focus of these various codes and reports is on biomedical research, which, for obvious reasons, can carry risk of significant harm for participants, the social sciences are not exempt from the concern of the ethical treatment of their research subjects. While in some ways, it may seem that many experiments and studies do not carry the same kind of risk of harm or injury as biomedical research, it is not the case that social science research is without risk. The issue of ethical practice in field research is of critical importance because field research, at the heart of it, involves the manipulation of real-world circumstances in real people’s lives.

In this paper, I will review the main areas of concern related to ethics in research involving human subjects, and more specifically, field experiments. I will then discuss briefly

how ethical issues are disseminated to researchers. In addition, I will talk about how the Common Rule and the process of the Institutional Review Board (IRB) relates to ethical issues, as well as how ethical issues are related to the larger issue of transparency in research. I will then present the results of an initial pilot study looking at how ethical concerns are discussed (or not) in published articles in two prestigious journals: The American Journal of Political Science and the American Economic Review. I will conclude with suggestions for future research as well as ways that researchers might integrate an ethical concerns perspective into the research process from design to publication.

Overview of the Areas of Ethical Concern in Field Experiments

As the EGAP Ethics Committee (2019) notes in their memo submitted to the APSA, “Researcher contact with human subjects often has an interventional aspect and therefore has the potential to affect those immediately engaged in the research and then broader populations (including through political processes).” (p. 2) As many troubling examples in history demonstrate, working with human subjects generates the potential for the abuse of those subjects. There are additional ethical concerns as well, particularly when doing research outside of the United States. Desposato (2015) notes, “Cultural, economic, and religious norms mean that our simple and safe treatments may be extremely high risk in other environments.” (Slide 16). We must be concerned not only with our research participants, but with our field staff as well.

The first basic principle outlined by the Belmont Report is that of “Respect for Persons” (B1). At its heart, this refers to treating people as ends in and of themselves, not as means to an end. The practical application of this principle is that of informed consent. (C1) This means that

researchers must treat possible research participants as autonomous beings, capable of making reasonable decisions for themselves, based on sufficient information. The burden is on the researcher to provide this information in an accessible way to the potential participants. The Belmont Report makes a specific note that not only must researchers respect autonomy (essentially, that participants must make the decision to participate of their own, uncoerced will, and that participants must be able to withdraw from the research at any time), but also that researchers must be aware of the potential of diminished autonomy. This is to say, there are potential participants who are vulnerable and must be protected.

One very important note that researchers must take into consideration as they design a study and seek participants is the power that they hold as the authority in the research scenario. As Katz (1996) notes:

One of the most important findings of the Advisory Committee on Human Radiation Experiments included an assessment of contemporary research practices, showing that patient-subjects believe that "an intervention would not even be offered if it did not carry some promise of benefit,"⁵ and therefore the consent process was "a formality" to which patient-subjects need to pay scant attention. Patients' expressions of faith and trust make it clear that their rights can only be protected if physician-investigators learn that such trust must be challenged. (1996)

Again, while the potential risks of social science research may generally be lower than the risks of biomedical research (though not, it can be argued, always), this is an important point for researchers to remember. Managing the power dynamics of performing research using human beings is an essential part of an ethical research practice.

The second ethical principle is that of “Beneficence” (B2), or the general principle of doing good. The Report states, “Two general rules have been formulated as complementary expressions of beneficent actions in this sense: **(1)** do not harm and **(2)** maximize possible

benefits and minimize possible harms.” It must be noted that there is a possible ethical conflict created here. Researchers must seek to minimize harm to their participants, but in order to understand what harm might be at risk, they may need to expose their participants to harm. In addition, there is the question of how one evaluates the balance between overall benefit of the research vs harm or potential harm done. This assessment is, in fact, the practical application of the principle (The Belmont Report, C2), and the complexities of this application are addressed in the Report.

The third of the basic ethical principles outlined by the Belmont Report is that of “Justice” (B3). “Who ought to receive the benefit of research and bear its burdens?” The Report notes the historical precedents in which the burden of experimentation was borne by the disadvantaged and poor, while the privileged benefited. As the report states:

Against this historical background, it can be seen how conceptions of justice are relevant to research involving human subjects. For example, the selection of research subjects needs to be scrutinized in order to determine whether some classes (e.g., welfare patients, particular racial and ethnic minorities, or persons confined to institutions) are being systematically selected simply because of their easy availability, their compromised position, or their manipulability, rather than for reasons directly related to the problem being studied. Finally, whenever research supported by public funds leads to the development of therapeutic devices and procedures, justice demands both that these not provide advantages only to those who can afford them and that such research should not unduly involve persons from groups unlikely to be among the beneficiaries of subsequent applications of the research. (B3)

The Report, in discussing the practical application of the principle of justice, focuses entirely on the issue of the selection of research subjects, and does not address the latter point they make, about the question of who benefits from the research being done, and in particular, the statement that if the research participants cannot afford the benefits of the research in which they have

participated, those benefits should be made available to them. At whose cost, however, those benefits should be provided, the Report does not presume to speculate.

As the report states, “the principle of justice gives rise to moral requirements that there be fair procedures and outcomes in the selection of research subjects,” (C3), and makes the further distinction that justice must be assessed at both the individual and the societal level, and that particular care must be taken with subjects from vulnerable groups, for example, the incarcerated, the economically disadvantaged or the terminally ill.

In addition to the principles outlined in the Belmont Report, which focuses on the treatment of human subjects in research, there is another area of ethical concern for researchers, which is that of confidentiality. There are two kinds of confidentiality with which researchers must be concerned: the first is the confidentiality (or anonymity) of their subject’s identities, and the second is the protection of their data in the digital era (that topic is beyond the scope of this particular paper, but is important). Of note is that there is potential for harm related to the first type of confidentiality, in that some types of research can put participants at risk. In addition, the current push in the science community towards greater transparency and replicability by making data available may be in conflict with the need to delete data or keep it private (BITTS).

Whitfield (2019) argues that the principles that have come out of biomedical research are insufficient for creating an ethical standard for political science research for several reasons. He makes the claim that biomedical research is “therapeutic in nature” (529), meaning it is focused on intervening on pathologies in the body, and finding ways to change, heal or improve the health of the body. This focus is based on what he claims is “...wide agreement on a positive good to be pursued.” (530) This is not the case for political science, which he argues is neither therapeutic in nature, nor based on any widespread agreement as to what would constitute a

moral good. In addition, he draws a distinction between biomedical research, which is focused on increasing health in individuals, and political science, which is “...distinctively concerned with people in or as committees, associations, states, polities, nations, corporations, and other types of groups engaged in some manner of collective decision making.” (530) He claims that it is the political orientation of political science research that means “... researchers must take seriously the ethical weight of group decisions in ways that most biomedical research need not.” (531) Whitfield then outlines different levels of harms that can be created through human subjects research: individual (as a result of the intervention made on an individual; diffuse (meaning the impact of the harm is that the world or context is changed in ways that hurt people); and collective (which he claims is very relevant in political science research). He claims:

...so long as one agrees that there are some more or less well-defined groups, that those groups make decisions, and that those decisions are sometimes authoritative over dissenting members and legitimate from the perspective of nonmembers, then we face an ethical problem of interference on those decisions. (532) In essence, Whitfield argues that interference in group behavior by an outside party, such as a researcher, is an ethical concern. Whitfield does not set forth any guidelines for how to resolve these concerns, rather he simply asserts that including political values in a framework of ethical research standards for political scientists is important, and “I conclude with a call for political theorists to engage forthwith in experimental political science ethics, and to work toward a set or sets of principles that might help guide researchers, reviewboards, and others toward better, more ethical practices.” (536)

All of this is to say that there are multiple areas of ethical concern within the research process, and while there are published standards, there is question whether the biomedically-based codes of ethics around human subjects research are fully adequate to assist social scientists in decision making in their research design and execution. This is clearly an on-going area of concern with more work to be done.

Example of Possible Ethical Conflicts

Desposato (2018) delineates two typical kinds of research done by political scientists: informational field experiments, where researchers give participants information of some sort and then observe behavior; and correspondence study field experiments, where researchers interact with subjects, hiding their identity, and then measure subjects' responses. He then articulates two areas of possible ethical conflict in these types of experimental designs.

The first area of potential harm is with respect to the issue of harm to participants. While Desposato does argue that the risk of physical harm to most participants is very low, physical harm is not the only kind of harm there is. He notes the potential for emotional harm as a result of something like a Get Out the Vote campaign, where subjects report negative responses to malign campaigns. (740) He also notes the potential of harm because these are real-world manipulations that may have a real-world impact, for example, on election outcomes.

In addition, there is another, substantive ethical issue, and relates to the issue of deception and informed consent. Desposato notes that at the very least, if the details of the study are hidden from the participants during the informed consent process (as is typical and often necessary for the research design), this is in and of itself deception.

Generally, informed consent is considered to be the practical application of one of the foundational ethical tenets, that of treating people with respect. The Common Code outlines the necessary components for informed consent, as well as the kinds of research that may be exempt from IRB approval. Desposato states:

A new ethical challenge of field experiments is that more than deceiving volunteers, subjects are not given a choice to participate or not and often never know that they are participating in a research study. This lack of voluntary and informed participation violates central norms of research ethics ...Yet, such designs are allowed by the Common Rule under limited conditions. There is thus

an unresolved tension between the norms of voluntary participation and the Common Rule's provisions for studies without consent. (740)

Desposato seeks to address how subjects might feel about the issue of deception and informed consent in research via a process of empirical ethics, meaning, he conducts a study asking people what they think, surveying both a sample that represents the standard American citizen and a sample of political science scholars. He notes some interesting findings and interactions, but perhaps most notable is for some particular designs (where deception is involved and there is not clear-cut normative value, and consent is not obtained), almost half of the citizen sample would prefer not to be involved in the research. He notes:

Many of our subjects are placed into our studies against their will. In some designs, most respondents were willing to participate in research as long as they were consenting, and it was the lack of consent that prompted their rejection. In other designs, subjects did not like the study, did not want to participate consenting or not, and the prospect of being forced into a study only increased rejection. (747)

Desposato makes some practical suggestions for how researchers might move forward, given this information, including seeking other forms of consent, striving to minimize research designs that require deception and do not allow for informed consent, and focusing on substantive topics in the public's best interest.

Communication of the Ethical Perspective

Given the importance of the Belmont Report as one of the foundations of guidelines for ethical recommendations in research, understanding the fundamental principles and applications delineated in the Report is important to provide a framework for further discussion. However, ethical guidelines are also communicated in other ways within professional and academic

communities. For the purposes of this paper, I will be focusing on two specific fields within the social sciences: political science and economics. One way that ethical standards of research practice are communicated is via professional organizations. For this paper, I will be looking at the American Political Science Association (APSA) and the American Economic Association (AEA). Both organizations are long-standing, well-established professional organizations with a focus on research and teaching.

The APSA has a clear focus on professional ethics. On their website, under the Resources tab, there is a subheading for Ethics, which leads to a page which includes an introduction to the Committee on Professional Ethics, Rights, and Freedoms; information on how to file a grievance; and resources which include: their general Professional Guide, their specific guide to human subjects research, and resources related to sexual harassment.

The Council of the American Political Science Association (APSA) adopted the Principles and Guidelines for Human Subjects Research at their 2020 Spring Council Meeting. While the Belmont Report is not specifically cited in the APSA Guidelines, the general principles and applications that they offer are very congruent. They also focus on issues of autonomy and consent, the issue of power differentials between researchers and subjects, and the issue of possible harm to subjects during the research process. In addition, the APSA makes a strong call for transparency and accountability in research, and state that researchers have “... an individual responsibility to consider the ethics of their research related activities and cannot outsource ethical reflection to review boards, other institutional bodies, or regulatory agencies.”

(2)

An important point made in both the APSA Guidelines and the Belmont report is that there are times where ethical guidelines may be in conflict with the particular circumstances of

the research design, or may be in conflict with each other. As already discussed, an example of this is in the use of deception during the research process. While the Belmont Report does not address this specific issue, the APSA guidelines do discuss it to clarify the different forms that deception can take in an experiment, and offer guidelines on how to assess the use of deception. This, and other issues of conflicts in ethical decision making will be addressed in the discussion of the Common Rule and the function of IRB oversight.

The AEA's perspective on the ethics of research is much less clear, based on the publicly available messaging on their website. Under the resources tab, there is no specific ethics topic. The closest thing available is the Best Practices for Economists topic. Under the Best Practices for Economists brochure, there is a research topic, but the ethical issues relevant to the treatment of human subjects or to research in general are not addressed.

Another way that that consideration of ethical concerns in field experiments is communicated is during the educational process. While a deep dive into the specifics of the coursework and training at the doctoral level that are available for graduate students in political science is beyond the scope of this paper, this would be a fascinating area for future research. In their 2016 article "Research Ethics in Economics", Yalcintas & Selcuk provide a detailed analysis of this topic, and their results are startling. They state, "Data we collected from the survey suggest the following: (1) Research ethics is taught in only a very few economics departments around the globe. (2) Topics related to research ethics are not taught in courses on economics and ethics." (56)

This is of concern because there is evidence that "...research misconduct leads to harmful consequences for the welfare of the members of research community in economics [sic]. But economics departments, to a large extent, do not seem to show any sign for intellectual care."

(56) Of note is that even this article seems much more concerned on the impact of possible unethical behavior on the academic and intellectual community (i.e. other researchers), as opposed to the possibility of harm on the subjects of that research.

Fujii (2012) discusses the importance of an embedded ethical perspective in political science research. She makes a distinction between what she labels the procedural ethics of the IRB process, as opposed to a perspective which integrates ethical thinking throughout the research process from start to finish. She notes that while the Belmont Report offers a sound basis for thinking ethically, the ethical issues that researchers may confront over the course of an experiment and its write-up may be more complex and difficult to address. As such, "...the responsibility to act ethically rests ultimately on the individual researcher." (Fujii, 2012, 718) Fujii offers concrete guidelines to keep in mind when designing experimental research, and a reminder that:

...we must remind ourselves that to enter another's world as a researcher is a privilege, not a right. Wrestling with ethical dilemmas is the price we pay for the privileges we enjoy. It is a responsibility, not a choice, and, when taken seriously, it may be one of the most important benefits we have to offer those who make our work possible. (722)

Ethical practices in research may be disseminated through an intellectual or academic community by standards set by the academic journals that are publishing experimental research. Jordan & Hill (2012) conducted a study on political science journal editors to examine whether or not top journals in the field of political science require any type of ethical assurance statements from their authors. They found that overall, the most widely reported ethical concern for journal editors seems to be around the issue of data sharing for replicability. "In contrast, only 6 of 48, or 12 % (with a standard deviation of 0.33) of respondents reported requiring assurance statements about human subjects or public opinion data reporting." (Jordan & Hill 2012, 247) It

is their conclusion that with respect to the ethical considerations of experimental research, the field of political science may be lagging behind other disciplines such as biomedical or physical science research, and that a clear establishment of norms for publication ethics would be beneficial.¹

One final way that ethical standards are communicated to researchers is through the IRB approval process. The research using human participants is subject to regulation by Title 45, Code of Federal Regulations Part 46, and any research that is supported by Federal funding is subject to this regulation. This includes research that is not directly funded by the Federal government, but is indirectly supported. Subpart A of this code, known as the “Common Rule,” defines all the relevant terms, as well as listing the exemption categories for research subjects. This is the baseline standard for ethical concerns as mandated by the federal government, and is the general standard used by academic institutions in the United States. Subparts B, C, D, and E focus on additional protections for vulnerable peoples, including pregnant women and fetuses, prisoners, and children, as well as the technical specifics around registering an IRB. Desposato (2015) notes that IRBs are not “...ethical committees – they exist to comply with federal rules and keep dollars flowing.” (Slide 46). Given that the IRB process and its standards were developed for dealing with human subjects in biomedical research, there have been criticisms of how well this focus translates to political science, particularly to field experiments. Yanow & Schwartz-Shea (2008), for example, argue that because the nature of field experimentation involves going into research subjects lives and real-world spaces (as opposed to having subjects come to the researcher), there is an essential difference in the power differential between researcher and subject, which changes the way that ethical decisions are made. Levine and Skedsvold (2008) offer several models for reforming the IRB process to better align with

¹ I was unable to find any parallel research about journal requirements in the field of economics.

political science best practices. Essentially, it is argued that while there is room (and perhaps significant need) for reform in the IRB process, this does not exempt political science researchers from ethical considerations in research design and implementation.

Implications for Researchers

Experimentation, and in particular, field experiments, can offer insights and valuable information to researchers, as well as to the larger academic community and to policymakers.

List (2011) notes the following advantages of field experiments:

“First, field experiments offer a distinctive and new source of empirical evidence, which can then be compared, contrasted, reconciled, and eventually intertwined with evidence from nonexperimental and lab methods... Second, field experiments offer an immediate opportunity to specify and address the economic question of interest, rather than waiting and hoping for a natural event or a cast-iron econometric specification that would allow the researcher to address the issue cleanly... Finally, field experiments offer economists the possibility of an improved connection from economic theory and empirical evidence to the real world, built on a deeper contextual understanding of real-world issues and institutions. (9-10)

Burtless (1995) notes that experimentation, with its random assignment of treatment, allows researchers to measure the effects of treatments and, under some circumstances, to assess the direction of causality, which is, of course, a topic of profound interest to researchers. All this is to say that experimental research makes valuable and necessary contributions, but the ethical concerns with respect to fieldwork are important and must be addressed by researchers throughout their research design and execution.

Pilot Study

This study reflects a preliminary investigation into one important way that the ethical concerns of researchers are communicated to the academic community, both to students and

colleagues, which is in the published article. The structure of the data collection is based on Druckman, Green, Kuklinski & Lupia (2006). I chose to focus on two journals: the [American Journal of Political Science](#) and the [American Economic Review](#). Both are well-established and highly respected scholarly journals.

The articles were sourced from [Jstor](#). Two searches were performed, searching for the term "field experiment" in either the title or the abstract, one search for each journal. No date restrictions were applied.

The AJPS search yielded 29 results, published between 2003 and 2019. The AER search yielded 39 Results, with one published in 1986 and the rest published between 2000 and 2018. 4 articles total were removed from the data set due to not reporting on an actual field experiment, 1 from the AJPS and 3 from the AER. This led to a final data set with 64 observations. A bibliography of all articles included in the data analysis is available in Appendix A.

All identifying information was tabulated. In addition, the first author's university or organization affiliation was included, and used as a proxy for the home country of the lead researcher. The location of the setting of the field experiment was noted when available. Assessment was then made of the designation of the country of researcher origin and location of the experiment based on the [World Bank classification system](#). Then various searches were performed on each article individually, looking for particular keywords. The general topics that were searched on included:

- Was there any mention of ethics in the article?
- Was IRB approval reported?
- Was informed consent obtained by the researchers from the research participants?
- Was potential harm to research subjects or staff discussed?

Searches included:

- "ethic-"
- "IRB", "institutional", "review board", "human", "subjects", "committee"
- "informed", "consent"
- "harm", "burden", "mitigat-", "minimi-" and "safe-"
- "informed", "consent"
- "benefit"

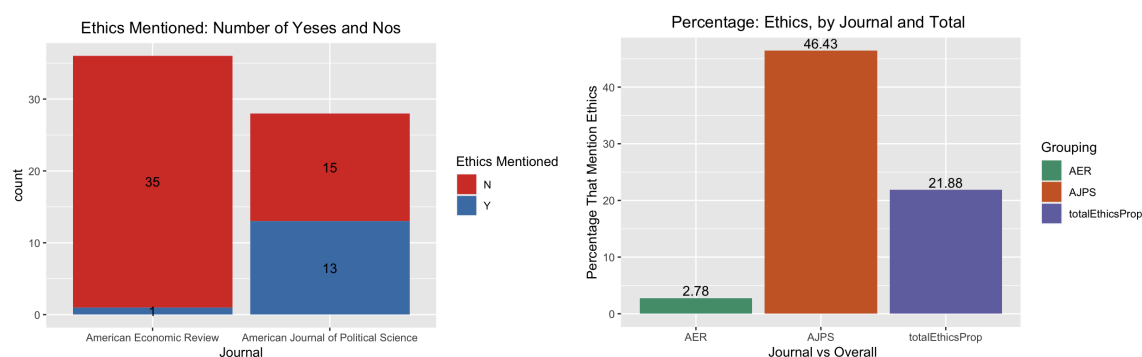
In addition, assessment was made as to the following:

- Was contact information for the authors provided?
- How were research subjects selected and/or recruited?
- Was the study registered or preregistered?
- Was the general conflict of interest disclosure included in the article?
- Was the data made publicly available?
- Was any financial support or funding acknowledged?

As this is a preliminary investigation, I don't have specific hypotheses about this data; rather, I want to get an initial sense from these two journals as to how commonplace including a discussion of ethics in the published research article might be. The issue of how many articles should mention ethical concerns of field research is separate from the question of how many actually do, and the latter is the question I'm examining at the moment. I am aware that some of these topics are very contingent on placement in time/history. For example, the practice of making data available for replicability is a more recent one, coming out of the push for transparency in research.

The initial analysis I will be presenting is simply descriptive, and for the purposes of this paper, I will present the visualizations of the following variables: Ethics, IRB Approval Reported, Informed Consent Obtained, and Possible Harm to Subjects. I'll present two graphics per variable, first a simple breakdown of Yeses and Nos, grouped by journal. I'll then present an overall comparison of the proportion of Yeses by journal and by total.

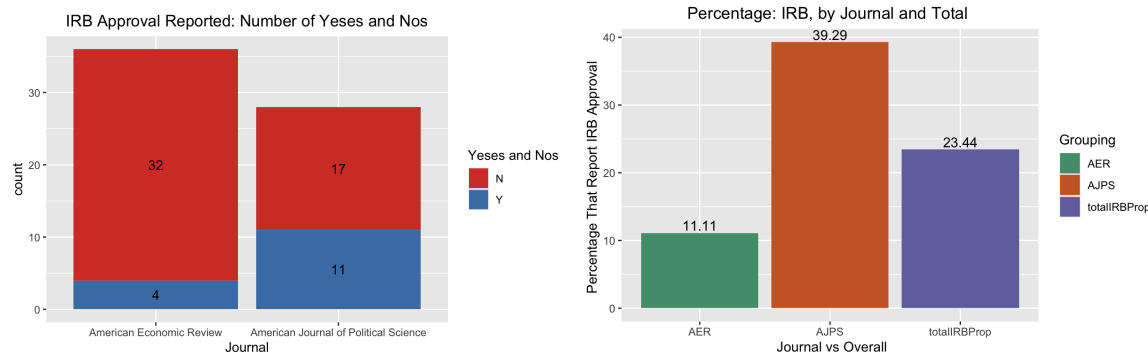
Is the word ethics mentioned in the article?



This is a very striking result, in terms of looking at the difference between the AER and the AJPS². Almost half of the articles in the AJPS do mention ethical concerns of some sort. It must be noted, however, that four of fifteen AJPS articles which do mention the ethical considerations of the researchers, or approximately 27% of the articles which do mention ethics, and about 14% of the total AJPS articles, had David Broockman, Ph.D. as the lead or second author, which may have skewed the results.

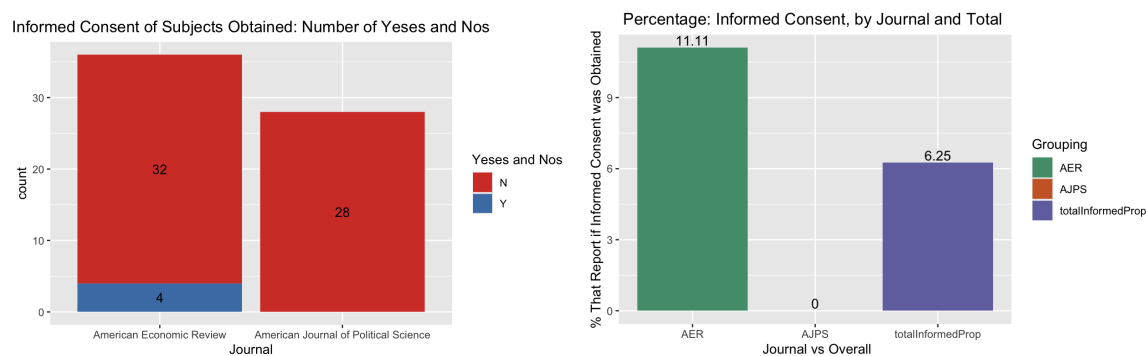
² I believe a chi-square test would be a good way to evaluate if there are statistically significant differences between the two journals. First we would need to calculate power for our sample, to see if we have a big enough sample size in our two groups. Then, given we do have a large enough sample size, we would run the Chi-square test. I don't feel confident enough in my statistics/R knowledge to run that analysis, but I would like to.)

Is IRB approval documented?



This is a bit less striking than the Ethics results, but still, overall, it's interesting to see that the AER has a much lower rate of reporting of IRB approval. Given that over 80% of the first authors were affiliated with US academic institutions at the time of publication, and that the requirement of IRB approval has been in place since 1974, it does not seem unreasonable to expect that all US-affiliated authors would report whether they had received IRB approval or an exemption, but clearly that is not the case.

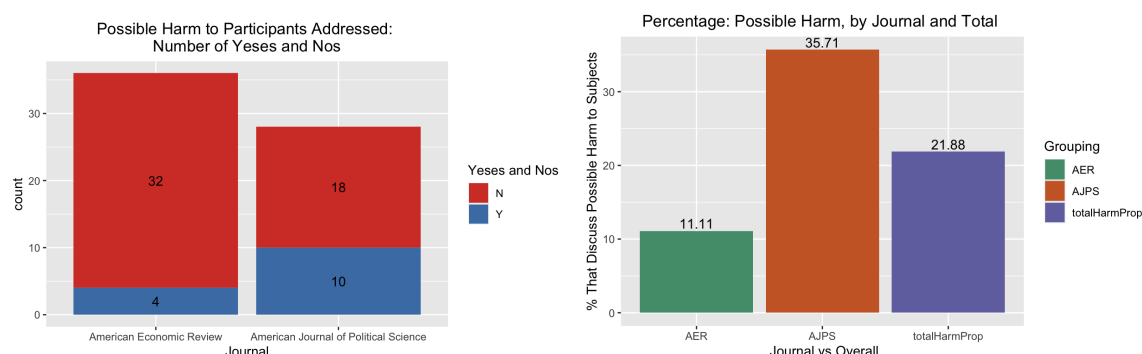
Was Informed Consent Obtained?



As discussed above, Respect for Persons is a fundamental part of the Belmont Report, and Informed Consent is generally seen as the practical application thereof. This finding does not necessarily mean that informed consent was not obtained, or that it was even necessary. It's very

probable that many of these studies might be exempt from that requirement. What is of particular note is that only 6.25% of the studies overall reported getting informed consent³.

Was Possible Harm to Participants Discussed?



Again, we note that overall, the proportion of published articles that report consideration of possible harm to research subjects is low, and that there appears to be a large difference between the AER and the AJPS in terms of rates of reporting.

General Observations & Discussion

The previous discussion can perhaps be summed up as this. Ethical concerns are deeply pertinent to any research involving human subjects, but are of particular import for field experiments, because of the real-life manipulation of real-life people. However, the experimental model is a powerful one, and field experiments can offer valuable and needed information for academics and policy makers. There are many sources of guidelines for ethical decision making for social scientists, although many of these guidelines are based on biomedical research principles, which may or may not be completely applicable to social science research. In any case, ethical guidelines are based on the Belmont Report's three fundamental ethical principles:

³ The search was done for the term "informed" and "consent" to indicate whether it was mentioned at all.

respect for people, beneficence, and justice, and their common applications: informed consent, the minimization of harm to participants and maximization of benefit from the research, and an unbiased selection of research participants which does not place an undue burden on any particular group, and protects vulnerable groups from possible exploitation.

In addition to the keyword searches utilized for assessing whether such issues as researchers reporting: any ethical concerns related to their research, whether or not IRB approval or exemption was granted, whether informed consent to participate in the study was obtained from participants, and any consideration as to possible harm to subjects, there were more subjective things that I noticed in my review of the research articles.

As noted above, the Belmont Report (1979) states:

Finally, whenever research supported by public funds leads to the development of therapeutic devices and procedures, justice demands both that these not provide advantages only to those who can afford them and that such research should not unduly involve persons from groups unlikely to be among the beneficiaries of subsequent applications of the research. (B3)

It appears that most ethical codes interpret this to mean that decisions around participant selection are ethically relevant, in terms of ensuring that no one group is overly burdened. In addition, I would suggest that this statement at the least proposes that doing research on participants that will not benefit them specifically in any way is an additional ethical concern to be considered.

From my review of the articles included in the research data collection, I noted two general things. The first was that very rarely was the actual process of the selection of research participants described, particularly around the way that the sample was selected. By this I mean, it was rarely the case, particularly for on-site field experiments (as opposed to online or by-mail designs) that researchers discussed the process of how they selected a particular research site.

This seems important, both around the issue of ethical selection, but also in understanding possible selection bias. For example, if a site is chosen because a researcher has a particular personal connection to the governmental body or NGO, this may create a relevant selection bias. Understanding not only how interventions are randomly assigned to research participants, but how such research participants were identified and recruited in the first place is a question of both research design integrity and ethical selection of participants.

A second general observation is this. While most articles reflected on the general contributions their studies made to the academic field as a whole, overall, under 5% reported on any potential benefit to their participants in a specific way. Given Desposato's 2018 finding that, when the benefit of the research is less clear-cut, the study design uses deception, and there is a lack of informed consent, close to half of his respondents reported preferring not to be enrolled in this type of research study. Therefore, it seems pertinent that researchers think clearly about the explicit and specific contributions their research is making to the academic field and to the world, and clearly be able to communicate those contributions to participants or to readers, if deception and lack of informed consent are necessary elements of the study.

It must be emphasized that I am, in no way, making the argument that any of the researchers involved in any of the experiments presented in the articles surveyed behaved unethically, or that the researchers were not concerned with ethical guidelines in their research design and execution process. The fundamental issue is that because these concerns were so rarely openly discussed and addressed, there is no way to know what these researchers did in order to create ethical research designs, or how those designs were implemented in such a way as to protect their human subject participants. While there is attention and discussion in some fields about the ethical concerns of field experiments, that discussion seems to be addressed more

theoretically or in training (and even there, perhaps not adequately), rather than in the reporting of the actual practice of doing field research. This creates accepted community norms around the discussion of ethical decision making in research design.

Directions for Future Research and Recommendations

This is clearly a very preliminary investigation into the issue of the ethics of field experiments in the social sciences. In my own data, I have continued questions, for example, I would like to conduct an analysis to evaluate how different the two journals are in terms of the proportions of articles discussing ethical concerns. I would also be interested in learning if the different types of ethical considerations reported cluster together — meaning, for example, if an author does present IRB approval or exemption status of their study, are they also likely to report other kinds of ethical concerns. In addition, although I did not present the results here, I did evaluate where the research was conducted and where the home institution of the first author is located, to get an overview of where people are conducting research versus where they are located. There are particular ethical concerns about conducting research with vulnerable populations, such as research in developing nations, or nations identified as Low-Income by the World Bank.

Future research might include, for example, a survey of the top graduate programs in political science and economics (and any discipline in which field experiments are done), to gain an up-to-date understanding of how ethical concerns in research design and implementation are communicated to young professionals. Jordan & Hill's (2012) research could be extended to other disciplines in terms of understanding the standards set by peer-reviewed journals for publishing field experiments. A survey of researchers currently publishing field experiments

would be fascinating to learn more about their concerns and processes around designing field experiments and how an ethical perspective is embedded in that (or not). It would be interesting to see if there are differences between established professionals and those early in their careers or still in graduate school, as well as to understand how community standards around ethical decision making are communicated through the years.

At the most basic level, however, coming to discipline-agreed upon standards for the ethical treatment of humans participants in field research is a critical next step. Then, ensuring that those standards are consistently communicated to all who design and implement research with human subjects, field experiments or other types of designs, is of great importance. There are not always easy answers, and there are times where different ethical considerations are in conflict with each other. That these are difficult decisions does not mean that they are impossible to make, although there will, in all likelihood, need to be tradeoffs at times. Encouraging all who conduct experimental research to consider the ethical implications of their decisions throughout the research design and implementation process in order to ensure the highest quality of ethical behavior when utilizing human beings in research is, in my opinion, a fundamental aspect of integrity in the research process.

References

- American Economic Association [website](#).
- American Political Science Association [website](#).
- American Political Science Association (APSA) (2020). Principles and Guidelines for Human Subjects Research. [Available here](#).
- Berkeley Initiative for Transparency in the Social Sciences [website](#).
- Broockman, D., Kalla, J., & Sekhon, J. (2017). The Design of Field Experiments With Survey Outcomes: A Framework for Selecting More Efficient, Robust, and Ethical Designs. *Political Analysis*, 25(4), 435-464. Retrieved May 12, 2021, from <https://www.jstor-org.silk.library.umass.edu/stable/26563491>
- Burtless, G. (1995). The Case for Randomized Field Trials in Economic and Policy Research. *The Journal of Economic Perspectives*, 9(2), 63-84. Retrieved May 12, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/2138167>
- Deaton, A., & Cartwright, N. (2018). Understanding and misunderstanding randomized controlled trials. *Social science & medicine* (1982), 210, 2–21. <https://doi.org/10.1016/j.socscimed.2017.12.005>
- Desposato, S. (2015). BITSS Institute Presentation Desposato June 2015 Updated.pdf. [Available here](#).
- Desposato, S. (2018). Subjects and Scholars' Views on the Ethics of Political Science Field Experiments. *Perspectives on Politics*, 16(3), 739-750. doi:10.1017/S1537592717004297
- Druckman, J., Green, D., Kuklinski, J., & Lupia, A. (2006). The Growth and Development of Experimental Research in Political Science. *The American Political Science Review*, 100(4), 627-635. Retrieved May 4, 2021, from <http://www.jstor.org/stable/27644392>

EGAP Ethics Committee: Nickerson, D., Platas, M., Robinson, A., & Sinmazdemir, T., (2019).

EGAP Committee Memo on the Report of the APSA AdHoc Committee on Human Subjects Research. [Available here.](#)

Fujii, L. (2012). Research Ethics 101: Dilemmas and Responsibilities. PS: Political Science & Politics, 45(4), 717-723. doi:10.1017/S1049096512000819

Jordan, S.R. & Hill, K.Q. (2012). Ethical Assurance Statements in Political Science Journals. Journal of Academic Ethics, 10, 243–250. <https://doi.org/10.1007/s10805-012-9163-6>

Katz J. (1996). The Nuremberg Code and the Nuremberg Trial. A reappraisal. JAMA, 276(20), 1662–1666.

Levine, F., & Skedsvold, P. (2008). Where the Rubber Meets the Road: Aligning IRBs and Research Practice. PS: Political Science & Politics, 41(3), 501-505.

doi:10.1017/S1049096508080888

List, J. (2011). Why Economists Should Conduct Field Experiments and 14 Tips for Pulling One Off. The Journal of Economic Perspectives, 25(3), 3-15. Retrieved May 12, 2021, from <http://www.jstor.org/silk.library.umass.edu/stable/23049420>

List, J., & Metcalfe, R. (2014). Field experiments in the developed world: An introduction. Oxford Review of Economic Policy, 30(4), 585-596. Retrieved May 12, 2021, from

<http://www.jstor.org/silk.library.umass.edu/stable/44945364>

Moon, M. R. (2009). Virtual Mentor. 11(4):311-316. doi:

10.1001/virtualmentor.2009.11.4.pfor1-0904. ([Available here.](#))

National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (1979). The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research. Department of Health, Education and

- Welfare. Washington, D.C.: U.S. Government Printing Office. National Research Council. 2005. ([Available here.](#))
- Rubin, D. (2008). For Objective Causal Inference, Design Trumps Analysis. *The Annals of Applied Statistics*, 2(3), 808-840.
- U.S. Government Printing Office, (1949). "Trials of War Criminals before the Nuremberg Military Tribunals under Control Council Law No. 10", Vol. 2, pp. 181-182. Washington, D.C.
- Whitfield, G. (2019). TRENDS: Toward a Separate Ethics of Political Field Experiments. *Political Research Quarterly*, 72(3), 527–538. <https://doi.org/10.1177/1065912919835970>
- World Medical Association. World Medical Association Declaration of Helsinki: ethical principles for medical research involving human subjects. *JAMA*. 2013 Nov 27;310(20):2191-4. doi: 10.1001/jama.2013.281053. PMID: 24141714.
- Yalcintas, A. & Selcuk, I.S. (2016). Research Ethics Education in Economics. *Review of Social Economy*, 74(1), 53-74. DOI: 10.1080/00346764.2015.1100847
- Yanow, D., & Schwartz-Shea, P. (2008). Reforming Institutional Review Board Policy: Issues in Implementation and Field Research. *PS: Political Science & Politics*, 41(3), 483-494. doi:10.1017/S1049096508080864

Appendix A: All Articles Included in Data Analysis

Political Science Field Experiment Results

- JSTOR search: (ti:(field experiment) OR ab:(field experiment)) AND pt:(American Journal of Political Science)
- 29 Results: 2003 - 2019

Anderson, S., Buntaine, M., Liu, M., & Zhang, B. (2019). Non-Governmental Monitoring of Local Governments Increases Compliance with Central Mandates: A National-Scale Field Experiment in China. *American Journal of Political Science*, 63(3), 626-643.

Retrieved April 17, 2021, from <http://www.jstor.org/stable/45132501>

Arceneaux, K., & Kolodny, R. (2009). Educating the Least Informed: Group Endorsements in a Grassroots Campaign. *American Journal of Political Science*, 53(4), 755-770. Retrieved

April 17, 2021, from <http://www.jstor.org/stable/20647949>

Boas, T., Hidalgo, F., & Melo, M. (2019). Norms versus Action: Why Voters Fail to Sanction Malfeasance in Brazil. *American Journal of Political Science*, 63(2), 385-400. Retrieved

April 17, 2021, from <http://www.jstor.org/stable/45132484>

Broockman, D. (2013). Black Politicians Are More Intrinsically Motivated to Advance Blacks'

Interests: A Field Experiment Manipulating Political Incentives. *American Journal of Political Science*, 57(3), 521-536. Retrieved April 17, 2021, from

<http://www.jstor.org/stable/23496636>

Broockman, D. (2014). Distorted Communication, Unequal Representation: Constituents

Communicate Less to Representatives Not of Their Race. *American Journal of Political Science*, 58(2), 307-321. Retrieved April 17, 2021, from

<http://www.jstor.org/stable/24363487>

- Butler, D., & Broockman, D. (2011). Do Politicians Racially Discriminate Against Constituents? A Field Experiment on State Legislators. *American Journal of Political Science*, 55(3), 463-477. Retrieved April 17, 2021, from <http://www.jstor.org/stable/23024931>
- Chang, H., & Peisakhin, L. (2019). Building Cooperation among Groups in Conflict: An Experiment on Intersectarian Cooperation in Lebanon. *American Journal of Political Science*, 63(1), 146-162. Retrieved April 17, 2021, from <http://www.jstor.org/stable/45132468>
- Chen, J., Pan, J., & Xu, Y. (2016). Sources of Authoritarian Responsiveness: A Field Experiment in China. *American Journal of Political Science*, 60(2), 383-400. Retrieved April 17, 2021, from <http://www.jstor.org/stable/24877628>
- Chong, A., León-Ciliotta, G., Roza, V., Valdivia, M., & Vega, G. (2019). Urbanization Patterns, Information Diffusion, and Female Voting in Rural Paraguay. *American Journal of Political Science*, 63(2), 323-341. Retrieved April 17, 2021, from <http://www.jstor.org/stable/45132480>
- Coronel, J., Duff, M., Warren, D., Federmeier, K., Gonsalves, B., Tranel, D., & Cohen, N. (2012). Remembering and Voting: Theory and Evidence from Amnesic Patients. *American Journal of Political Science*, 56(4), 837-848. Retrieved April 17, 2021, from <http://www.jstor.org/stable/23317161>
- Dale, A., & Strauss, A. (2009). Don't Forget to Vote: Text Message Reminders as a Mobilization Tool. *American Journal of Political Science*, 53(4), 787-804. Retrieved April 17, 2021, from <http://www.jstor.org/stable/20647951>
- Einstein, K., & Glick, D. (2017). Does Race Affect Access to Government Services? An Experiment Exploring Street-Level Bureaucrats and Access to Public Housing. *American*

- Journal of Political Science, 61(1), 100-116. Retrieved April 17, 2021, from <http://www.jstor.org/stable/26379495>
- Findley, M., Nielson, D., & Sharman, J. (2015). Causes of Noncompliance with International Law: A Field Experiment on Anonymous Incorporation. *American Journal of Political Science*, 59(1), 146-161. Retrieved April 17, 2021, from <http://www.jstor.org/stable/24363601>
- Gerber, A., Green, D., & Shachar, R. (2003). Voting May Be Habit-Forming: Evidence from a Randomized Field Experiment. *American Journal of Political Science*, 47(3), 540-550. doi:10.2307/3186114
- Gerber, A., Huber, G., Doherty, D., Dowling, C., & Hill, S. (2013). Do Perceptions of Ballot Secrecy Influence Turnout? Results from a Field Experiment. *American Journal of Political Science*, 57(3), 537-551. Retrieved April 17, 2021, from <http://www.jstor.org/stable/23496637>
- Gerber, A., Huber, G., Meredith, M., Biggers, D., & Hendry, D. (2015). Can Incarcerated Felons Be (Re)integrated into the Political System? Results from a Field Experiment. *American Journal of Political Science*, 59(4), 912-926. Retrieved April 17, 2021, from <http://www.jstor.org/stable/24582956>
- Gottlieb, J. (2016). Greater Expectations: A Field Experiment to Improve Accountability in Mali. *American Journal of Political Science*, 60(1), 143-157. Retrieved April 17, 2021, from <http://www.jstor.org/stable/24583055>
- Grose, C., Malhotra, N., & Van Houweling, R. (2015). Explaining Explanations: How Legislators Explain their Policy Positions and How Citizens React. *American Journal of*

- Political Science, 59(3), 724-743. Retrieved April 30, 2021, from [http://www.jstor.org/silk.library.umass.edu/stable/24583093](http://www.jstor.org/silk/library.umass.edu/stable/24583093)
- Grossman, G., & Baldassarri, D. (2012). The Impact of Elections on Cooperation: Evidence from a Lab-in-the-Field Experiment in Uganda. *American Journal of Political Science*, 56(4), 964-985. Retrieved April 17, 2021, from <http://www.jstor.org/stable/23317168>
- Hjortskov, M., Andersen, S., & Jakobsen, M. (2018). Encouraging Political Voices of Underrepresented Citizens through Coproduction: Evidence from a Randomized Field Trial. *American Journal of Political Science*, 62(3), 597-609. Retrieved April 18, 2021, from <http://www.jstor.org/stable/26598769>
- Imai, K., & Yamamoto, T. (2010). Causal Inference with Differential Measurement Error: Nonparametric Identification and Sensitivity Analysis. *American Journal of Political Science*, 54(2), 543-560. Retrieved April 18, 2021, from <http://www.jstor.org/stable/25652222>
- Kalla, J., & Broockman, D. (2016). Campaign Contributions Facilitate Access to Congressional Officials: A Randomized Field Experiment. *American Journal of Political Science*, 60(3), 545-558. Retrieved April 18, 2021, from <http://www.jstor.org/stable/24877480>
- Karpowitz, C., Monson, J., & Preece, J. (2017). How to Elect More Women: Gender and Candidate Success in a Field Experiment. *American Journal of Political Science*, 61(4), 927-943. Retrieved April 18, 2021, from <http://www.jstor.org/stable/26379536>
- Larson, J., & Lewis, J. (2017). Ethnic Networks. *American Journal of Political Science*, 61(2), 350-364. Retrieved April 18, 2021, from <http://www.jstor.org/stable/26384736>

- McClendon, G. (2014). Social Esteem and Participation in Contentious Politics: A Field Experiment at an LGBT Pride Rally. *American Journal of Political Science*, 58(2), 279-290. Retrieved April 18, 2021, from <http://www.jstor.org/stable/24363485>
- McConnell, C., Margalit, Y., Malhotra, N., & Levendusky, M. (2018). The Economic Consequences of Partisanship in a Polarized Era. *American Journal of Political Science*, 62(1), 5-18. Retrieved April 18, 2021, from <http://www.jstor.org/stable/26598747>
- Nickerson, D. (2007). Quality Is Job One: Professional and Volunteer Voter Mobilization Calls. *American Journal of Political Science*, 51(2), 269-282. Retrieved April 18, 2021, from <http://www.jstor.org/stable/4620065>
- Nyhan, B., & Reifler, J. (2015). The Effect of Fact-Checking on Elites: A Field Experiment on U.S. State Legislators. *American Journal of Political Science*, 59(3), 628-640. Retrieved April 18, 2021, from <http://www.jstor.org/stable/24583087>
- Sinclair, B., McConnell, M., & Green, D. (2012). Detecting Spillover Effects: Design and Analysis of Multilevel Experiments. *American Journal of Political Science*, 56(4), 1055-1069. Retrieved April 18, 2021, from <http://www.jstor.org/stable/23317173>

Economics Field Experiments Results

- JSTOR Search: (ti:(field experiment) OR ab:(field experiment)) AND pt:(American Economic Review)
- 39 Results: 1986, 2000 - 2018

Alatas, V., Banerjee, A., Hanna, R., Olken, B., & Tobias, J. (2012). Targeting the Poor: Evidence from a Field Experiment in Indonesia. *The American Economic Review*, 102(4), 1206-1240. Retrieved April 16, 2021, from

<http://www.jstor.org.silk.library.umass.edu/stable/23245454>

Al-Ubaydli, O., & Lee, M. (2011). Can Tailored Communications Motivate Environmental Volunteers? A Natural Field Experiment. *The American Economic Review*, 101(3), 323-328. Retrieved April 16, 2021, from

<http://www.jstor.org.silk.library.umass.edu/stable/29783763>

Ashraf, N., Berry, J., & Shapiro, J. (2010). Can Higher Prices Stimulate Product Use? Evidence from a Field Experiment in Zambia. *The American Economic Review*, 100(5), 2383-2413. Retrieved April 16, 2021, from

<http://www.jstor.org.silk.library.umass.edu/stable/41038767>

Bhargava, S., & Manoli, D. (2015). Psychological Frictions and the Incomplete Take-Up of Social Benefits: Evidence from an IRS Field Experiment. *The American Economic Review*, 105(11), 3489-3529. Retrieved April 16, 2021, from

<http://www.jstor.org.silk.library.umass.edu/stable/43821382>

Bertrand, M., & Mullainathan, S. (2004). Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination. *The American Economic Review*, 94(4), 991-1013. Retrieved April 16, 2021, from

<http://www.jstor.org.silk.library.umass.edu/stable/3592802>

- Bursztyn, L., Fujiwara, T., & Pallais, A. (2017). 'Acting Wife': Marriage Market Incentives and Labor Market Investments. *The American Economic Review*, 107(11), 3288-3319.
Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/44871789>
- Cai, H., Chen, Y., & Fang, H. (2009). Observational Learning: Evidence from a Randomized Natural Field Experiment. *The American Economic Review*, 99(3), 864-882. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/25592485>
- Callen, M., & Long, J. (2015). Institutional Corruption and Election Fraud: Evidence from a Field Experiment in Afghanistan. *The American Economic Review*, 105(1), 354-381.
Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/43497063>
- Chetty, R., Looney, A., & Kroft, K. (2009). Salience and Taxation: Theory and Evidence. *The American Economic Review*, 99(4), 1145-1177. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/25592504>
- Chen, Y, Harper, M. F., Konstan, J., & Li, S. X., (2010). Social Comparisons and Contributions to Online Communities: A Field Experiment on MovieLens. *The American Economic Review*, 100(4), 1358-1398. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/27871259>
- Cole, S., Stein, D., & Tobacman, J. (2014). Dynamics of Demand for Index Insurance: Evidence from a Long-Run Field Experiment. *The American Economic Review*, 104(5), 284-290.
Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/42920951>

- Deming, D., Yuchtman, N., Abulafi, A., Goldin, C., & Katz, L. (2016). The Value of Postsecondary Credentials in the Labor Market: An Experimental Study. *The American Economic Review*, 106(3), 778-806. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/43821470>
- Donato, K., Miller, G., Mohanan, M., Truskinovsky, Y., & Vera-Hernández, M. (2017). Personality Traits and Performance Contracts: Evidence from a Field Experiment among Maternity Care Providers in India. *The American Economic Review*, 107(5), 506-510. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/44250450>
- Dupas, P., & Robinson, J. (2013). Why Don't the Poor Save More? Evidence from Health Savings Experiments. *The American Economic Review*, 103(4), 1138-1171. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/23469615>
- Engelbrecht-Wiggans, R., List, J., & Reiley, D. (2005). Demand Reduction in Multi-Unit Auctions: Evidence from a Sportscard Field Experiment: Reply. *The American Economic Review*, 95(1), 472-476. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/4132695>
- Eriksson, S., & Rooth, D. (2014). Do Employers Use Unemployment as a Sorting Criterion When Hiring? Evidence from a Field Experiment. *The American Economic Review*, 104(3), 1014-1039. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/42920727>
- Fearon, J., Humphreys, M., & Weinstein, J. (2009). Can Development Aid Contribute to Social Cohesion after Civil War? Evidence from a Field Experiment in Post-Conflict Liberia.

- The American Economic Review, 99(2), 287-291. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/25592413>
- Fehr, E., & Goette, L. (2007). Do Workers Work More if Wages Are High? Evidence from a Randomized Field Experiment. The American Economic Review, 97(1), 298-317. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/30034396>
- Field, E., Jayachandran, S., & Pande, R. (2010). Do Traditional Institutions Constrain Female Entrepreneurship? A Field Experiment on Business Training in India. The American Economic Review, 100(2), 125-129. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/27804976>
- Field, E., Pande, R., Papp, J., & Rigol, N. (2013). Does the Classic Microfinance Model Discourage Entrepreneurship Among the Poor? Experimental Evidence from India. The American Economic Review, 103(6), 2196-2226. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/42920648>
- Frey, B., & Meier, S. (2004). Social Comparisons and Pro-Social Behavior: Testing "Conditional Cooperation" in a Field Experiment. The American Economic Review, 94(5), 1717-1722. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/3592843>
- Friebel, G., Heinz, M., Krueger, M., & Zubanov, N. (2017). Team Incentives and Performance: Evidence from a Retail Chain. The American Economic Review, 107(8), 2168-2203. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/44871760>

- Fryer, R. (2018). The “Pupil” Factory: Specialization and the Production of Human Capital in Schools. *The American Economic Review*, 108(3), 616-656. Retrieved April 16, 2021, from <https://www-jstor-org.silk.library.umass.edu/stable/26527934>
- Giné, X., Goldberg, J., & Yang, D. (2012). Credit Market Consequences of Improved Personal Identification: Field Experimental Evidence from Malawi. *The American Economic Review*, 102(6), 2923-2954. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/41724676>
- Goldin, J., Homonoff, T., & Tucker-Ray, W. (2017). Retirement Contribution Rate Nudges and Plan Participation: Evidence from a Field Experiment. *The American Economic Review*, 107(5), 456-461. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/44250440>
- Harrison, G., Lau, M., & Williams, M. (2002). Estimating Individual Discount Rates in Denmark: A Field Experiment. *The American Economic Review*, 92(5), 1606-1617. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/3083267>
- Kaboski, J., Lipscomb, M., & Midrigan, V. (2014). The Aggregate Impact of Household Saving and Borrowing Constraints: Designing a Field Experiment in Uganda. *The American Economic Review*, 104(5), 171-176. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/42920931>
- Karlan, D., & List, J. (2007). Does Price Matter in Charitable Giving? Evidence from a Large-Scale Natural Field Experiment. *The American Economic Review*, 97(5), 1774-1793. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/30034584>

- Kessler, J. (2017). Announcements of Support and Public Good Provision. *The American Economic Review*, 107(12), 3760-3787. Retrieved April 16, 2021, from <https://www-jstor-org.silk.library.umass.edu/stable/26527896>
- LaLonde, R. (1986). Evaluating the Econometric Evaluations of Training Programs with Experimental Data. *The American Economic Review*, 76(4), 604-620. Retrieved April 16, 2021, from <http://www-jstor-org.silk.library.umass.edu/stable/1806062>
- Landry, C., Lange, A., List, J., Price, M., & Rupp, N. (2010). Is a Donor in Hand Better than Two in the Bush? Evidence from a Natural Field Experiment. *The American Economic Review*, 100(3), 958-983. Retrieved April 16, 2021, from <http://www-jstor-org.silk.library.umass.edu/stable/27871236>
- Larson, J., & Lewis, J. (2017). Ethnic Networks. *American Journal of Political Science*, 61(2), 350-364. Retrieved May 6, 2021, from <http://www-jstor-org.silk.library.umass.edu/stable/26384736>
- Levin, D. (2005). Demand Reduction in Multi-Unit Auctions: Evidence from a Sportscard Field Experiment: Comment. *The American Economic Review*, 95(1), 467-471. Retrieved April 16, 2021, from <http://www-jstor-org.silk.library.umass.edu/stable/4132694>
- List, J., & Lucking-Reiley, D. (2000). Demand Reduction in Multiunit Auctions: Evidence from a Sportscard Field Experiment. *The American Economic Review*, 90(4), 961-972. Retrieved April 16, 2021, from <http://www-jstor-org.silk.library.umass.edu/stable/117317>
- Nagin, D., Rebitzer, J., Sanders, S., & Taylor, L. (2002). Monitoring, Motivation, and Management: The Determinants of Opportunistic Behavior in a Field Experiment. *The American Economic Review*, 92(4), 850-873. Retrieved April 16, 2021, from <http://www-jstor-org.silk.library.umass.edu/stable/3083284>

- Noussair, C., Van Soest, D., & Stoop, J. (2015). Cooperation in a Dynamic Fishing Game: A Framed Field Experiment. *The American Economic Review*, 105(5), 408-413. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/43821918>
- Pallais, A. (2014). Inefficient Hiring in Entry-Level Labor Markets. *The American Economic Review*, 104(11), 3565-3599. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/43495347>
- Shimeles, A., Gurara, D., & Woldeyes, F. (2017). Taxman's Dilemma: Coercion or Persuasion? Evidence from a Randomized Field Experiment in Ethiopia. *The American Economic Review*, 107(5), 420-424. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/44250433>
- Tadelis, S., & Zettelmeyer, F. (2015). Information Disclosure as a Matching Mechanism: Theory and Evidence from a Field Experiment. *The American Economic Review*, 105(2), 886-905. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/43495402>
- Voors, M., Nillesen, E., Verwimp, P., Bulte, E., Lensink, R., & Van Soest, D. (2012). Violent Conflict and Behavior: A Field Experiment in Burundi. *The American Economic Review*, 102(2), 941-964. Retrieved April 16, 2021, from <http://www.jstor.org.silk.library.umass.edu/stable/23245440>