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Does studying ethics affect moral views? An application to economic justice

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Recent years have witnessed a rapid increase in initiatives to expand ethics instruction in higher education. Numerous empirical studies have examined the possible effects on students of discipline-based ethics instruction, such as business ethics and medical ethics. Nevertheless, the largest share of college ethics instruction has traditionally fallen to philosophy departments, and there is a paucity of empirical research on the individual effects of that approach. This paper examines possible effects of exposure to readings and lectures in mandatory philosophy classes on student views of morality. Specifically, it focuses on an ethical topic of importance to both economics and philosophy, viz. economic (or distributive) justice. The questionnaire study is designed to avoid features suspected of generating false positives in past research while calibrating the measurement so as to increase the likelihood of detecting even a modest true effect. The results provide little evidence that the philosophical ethics approach studied here systematically affects the fairness views of students. The possible implications for future research and for ethics instruction are briefly discussed.

Keywords: ethics education; fairness; justice; teaching ethics; questionnaire; experiment

JEL codes: A29; C90; D63

1. Introduction

Recent years have witnessed a rapid increase in initiatives to expand ethics instruction, notably in higher education. These efforts have focused mostly on approaches tailored to different disciplines, including courses in business ethics, medical ethics, legal ethics, engineering ethics, and media ethics, among others. There is also a growing discourse on returning economics to its origins as a ‘moral science’ and on strengthening the emphasis on ethics in economics teaching and research (e.g. see Atkinson, 2011; Bruni & Sugden, 2013; DeMartino, 2011; Sandel, 2013; Shiller & Shiller, 2011). Nevertheless, the largest share of college ethics instruction has traditionally fallen on philosophy departments. There have been studies of the possible effects of the more recent disciplinary approaches to ethics training, but there is a remarkable paucity of empirical research on possible effects of traditional philosophical ethics instruction on college students, indeed, none, to the author’s knowledge. This paper reports the results of a questionnaire study that takes a first step to fill that gap. Specifically, it focuses on an ethical topic of importance to both economics and philosophy, viz. economic

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(or distributive) justice, and examines possible effects on fairness views of exposure to readings and lectures in mandatory philosophy classes.

In order to put the design and contribution of the current study in context, Section 2 reviews briefly previous empirical research on the effects of ethics instruction. Section 3 presents a detailed discussion of the method and procedures used here. Section 4 gives details of the questionnaire and reports its results, which provide little evidence that the ethics instruction studied here affects moral views. Finally, Section 5 discusses the results and concludes.

2. Literature review

Our review begins with a few examples from a now large literature in economics on factors that might affect moral views or behavior, which is loosely related to our topic. The natural experiment of Frey and Meier (2003) finds economists to be more selfish due to selection into their field of study rather than because of their economics training. Faravelli (2007) concludes from a questionnaire study that the fairness views of economics students differ qualitatively from others due both to selection and training, specifically, the economists are less supportive of equality. Relative to engineering students, Hole (2013) finds economics students more likely to favor a libertarian concept of fairness and to place lesser weight on fairness, in general. Almås, Cappelen, Sørensen, and Tungodden (2010) report qualitative changes in the fairness preferences of children over a period of years: young children prefer equality, whereas older children increasingly favor inequalities that reward effort or promote efficiency. Xiao and Houser (2014) find college students who are properly incentivized to volunteer are subsequently more likely to express an interest in future volunteering. These and many additional studies shed light on the malleability of moral views or behavior in relation to different forces. In the present study, the force considered is ethics training and the effect of interest is a change in moral views.

Empirical research on ethics instruction has been limited to training within disciplines, as opposed to philosophy courses.¹ The disciplinary approaches are frequently constructed around psychological, rather than philosophical, approaches to ethics that often propose different stages of moral development, such as those found in the theoretical frameworks of Kohlberg (1969) or Rest (1986). Almost all of this quite extensive research is based on questionnaires, including tests or self-reported measures of ethical awareness, sensitivity, reasoning, judgment, intentions, behavior, or beliefs. I am aware of two fairly recent meta-analyses of this literature, which both draw disappointing conclusions. Waples, Antes, Murphy, Connelly, and Mumford (2009) analyze 25 studies of business ethics programs and find ‘the overall effectiveness of business ethics instruction was minimal.’ Antes et al. (2009) focus on 26 ethics programs in the sciences and, similar to Waples, et al., conclude ‘the results showed that the overall effectiveness of ethics instruction was modest.’

The goals, design and methods of these questionnaire studies differ widely, but important questions arise about their various limitations. There is the general ‘file-drawer problem’ (Rosenthal, 1979), i.e. negative findings seem more likely to go unreported, which creates a positive bias among disseminated studies as well as the meta-analyses that draw on them. In addition, ethics instruction might simply trigger a ‘social desirability bias’ rather than a true change in the students, i.e. ethics students perhaps become more sensitive to giving socially desirable (i.e. ethical) responses. There are also numerous concerns that vary with the specific study. Often the ethics

training is voluntary, raising questions of selection bias. Frequently, there is no group against which to compare treated subjects (i.e. the ‘control group’ in experiments). The researcher is sometimes the instructor, which raises at least two questions. First, the instructor might teach to the test or, similarly, design the test to be essentially a measure of learning of the course material rather than an indication of any kind of moral transformation. Second, demand effects become an increased concern, i.e. respondents might seek to offer the instructor/researcher the ‘desired’ response. Response formats sometimes require subjective scoring, and, in addition, this is sometimes carried out by the researcher him/herself. Many are based on some theory of moral development, which requires acceptance of the relevance of the theoretical framework. Moreover, such theories involve stages of moral development, and most studies focus on just one, or at best a subset, of the theorized stages. Discipline-based ethics training presumably seeks to effect behavioral changes, but most research in this area does not study student behavior *per se*. Those survey studies that do address behavior rely on respondent self-reports, which accentuates the aforementioned doubts about social desirability bias and demand effects.

There is a literature on the behavior of ethicists, which might be seen as indirect evidence on ethics instruction. If studying ethics affects moral behavior, should not the effects be at least as strong among those who study it professionally as among students with much briefer exposure? In a series of papers, Schwitzgebel (e.g. 2009; and 2010 with Rust) make comparisons between the moral behavior of ethicists and that of other groups. He and his co-authors conclude that ethicists behave no better than other types of philosophers and academics: for example, they are no more likely to vote and, in fact, are about 50% more likely to steal books.

There are only three studies, to my knowledge, that measure actual (rather than self-reported) behavior of ethics students, and all involve business ethics. Bloodgood, Turnley and Mudrack (Bloodgood, Turnley, & Mudrack, 2008) study undergraduate business students who had either already taken or not yet taken a full-term business ethics course required by their program. Students in both groups participate in an experiment in which they are compensated based on their self-reported performance on a word-search task. The experimenters, who identify surreptitiously discrepancies between actual and reported performance, find no main effect on cheating between the two groups. Nevertheless, they find that less religious and more intelligent students who had taken the ethics course cheated less than similar students who had not taken the course. Mayhew and Murphy (2009) compare fourth year Masters of Accounting students, who are required to participate in a newly implemented no-credit ethics education program (which is less involved than a full course), with fifth year students pursuing the same degree who are not subject to this requirement. Compensation is related to self-reported performance on a quiz based on the board game Trivial Pursuit, whereby there is a random chance of cheating being detected and penalized. The authors find no significant difference in cheating between the two groups, when reporting is anonymous, but cheating does decrease among the ethics, but not non-ethics, students, when subjects and their self-reported performances are publicly revealed to the experimenter and other subjects. In Konow (2017), students in introductory economics classes are exposed to one of three lectures: either by one of two different business ethics professors, who adopt different motivational strategies, or by a statistics professor, who serves as a control. The students then participate in an incentivized, double-blind experiment that includes a dictator game and a prisoner’s dilemma. Relative to the control, the ethics lectures suggest differential, and favorable, effects on generosity

and cooperation that depend on the ethics professor's strategy, although only one of the two effects of interest is statistically significant.

To summarize the literature review, existing questionnaire studies provide weak evidence of effects of ethics instruction, but given various concerns about design and methods, even these weak effects are suspect. Indirect evidence from the behavior of ethicists suggests no favorable, and possibly even some unfavorable, effects of studying ethics. Behavioral experiments find mixed or no effects. Bloodgood et al. report no main effect – significant effects require parsing the data. Mayhew and Murphy find no effects on intrinsically motivated behavior: significant effects appear only when subjects and their decisions are made public, which presumably primes extrinsic and self-interested motives, such as a concern for one's reputation. Konow (2017) finds favorable effects of ethics lectures on intrinsically motivated behavior, but only one effect is statistically significant. No existing empirical study known to the author, however, examines possible effects on college students of an ethics course offered by a philosophy department, let alone on an economic topic, despite the long and prominent role of such courses in ethics instruction.

3. Methods and procedures

What would be a suitable test of the question posed here? One might imagine that the ideal study assigns students randomly to treatment and control with incentivized measures of their behavior years later. It would indeed be interesting and informative to know the results of such an ambitious study, but there are numerous reasons to believe it would not be the best method for the subject of this study. The reasons go beyond the many practical challenges, such as obtaining institutional consent for curriculum changes to permit such random assignment, concealing the experiment from student subjects during the institutional approval process and subsequent random assignment and data collection, locating subjects after years, securing the willingness of working age individuals to participate in an experiment, avoiding selection biases, etc. Even if these obstacles could be overcome, the weak results from most prior research suggest that this 'ideal' experiment is based on unrealistic expectations for the strength of effect existing ethics education is capable of producing. Most importantly, although the aim of ethics instruction in disciplines is often some behavioral outcome, it is not at all clear that this is the goal of philosophy courses on ethics. Even though some moral philosophers might hope for behavioral effects, a more modest, and presumably widely shared, objective is that their conceptually centered instruction will alter, and presumably improve, moral reasoning. If such training is to have any practical import, one manifestation of this should be at least some changes in moral views. Thus, this study focuses on effects on student moral views, specifically, of fairness.

The present focus on moral views is, nevertheless, not unrelated to behavior. Here, I will make a practical distinction between two forces that drive moral behavior: views of what is right and the motivation to act on such views. Suppose we accept one of the critical justifications for moral education, viz. that people sometimes fail to conduct themselves as they should. Then we can point to two forces that account for such shortfalls, both of which are important to narrowing the gap between actual and desired behavior: moral views and moral motivation. Even if a person has the 'correct' view of what is right (however one defines that), this does not necessarily mean the person is (sufficiently) motivated to act on that view. On the other hand, even if the person is strongly motivated to act on a moral view, the desired behavior will not materialize, if the

person's view of right conduct is off. A single behavioral measure, such as the 'ideal' experiment suggested above, would not allow us to disentangle these forces. This breakdown of the forces that drive behavior strikes me as both useful and innocuous: it does not require that one buy into a specific and sometimes elaborate theory that is disputed by other scholars, as with theories of moral psychology. Even though this distinction does not require a formal model, its importance might be illustrated in terms familiar to economists using an example suited to the topic of this study: to act fairly, when fairness conflicts with material interests, an agent must have both sufficient inequity aversion and the right concept of fairness in his/her objective function.² Although motivation is important, I focus on views for several reasons, including for their importance on their own account and for their suitability for the type of ethics education examined here.

More specifically, this study examines possible effects on fairness views of exposure to five weeks of readings and lectures on distributive justice in a mandatory ethics course. Students subsequently completed questionnaires that elicited fairness views about circumstances described in vignettes, i.e. hypothetical scenarios. The aim was to explore possible repercussions of ethics instruction for impartial views, and vignettes eliminate personal stakes that can contribute to biased expression of views. This method also allows the flexibility to include numerous and very different concepts of justice with the contextual richness that is often helpful for exploring a complex fairness concept, let alone a whole set of them. Moreover, vignettes have proven better at aiding reasoning about complex concepts than presentation of problems in an abstract form (Goldstein & Weber, 1995). As detailed below, the questionnaire was designed and administered so as to elicit thoughtful responses.

The current study was additionally designed to avoid, to the extent possible, pitfalls of previous questionnaire studies of ethics education discussed in the prior section. Perhaps, the most important challenge for such research is, of course, to avoid selection bias. In the current context, those who choose to enroll in an ethics course might differ from those who do not, either in their preconceived fairness views or in how they respond to course material. This study addresses this issue by exploiting the fact that the university where the study was conducted required all students to take an ethics course offered by the philosophy department.³

A second shortcoming of some prior studies was the absence of a comparison group or control. One possibility for the current study was to conduct the study *within subjects*, i.e. to take before and after measures of views. This has the advantage of involving mostly the same subjects, although some problems could still be expected because of students adding, dropping, or being absent from the class. On the other hand, a within-subjects design would likely increase other concerns we discussed. For one, additional measures would be needed to ensure anonymity, which might make students suspicious and, consequently, prime social desirability motives. In addition, demand effects seem more likely, e.g. some respondents might be prompted to change their responses to the identical survey that is repeated after covering course material on the very topic of the survey. Alternately, the survey could be conducted *between subjects*, and the curriculum requirements of the university also delivered a solution along these lines: students were not permitted to take the ethics course until they reached Junior (i.e. third year) status. This created a treated group free of selection biases to set beside a comparison group drawn from a wide variety of first and second year courses whose only systematic observable difference was age. Of course, one cannot rule out that views differ because of age or class status, but several arguments, including those based on regression analysis, count against this.⁴

The roles of researcher and instructor were separated in this study in order to avoid teaching to the test. The instructor of the ethics course did not see the fairness survey prior to its administration. And the content of the fairness questionnaire was chosen before the researcher knew anything about the ethics course, except that it contained a section concentrating on justice. Importantly, the goal of the questionnaire was not, in any case, to test knowledge of ethical theories. Although some vignettes were inspired by theories of justice, the research aim was to examine whether ethics instruction affected fairness views about practical situations, so the content of the vignettes was contextually rich rather than being transparently related to abstract theories. In fact, unlike many prior studies, the results can be judged without any commitment to a particular psychological or philosophical theory of justice. At the same time, this approach of distancing theoretical course material from practical vignette content should simultaneously lessen the aforementioned concerns about social desirability bias and demand effects. Finally, the response format for all questions was objective, averting the need for any subjective scoring of responses.

Beyond these issues, the questionnaire was administered according to good design principles and so as to encourage thoughtful and candid responses while minimizing extraneous effects. Specifically, the questionnaire was brief so as not to overtax respondents' attention, respondents were given up to 20 minutes in-class (or as long as they wished for surveys mailed to some respondents), responses were anonymous, contrasting or similar versions of questions were never presented to the same subject, and questions were sequenced according to a randomized Latin-square design to address order effects.

As discussed above, the general suspicion with previous questionnaire studies on the effects of ethics education, and the clear expectation in the case of some, is that there is a positive bias in favor of finding an effect. The measures just detailed were undertaken precisely in order to reduce the likelihood of such type I errors. On the other hand, the overall conclusion from most previous studies is that the effect sizes are modest to non-existent. This suggests the need to guard against a type II error, as well. That is, perhaps there is a true effect, but great care is needed in selecting the outcome and calibrating the measurement so as to be able to detect it. Rather than starting with the strongest possible effect, therefore, the approach of this study is to proceed from the opposite direction and exploring a low threshold for a true but meaningful effect. This formulation of the question informed several additional choices I now discuss.

First, both the course material and the survey were focused on the same topic, viz. fairness. The instruction and questionnaire were designed independently for the aforementioned reasons. But maintaining a common topic is not only an appropriate test for our question but should also increase the likelihood of an effect, as opposed, say, to teaching about justice and testing a different aspect of morality such as honesty (even though honesty preferences are significant, e.g. see Gneezy, 2005). Nevertheless, justice has proven to be one of the most important economic forces in the laboratory, labor markets, taxation, education policy, and the provision of health care (e.g. see Konow, 2003) and is arguably the largest single topic in philosophical ethics.

Second, the effect investigated is a possible change in moral views, which, as previously discussed, is important to moral behavior. But this effect only requires expressing a different view in an attitudinal survey and not a change in behavior that potentially requires incurring a personal cost. On a related point, fairness views elicited in surveys have proven responsive to even minor, but critical, changes in content, such as the

stated effort or income of parties. So, why would respondents not alter views as a result of instruction? As a further step, we remain agnostic about what direction the change may take. Since a vignette can encompass conflicting fairness principles and the ethics instruction might affect the trade-off between them in different ways, for the purposes of this study, we withhold judgment on which direction is the 'correct' one and consider only whether views differ significantly with ethics instruction.

Third, ethics classes were selected that included an intensive treatment of distributive justice. Specifically, the first five weeks of these classes were dedicated to readings and in-class discussions of this topic that included concepts of equality, desert, libertarianism, consequentialism, Kantianism, Rawlsianism, and natural law.

Fourth, the targeted effect is short-run. Most of the respondents (98 of 151) completed the survey at the start of the class meeting immediately following completion of the section on justice, so that the material would still have been fresh in their minds. Other students, who had taken courses with the same five week section on distributive justice in one of three previous semesters and responded to mailed surveys, were included to boost the sample size and to examine the duration of any effects. Nevertheless, the responses of the two groups of ethics students rarely differed significantly. Although long-term changes would always seem preferable, many real-world interventions specifically target the short- or intermediate-term in apparent recognition of diminishing effects over time. For example, some policies to promote compliance with moral and legal norms in the workplace are implemented repeatedly and at regular intervals, e.g. California law AB1825 mandates sexual harassment training for most people in supervisory capacities at least every two years. Other ethics-related activities have even shorter term goals, such as the common practices of charitable organizations to call door-to-door or to employ mailed solicitations, telethons, and televised advertisements that exhort potential donors to immediate action.

To summarize, the questionnaire for this study is designed to reduce various potential sources of false positives that are often a concern with previous studies while calibrating other features, e.g. outcome, instruction and duration, so as to detect even a weak effect and to avoid the opposite problem of a false negative. The next section discusses the content of the questionnaire and reviews the results of the responses to it.

4. Questionnaire and results

Fifteen vignettes were selected to represent major schools of thought about distributive justice, specifically, they are organized into the four families of theories that structure the treatment of justice in Konow (2003). Indeed, the results for the non-ethics sample are drawn from that publication and others of the author (Konow, 1996, 2001), which were based on surveys conducted in a wide range of introductory classes at the same university. Most questions involve simple binary responses, e.g. Fair or Unfair, but five offer more than two ordered response categories, e.g. Very Fair, Fair, Unfair, and Very Unfair. To simplify the initial presentation, all results have been converted to binary categories, but I will subsequently analyze more fully the results for the five questions with more than two response categories and discuss briefly the content of all questions.

Table 1 summarizes the results for the questions, ordering them into one of the four families of theories and displaying the ethics and non-ethics samples separately. The percentages represent those respondents expressing a fairness view consistent with endorsement of the theory or approval of some price/salary described in the scenario, and the sample sizes appear in parentheses. The difference in the percent of fairness

Table 1. Fairness views of ethics and non-ethics students.

Question	Theoretical family/Concept or topic	Ethics sample(N) %	Non-ethics sample(N) %	Difference%
<i>Consequentialism & welfare economics</i>				
1	Pareto principle	35 (91)	43 (132)	-8
2	Compensation principle	34 (58)	41 (123)	-7
3	Absence of envy	9 (147)	10 (260)	-1
<i>Need & equality</i>				
4	Basic needs	87 (142)	89 (122)	-2
5	Difference principle	19 (146)	20 (177)	-1
6	Original position	15 (149)	14 (142)	1
7	Nature as the cause of inequality	3 (149)	1 (150)	2
<i>Equity & desert</i>				
8	Proportionality	89 (147)	85 (295)	4
9	Responsibility	83 (148)	81 (78)	2
10	Conflicting responsibility concerns	54 (146)	48 (131)	6
<i>Context & framing effects</i>				
11	Wage cut if market wage falls	10 (148)	17 (258)	-7*
12	Wage cut if falling sales	54 (100)	59 (191)	-5
13	Wage cut if new lower profit business	81 (94)	67 (220)	14**
14	Price cut with cost-plus pricing	23 (103)	32 (158)	-9
15	Low price but small share of sales	55 (91)	65 (85)	-10

Notes: Percentages are the fraction of respondents judging the justice concept or some price/salary as fair. Sample sizes (N) are in parentheses and (apart from non-responses) differ for the non-ethics groups, since results were collected in various waves; in the ethics sample, some questions have fewer observations given the aim to avoid presenting too many similar questions or contrasting versions of the same question (e.g. questions 1 and 2) to the same respondents. Difference is the percentage of ethics students minus the percentage of non-ethics students. Results of two-tail tests of differences in proportions are reported as

* $p < .10$; ** $p < .05$.

judgments between the two groups is indicated in the final column as well as the significance of any differences according to two-tail tests of differences in proportions. As is apparent from this final column, the magnitude of these differences is small and rarely exceeds single digits, and only one difference (for question 13) is significant at conventional levels. Thus, we find little evidence of an effect of this type of ethics instruction, despite several choices designed to detect even a modest effect, including use of a common topic (i.e. fairness) for the survey and class, classes that covered the topic intensely, a seemingly pliable outcome, and a very short effect duration.

A brief review of the questions helps give an idea of the breadth of scenarios. But let me first underscore what purpose the questions are intended to serve in the current context as well as what they are not supposed to do. Questions were selected to include a broad range of situations that were inspired by a wide variety of justice theories and concepts. The theories are often subtle and complex, as with Rawls, and there are sometimes different versions of a given concept, as with envy freeness. A justice scholar, therefore, might find one or another vignette deficient as a representation or test of the theory or concept associated with it. Such criticisms might be well taken, but, for the present research question, they are of absolutely no consequence. The goal here is not to test whether views comply with theories but rather to examine whether views differ as a result of ethics instruction, and the theories serve merely as one source of inspiration for scenarios. Indeed, the scenarios should be such that the theories or concepts are not transparently recognizable so as to avoid simply testing knowledge instead

of moral views. Nevertheless, those readers interested in a more extensive treatment of the concepts themselves are referred to the online Appendix for the complete questions and the original sources referenced there (see the website of the International Network for Economic Method <http://www.econmethodology.org/>).

Most of normative economics, including welfare economics, is consequentialist, i.e. it judges the rightness of acts or states based on their consequences or outcomes. The central concept in economics is, of course, the *Pareto Principle*, which endorses gains, as long as no one loses. Question 1 asks which is fairer: an equal allocation between two parties or one that makes one party better off and the other the same. Most respondents in both samples go against the Pareto Principle and find the equal allocation fairer. The results to question 2 reveal a similar level of opposition to the related *Compensation Principle*, which allows for losers, as long as winners could theoretically compensate losers (even if they do not). In welfare economics, fairness per se is usually associated with *Absence of envy* (or *envy freeness*) which defines an allocation as fair, if no agent prefers (i.e. envies) the bundle of another. Only 9–10% of respondents to question 3 judge an allocation as fair that is envy-free according to a simple version of this concept.

Other theories of justice emphasize equality and/or basic needs. Question 4 reveals that large majorities of both groups of respondents support allocating enough of a grant to satisfy the *basic needs* of some people temporarily, even if doing so reduces the ability to raise the living standard of others permanently. Probably the most influential justice theory of the twentieth century was due to John Rawls (1971). Rawls's full blown theory is too complex to tackle in short questions, so a partial and piecemeal approach was adopted: questions 5 to 7 seek to represent in stylized form some assumptions or conclusions of his theory. Large majorities of respondents go against Rawls's *Difference Principle* (question 5), a distributive rule that requires any inequalities to benefit the poorest, his central thought experiment (the *Original position* in question 6) that Rawls claims leads to the Difference Principle, and the insignificant role he, according to some critics, allows for non-random factors in life (*Nature* in question 7).

Another school of thought, based on equity and desert, associates justice with inequality rather than equality. Inspired by Aristotle (1925) and formulated and refined in social psychology, sociology, and economics, equity theory calls for *Proportionality* of outputs to inputs. That is, fair allocations are proportional to individual contributions, which find strong support in question 8. Theories of desert are most frequently based on the putative *Responsibility* of agents for the benefits or burdens that have occurred. Unequal allocations are fair, if agents are responsible for underlying differences, but are equal, if agents are not responsible for any differences, consistent with the majority view in question 9. Additional survey questions and economics experiments (e.g. see Konow, 1996, 2000, 2001) corroborate desert and support the accountability principle, which combines proportionality and responsibility: fair allocations are in proportion to the contributions individuals control but ignore differences which they do not. Despite evidence of broad support for the accountability principle, views are sometimes closely divided, as when there are multiple and *Conflicting responsibility concerns*. That is the case in question 10, where there is tension between fair earnings from a single transaction vs. fair overall earnings between two parties.

Question 10 also draws attention to a broader issue. The large percentage of respondents answering similarly to some questions might be viewed by a justice scholar as an auspicious indication of consensus about fairness. For the present purposes, however, they raise potential concerns about ceiling and floor effects due to the absence of

sufficient controversy. Nevertheless, the results for other questions help dispel this suspicion, e.g. the splits for questions 1 and 2 are less extreme but similar across samples. And the differences across samples are insignificant even in the knife-edge cases of questions 4, 10, 12, and 15 (as discussed below, the original non-binary responses to 4 are close to the midpoint of the permissible range).

Much justice research has focused on the effects on fairness judgments of context, including the variable allocated, the set of individuals involved and the presentation of facts (or framing effects), which questions 11 to 15 address. It is seen as unfair for an employer to cut employee wages merely because of a fall in the market wage (question 11), although it is more acceptable, if the employer's sales are falling (12), and even fair, according to most respondents, if the employer switches to a new business where its profits fall (13). Most respondents do not think fairness requires a factory to cut its price with its costs by the amount called for by cost-plus pricing (14). Finally, a small majority accepts an unfairly low price on one product, if the product comprises a small fraction of sales and the seller can show a profit on other items (15).

With question 13, we see the first and only difference in responses between ethics and non-ethics students that is statistically significant at conventional levels (11 is marginally significant). If this were the only judgment affected by ethics instruction, the overall conclusion would remain that there is little evidence of an effect. On the other hand, there are other reasons to suspect even this result. For one, if ethics instruction caused this difference, one would expect the difference to be larger for students currently enrolled in the course. Yet, this analysis shows no significant differences between the responses of current and former ethics students on any questions save question 13, and this one case goes opposite to the predicted direction. If we break down the sample of ethics students for this question into those currently enrolled in ethics, students who took ethics in a past semester, and those who took ethics previously and have subsequently graduated, only this last group differs significantly from the non-ethics sample: 13 of 14 graduates find it fair for the employer to cut wages in its new, low-profit business.

As previously stated, the response formats for five questions allow more than two categories. Question 4 involves the hypothetical allocation of any amount of \$100 million to the project that addresses basic needs, viz. project X rather than Y. The percentage in Table 1 represents those allocating to project X the \$50 million or more that is necessary in order to satisfy basic needs fully. Analyzing the original responses, we find the mean allocation of ethics students is 54.1 and of non-ethics students 53.4, an insignificant difference ($p > .70$). Questions 8, 10, and 14 each present three ordered numerical answers, and question 15 has the four categories Very Fair, Fair, Unfair, and Very Unfair. The split points for these questions in Table 1 were chosen so as to create the least extreme splits. Applying the Mann-Whitney rank-sum test to the original full sets of responses, the differences between the ethics and non-ethics students are insignificant for questions 8 ($p = .22$), 10 ($p = .30$), and 15 ($p = .18$) and significant for question 14 ($p = .01$). Thus, the findings using the complete data for these five questions are consistent with the simple test of differences in proportions in Table 1 except for question 14, where ethics students are slightly less supportive than non-ethics students of cutting prices when costs fall. If we break down the ethics sample into current and former students, we find the first evidence consistent with an effect of ethics instruction on *current* ethics students: their responses to question 14 differ significantly from non-ethics students ($p = .01$), although the responses of *former* ethics students do not differ significantly from those of non-ethics students ($p = .23$).

5. Discussion and conclusions

The results reported in the previous section provide little evidence that traditional instruction in philosophical ethics affects fairness views in concrete, contextually rich situations. Out of fifteen questions, the two samples differed significantly in at most two cases. Indeed, we are left with only one case, if we maintain a consistent assumption about timing, i.e. that the effect be either immediate, which leaves a significant difference only in the case of question 14, or lagged, which leaves only question 13. One significant difference is roughly what is to be expected by chance and in the absence of any difference in the populations.

With regard to the likely robustness of this negative finding, the arguments go both ways. Distributive justice is an important topic in economics and arguably the broadest single subject matter within philosophical ethics, but it might be the case that instruction about some other ethics topic affects moral views, even if it does not with respect to justice. Also, the focus here was on a traditional philosophical approach to teaching ethics, but teaching methods other than those studied here might produce different results. Of course, these are the kinds of considerations that temper conclusions from any single study and that point to the need for replications and extensions. Nevertheless, although various features set this study apart from others, its findings can also be viewed against the background of a large empirical literature on ethics instruction within disciplines that points to weak overall effects. Indeed, the results of the current study make even a weak effect appear optimistic, given the measures employed here both to avoid false positives and to heighten detection of any true effect.

Suppose we are justified in concluding that philosophical ethics does not, in fact, systematically affect moral views, or, for that matter, individual moral behavior. What are we to conclude from that? Are moral views immutable? Should one abandon efforts to teach prescriptive ethics? Although I do not claim to have conclusive answers to these questions, I offer the following considerations.

First, on the question of stability, previous studies have shown that fairness views can change significantly in response to small, but critical, changes in the content of scenarios. This might be taken as an indication that such views are labile. On the other hand, many results have been replicated across different respondent pools as with the ethics and non-ethics samples in the present study as well as with quite different subject pools, e.g. see examples in Konow (2001, 2003), and the Appendix to this paper. One interpretation of these seemingly contradictory findings goes along the following lines. Perhaps moral intuitions are widely shared, deeply ingrained and embedded in familiar contexts. Thus, there is considerable similarity of fairness views about identical scenarios across different groups of moral judges. Moreover, being based on intuitions that are both deep and stable, these views are not easily swayed by abstract arguments, such as those typically presented in philosophical ethics. Nevertheless, fairness views do respond to differences in the content of scenarios that differentially affect the importance or salience of competing intuitions. In fact, much empirical research on fairness, such as that just cited, argues that distributive justice is plural and based on multiple criteria. This suggests the further implication that the different theories presented in an ethics class might well resonate with different moral intuitions without, in the end, convincing the student of the need to declare one theory or intuition as the victor. Indeed, stability of moral views across samples and in response to ethics instruction might not only be a reasonable expectation but even a reassuring finding, if one holds such views to have some normative value.

Second, consider to what purposes ethics instruction might be put. The primary goal of most ethics education within disciplines, such as business ethics, engineering ethics and legal ethics, is to change individual attitudes and/or behavior. Another possible focus for ethics education, however, is on social, rather than individual, transformation. Specifically, philosophical ethics might alternatively be judged by its success or failure in imparting knowledge and/or skills that are of use for society as a whole. In fact, this is the usual approach to ethics instruction within economics. The field of economics and ethics typically focuses on delivering tools that can inform reflection on normative issues, which, in turn, might improve the formation and evaluation of economic policies. But students of economics and ethics are not necessarily expected to become more moral, at least no more than students of health economics are expected to become healthier, as a result of their participation in a course of study. In both cases, the principal targeted effect is social: students should acquire tools that can aid them in formulating or evaluating measures that promote ethical ends or improved health, respectively. Thus, the absence of an individual *effect* does not necessarily mean that ethics instruction is *ineffective* in a broader sense, a point that might well apply to the teaching of philosophical ethics. These questions are left for future research.

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Notes

1. See also Schwitzgebel (2013) for further discussion of this literature. After conducting an updated search, I came up with nearly the same list of major contributions as Schwitzgebel with only a few more recent contributions that do not overturn the conclusions that can be drawn from previous studies.
2. Note, however, that, similar to a common interpretation of utility theory in economics, it is useful to distinguish these two forces without committing to the idea that their behavioral effects are necessarily mediated by deliberate or conscious choice.
3. This requirement can be seen in the context of this University's longstanding commitment to moral education as captured in its mission statement. Traditionally, the implementation of this requirement in its specifics has been left to the Philosophy Department.
4. The ethics students include numerous respondents whose ages overlap with those of lower class rank, and multivariate regressions of responses on age reveal no significant relationships. This non-effect is also consistent with the similarity of views between this student sample and an older general population in other surveys, e.g. see the discussion in the Appendix and Question 8A in Konow (2003). Of course, we cannot rule out the possibility of an effect of class status separate from that of age, although I am not aware of any evidence of such an effect, let alone on fairness views. Moreover, this possibility might be more of a concern, if we found systematic differences between the two groups, but, as we will

see, there are systematic similarities. Such a finding requires some (unidentified) force to offset the effect of class status in just the right magnitude across most of the wide range of different fairness contexts examined here, which seems unlikely.

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