Teaching Economic Ethics

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Abstract

There have been growing calls for increased emphasis on ethics education following recent business scandals and economic upheavals. Although numerous studies have examined whether economics training produces more self-interested individuals, there appears to be little evidence on the possible effects of economic ethics, i.e., ethics instruction in an economic context. This paper reports the results of three studies that explore different types of ethics education and different types of outcomes. Study 1 examines the possible effects on fairness views of intensive exposure to readings and lectures in a mandatory philosophy class on a subject matter that concerns economics and ethics, viz., distributive justice. In Study 2, students in economics classes hear lectures on professional ethics and then participate in classroom economics experiments that measure generosity and cooperation. Study 3 examines whether current distributive and reciprocal preferences observed in a laboratory economics experiment are correlated with current or past volunteering activities outside the laboratory. The studies find both effects and non-effects depending on the method and the targeted effect. These findings tentatively suggest that economic ethics can influence behavior but that both the existence and type of effect is sensitive to the method employed.

Keywords:

JEL classification:

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There have been growing calls recently for economics to return to its origins as a “moral science” and for economists to strengthen the emphasis on ethics in their teaching and research. For example, on its 100th Anniversary, the American Economic Review devoted a section of its May 2011 issue to the topic Economics as a Moral Science. The Fall 2013 issue of the Journal of Economic Perspectives featured a symposium on Economics and Moral Virtues, and its Summer 2013 symposium on The Top 1 Percent raised ethical questions, implicitly given the nature of the topic and, at times, explicitly in the contributions. The rise in support for ethics education has cut across many fields, as evidenced by the addition of initiatives such as the UNESCO Ethics Education Programme and National Science Foundation funding for Ethics Education in Science and Engineering, and by the rapid growth in college-level ethics requirements and service learning activities valued in the billions of US dollars. But special concerns have been raised about the ethical training of those who, though their participation in or influence on the economy, have often been seen as complicit for such events as the 2001 accounting scandals at Enron and WorldCom and the 2007-08 financial crisis and subsequent Great Recession. As a result, the percentage of business schools that report requiring an ethics course for their MBA programs has more than doubled from 34% in 2001 to 79% in 2011 (Beyond Grey Pinstripes). Despite similar concerns about the repercussions of economics training as well as evidence of broad types of unethical conduct among professional economists (e.g., List et al., 2001), economists have only recently begun to urge the establishment and instruction of ethical guidelines in their profession, e.g., Atkinson (2011) and DeMartino (2011).

There are multiple ways in which economics training might affect society and the economy through its moral content (or lack thereof). Although many economists maintain that they should specify means rather than ends (note this is itself a normative claim), their education stresses certain goals (mostly efficiency-based ones) and centers on a view of human nature as self-interested. These factors can insinuate themselves into policy recommendations, including as they pertain to taxation, regulation, education and public health. The private sector relies on economists in various functions, including for consulting on financial markets and economic forecasting. The undergraduate economics degree is a leading major for many private and public sector positions and for post-graduate studies in law, finance, management, marketing and accounting. Moreover, the potential influence of economics instruction extends far wider, as it is required for virtually all undergraduate and graduate business degrees. Indeed, a now
considerable literature that began with Marwell and Ames (1981), Carter and Irons (1991), Frank, Gilovich and Regan (1993, 1996), Beil and Laband (1996), and Yezer, Goldfarb and Poppen (1996) asks “does studying economics lead to more self-interested behavior?” The weight of evidence suggests those trained in economics do act more selfishly than others, although the results are mixed on the culpability of economics training per se.

This paper turns the above question on its head and asks “is ethics training in an economic context (or economic ethics) related to moral attitudes or behavior?” This is a broad effort, given the great diversity of methods and goals. Ethics training can take many forms from the more traditional teaching of ethical theories in philosophy courses to lectures on professional ethics to service learning through volunteer activities. In addition, the goals of ethics training vary. The desired effect might be immediate or long-term. It could be to alter how one reasons about moral questions or to reinforce compliance with moral norms. One can differentiate types of morality, including generosity, fairness, cooperation and reciprocity. This paper adopts a multi-faceted approach, therefore, and reports three studies that vary with respect to the types of ethics training and the types of effects. Each study employs a different sample of college students including a broad cross-section, students enrolled in economics classes, and students who participate in a laboratory economics experiment. All studies were conducted at a comprehensive university in the western United States.

Study 1 examines possible effects on fairness views of exposure to five weeks of readings and lectures in a mandatory philosophy class on a subject matter that concerns both economics and ethics, viz., distributive justice. In Study 2, students in economics classes hear lectures on business ethics and then participate in classroom economics experiments that measure generosity and cooperation. Study 3 examines whether current distributive and reciprocal preferences observed in a laboratory economics experiment are correlated with current or past volunteering activities outside the laboratory. Despite the considerable interest in and potential importance of economic ethics, there has been little related work and no research, to my knowledge, on these particular questions. The current paper is intended as a first step in this direction.

1 Other studies on this question include Bauman and Rose (2011), Frank and Schulze (2000), Frey and Meier 2003), Frey and Meier (2005), Frey, Pommerehne and Gygi (1993), Hu and Liu (2003), Laband and Beil (1999), Selten and Ockenfels (1998), Spraggon and Oxoby (2009), Stanley and Tran (1998), and Zsolnai (2003). In addition, other research finds that those who study economics care less about fairness and/or more about efficiency than other students, e.g., see Faravelli (2007), Fehr, Naef and Schmidt (2006), and Hole (2013).

2 There is, however, some loosely connected but very interesting research. Cappelen et al. (2011) and Ellingsen and
Study 1: Philosophical Ethics: Views of Distributive Justice

We start with the longest established form of ethics instruction and with the effect that would seem easiest to achieve. Ethics education has historically been the domain of philosophers, and the traditional, and still main, approach to the teaching of moral philosophy involves presenting and critically analyzing dominant ethical theories. Although ethicists might hope that such instruction will favorably impact behavior, a more modest objective is that such instruction will alter and perhaps improve moral reasoning. Since this type of ethics training is conceptual, it also seems more fitting to examine its possible effects on attitudes or beliefs than on behavior. Most of the loosely related empirical research has focused on possible effects of professional ethics instruction, such as in business and the sciences, and has been subject to various methodological shortcomings.\(^3\) There appear to be no empirical studies of the effects of traditional ethics courses in philosophy, let alone as they apply to an economic question. This study examines how views of economic fairness might be affected by exposure to in-depth treatment of theories of distributive justice in an ethics course taught by a philosopher.

A potential problem, of course, is the existence of a selection bias: those who choose to enroll in an ethics course might differ from those who do not in ways related to their fairness views. This study exploits a natural experiment to address this challenge. All students at the university where the study was conducted were required by the university core to take a course in ethics listed in the philosophy department. These students provide a treated group without selection bias, but a question arises about the appropriate control. One possibility was to conduct the study within subjects, i.e., to take before and after measures of attitudes. This has the advantage of offering mostly the same subjects. On the other hand, some differences could still be expected because of students adding, dropping or being absent from the class, and using a within subjects method increases concerns about *experimenter demand effects* (see Zizzo, 2010).

\(^3\) Johannesson (2005) find that prompting subjects to reflect on fairness leads them to more sophisticated interpretations of fairness. Results of studies of children suggest moral learning proceeds with age: similar to the studies just cited, Almås et al. (2010) find an increase in sophistication about fairness but in this case related directly to age, and Fan (2000) finds willingness to cooperate rises through childhood. For surveys of such indirect empirical evidence, see Bloodgood, Turnley and Mudrack (2008), Mayhew and Murphy (2008), and Schwitzgebel (2013). These find little or no evidence of professional ethics instruction based mostly on self-reported behavior. Another form of indirect evidence more closely related to philosophical (as opposed to professional) ethics comes from a series of studies by Schwitzgebel and his collaborators indicating that ethics instructors behave no better and often worse than other philosophy professors, e.g., see Schwitzgebel (2009), Schwitzgebel and Rust (2009, 2010), and Schwitzgebel et al. (2012).
e.g., it is likely that some respondents would 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 natural experiment delivered this means, as well: students were not permitted to take the ethics course until they reached Junior (i.e., third year) status. This created a group of upper classmen free of selection biases to set beside a comparable group of lower classmen whose only systematically observable difference was class status. Thus, the sample included ethics students in the treatment and students enrolled in a wide variety of first and second year courses in the control.

Both groups included a broad cross section of students, and the questionnaires were administered in class: these elicited fairness views about circumstances described in vignettes, i.e., hypothetical scenarios. The goal of Study 1 is not to test knowledge of ethical theories, which would be expected to change even if there were no change in views, or to examine behavioral effects, for which an incentivized experiment would have been preferred. Rather, the aim is to explore possible repercussions of ethics instruction for impartial moral reasoning, and surveys eliminate material incentives that might bias views. Moreover, vignettes, which present concrete and contextually rich situations, have been shown to aid reasoning better than presentation of problems in abstract form (e.g., see Goldstein and Weber, 1995).

At least four aspects of the design should make it easier for differences between the two respondent groups to manifest. First, ethics classes were selected that included a particularly intensive treatment of distributive justice: the first five weeks were dedicated to readings and in-class discussions of this topic that included concepts of equality, desert, libertarianism, consequentialism, Kantianism, Rawlsianism, and natural law. Second, most of the respondents (98 of 151) completed the survey at the start of the class meeting immediately following

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4 It could be, of course, that fairness views differ between the two groups for other reasons, e.g., because of age differences. But the treatment group includes numerous respondents whose ages overlap with lower class rank, and regressions of responses on age reveal no significant relationship. 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 footnote 6 here and Question 8A in Konow (2003). Moreover, age might be more of a concern, if we found systematic differences between the treatment and control, but, as we will see, there are systematic similarities. Such a finding requires some (unidentified) force to offset the effect of age in just the right magnitude and to do so across the wide range of different fairness contexts examined here, which seems highly unlikely.

5 The survey was administered according to good design principles and so as to encourage thoughtful and candid responses while minimizing extraneous effects, e.g., respondents were given up to twenty minutes in-class (or as long as they wished for mailed surveys), responses were anonymous, contrasting or similar versions of questions were never presented to the same subject, the questionnaire was brief so as not to overtax respondents’ attention, and questions were sequenced according to a randomized Latin-square design to address order effects.
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 previous semesters and responded to mailed surveys, were included to boost sample size and to examine the duration of any effects. Nevertheless, the responses of the two groups of ethics students did not differ significantly, save on one question that will be discussed later.

Third, the effect that is investigated is a possible change in moral views elicited in an attitudinal survey, which only requires expressing a different belief and not some potentially costly change in behavior. Fourth, it is well established that fairness views expressed in surveys can be sensitive to even slight changes in wording or presentation. For example, consider version A of Question 4 from Kahneman, Knetsch and Thaler (1986):

4A. A company is making a small profit. It is located in a community experiencing recession with substantial unemployment but no inflation. There are many workers anxious to work at the company. The company decides to decrease salaries by 7% this year. Please rate this as:
   Fair 38%  Unfair 62%  N=125

Version B of this question is identical, except that the italicized text is replaced by the following:

4B. … and inflation of 12% … increase salaries only 5% …
   Fair 78%  Unfair 22%  N=129

These questions reveal a framing effect, viz., money illusion: most respondents find it unfair to cut nominal pay in the absence of inflation, but a large majority finds roughly the same real pay cut fair, if accomplished by inflation. This shift in proportions is highly significant. If fairness judgments are so sensitive to frames, it would not be surprising, therefore, if they were also affected by course material that specifically espouses positions about what is fair and just.6

The questions 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, which were based on surveys conducted in introductory classes. Table 1 summarizes the results for the 15 questions ordered into one of the four families of theories for the ethics and non-ethics samples and includes percentage responses and sample sizes.7 The percentages represent those respondents expressing a fairness view consistent with

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6 The non-student sample used by Kahneman, et al. might differ somehow from the student subject pool used here, but available evidence suggests otherwise: the survey of ethics students included question 4B, and 84% of the 147 students surveyed responded Fair, an insignificant 6 percentage point difference from the Kahneman, et al. result.

7 See the Appendix for the complete statement of questions and their original sources. The response format for most questions was binary (e.g., Fair or Unfair), but some had multiple response categories, which were converted into a binary form, as explained in the Appendix, for ease of presentation and of analysis in Table 1. Note that, apart from...
endorsement of the theory or approval of the action described in the scenario. The difference in the percent of fairness 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, despite setting the bar low, we find little evidence of an effect of this type of ethics instruction.

Table 1
Fairness Views of Ethics and Non-ethics Students

<table>
<thead>
<tr>
<th>Question</th>
<th>Theoretical Family/Concept or Topic</th>
<th>Ethics sample</th>
<th>Non-ethics sample</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td><strong>Consequentialism &amp; Welfare Economics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Pareto Principle</td>
<td>35</td>
<td>91</td>
<td>43</td>
</tr>
<tr>
<td>2</td>
<td>Compensation Principle</td>
<td>34</td>
<td>58</td>
<td>41</td>
</tr>
<tr>
<td>3</td>
<td>Absence of envy</td>
<td>9</td>
<td>147</td>
<td>10</td>
</tr>
<tr>
<td><strong>Need &amp; Equality</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Basic needs</td>
<td>87</td>
<td>142</td>
<td>89</td>
</tr>
<tr>
<td>5</td>
<td>Difference Principle</td>
<td>19</td>
<td>146</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>Original position</td>
<td>15</td>
<td>149</td>
<td>14</td>
</tr>
<tr>
<td>7</td>
<td>Nature as the cause of inequality</td>
<td>3</td>
<td>149</td>
<td>1</td>
</tr>
<tr>
<td><strong>Equity &amp; Desert</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Proportionality</td>
<td>89</td>
<td>147</td>
<td>85</td>
</tr>
<tr>
<td>9</td>
<td>Responsibility</td>
<td>83</td>
<td>148</td>
<td>81</td>
</tr>
<tr>
<td>10</td>
<td>Overall fairness on specific transaction</td>
<td>54</td>
<td>146</td>
<td>48</td>
</tr>
<tr>
<td><strong>Context &amp; Framing Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Wage cut if market wage falls</td>
<td>10</td>
<td>148</td>
<td>17</td>
</tr>
<tr>
<td>12</td>
<td>Wage cut if falling sales</td>
<td>54</td>
<td>100</td>
<td>59</td>
</tr>
<tr>
<td>13</td>
<td>Wage cut if new lower profit business</td>
<td>81</td>
<td>94</td>
<td>67</td>
</tr>
<tr>
<td>14</td>
<td>Price cut with cost-plus pricing</td>
<td>23</td>
<td>103</td>
<td>32</td>
</tr>
<tr>
<td>15</td>
<td>Low price but small share of sales</td>
<td>55</td>
<td>91</td>
<td>65</td>
</tr>
</tbody>
</table>

Notes: Difference is the difference between the percentage of ethics students less the percentage of non-ethics students judging the justice concept or action as fair. Results of two-tail tests of differences in proportions are reported as *p<.10, **p<.05.

non-responses, sample sizes 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 similar questions or contrasting versions of the same question (e.g., questions 1 and 2) to the same respondents.
In order to gain an appreciation of the breadth of fairness concepts represented, let us briefly review the questions. Note that justice scholars might disagree about whether particular questions fully or accurately captures a theory, especially given the complexity and subtlety of many theories. That point might be well taken but is not relevant for the purpose at hand: the goal here is not to test the theories but to compare fairness judgments in a wide variety of contexts, and the theories are merely taken here as inspiration for the questions and the tests.

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 economic concept 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 Compensation Principle, by contrast, allows for losers, as long as winners could theoretically compensate losers (even if they do not), and the responses to question 2 suggest roughly the same level of opposition to this principle by both samples as to the Pareto Principle. Absence of envy defines an allocation as fair, if no agent (i.e., envies) the bundle of another agent. Question 3 presents an allocation of goods that is envy-free, but only 9-10% of respondents in each sample consider it fair.

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 simplified and piecemeal approach was adopted: questions 5 to 7 seek to represent in stylized form parts of his theory. The part of Rawls’s theory that has received the greatest attention, particularly among economists, is his Difference Principle. This justice rule calls for equality, unless inequality benefits the worst off. A corollary of this principle is that a movement from equal to unequal allocations is never preferred, if one party loses. Nevertheless, large majorities find such a change fair in question 5, if the winner has been industrious and the loser lazy, a distinction the Difference Principle does not recognize. Rawls claims that the Difference Principle would be chosen in a hypothetical state of impartiality, specifically, he proposes a thought experiment called the original position. Question 6 incorporates features of this position,
including initial equality under ignorance of one’s place in a randomly determined later state. Indeed, the later allocations even satisfy the Difference Principle, and the hypothetical parties even reveal a preference for this state, but most respondents judge these initial conditions, i.e., those of the thought experiment itself, unfair. Nature, or the random assignment of social position and personal characteristics in life, figures prominently in Rawls’s theory as the cause of inequality and seems to leave scant room for other sources. Question 7 explicitly eliminates any role for nature such that fairness should call for equality, but very large and similar majorities of respondents find an additional factor relevant and support effort as a fair basis for inequality.

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. In question 8, a store manager works twice as many hours as another, and a large majority of respondents finds proportionate pay fair, choosing it over equal pay or an alternative intermediate to the two. Theories of desert are most frequently based on the putative responsibility of agents for the benefits or burdens that have occurred: if they are responsible for differences, fair allocations differ, but, if they are not responsible, then fair allocations are equal. Similar majorities of respondents respond in accordance with this principle in question 9 and find unequal allocations unfair, if they are due to genetic differences in ability. Additional survey questions and economics experiments (e.g., see Konow, 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.

Views about how to apply this principle can be more closely divided, however, when multiple responsibility concerns conflict and calculations are more complex as in question 10, and here respondents from both samples are approximately equally split. These results help dispel possible suspicions that the similarities between the two samples is due to the absence of controversy in the scenarios: even in knife-edge cases, both samples respond similarly.

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8 Here the owner of a video game machine rents it to a restaurant owner. In a contrasting version of this question (question 4A in Konow, 2001), the two parties appear equally responsible, and most respondents think it is fair for the two parties to share the surplus (revenue beyond the owner’s maintenance costs) equally. The version here, however, adds the fact that video game owner enjoys an advantage on revenue from other sources, for which he is not responsible and which is, therefore, unfair. Thus, some respondents seek to redress this unfairness by shifting the terms of the video game machine transaction whereas others disregard the conditions extraneous to the transaction.
Much justice research has focused on the effects of context on fairness judgments, including the variable allocated, the set of individuals involved and the presentation of facts (or framing effects). Questions 11 to 15 present various scenarios that inquire mostly into the fairness of changes in wages or prices. It is viewed 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 in the manner called for by cost-plus pricing (14). Finally, most respondents accept an unfairly low price on one product, if the product represents a small fraction of sales, and the seller is able to show a profit on other items (15).

With question 13, we see the first and only statistically significant difference in responses between ethics and non-ethics students (the difference with question 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. One significant difference out of 15 is roughly what is to be expected by chance and in the absence of any difference in the populations. Moreover, if ethics instruction caused this difference, one would expect the difference to be larger for students currently enrolled in the course. Yet, there are no significant differences between the responses of current and former ethics students on any questions save question 13, and that goes opposite 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 but 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. One conjecture is that the exposure of these graduates to the workplace has caused them to be more accepting of the need to adapt to the market in this case.

Thus, we observe little evidence that traditional instruction in philosophical ethics affects moral judgments about concrete, contextually rich situations, which is especially striking given the various aforementioned considerations that suggest this is a modest expectation. This finding could be unique to this topic and/or this course. On the other hand, it is consistent with studies that have looked for other types of effects of ethics classes and found little to no supportive evidence (e.g., see, Schwitzgebel, 2013). Nevertheless, the absence of such effects does not
necessary mean this method is ineffective in a broader sense, a point to which I will return in the final section of this paper.

**Study 2: Professional Ethics: Generosity and Cooperation**

Philosophical ethics seeks to promote an intellectual understanding of its subject matter, and the same is true of traditional “economics and ethics” with its focus on normative ethical criteria. What I will call “professional ethics,” by contrast, seeks explicitly to modify behavior. Although versions of professional ethics, such as business ethics, medical ethics or legal ethics, often include normative theoretical content, their aim is to alter behavior, whether through imparting knowledge, molding thoughts or motivating action. This seemingly sets the bar higher in terms of outcomes than with the changes in moral reasoning considered in the prior section. Study 2 employs lectures that exhort students enrolled in economics classes to moral conduct and examines possible effects on their levels of generosity and willingness to cooperate in classroom economics experiments.

This study involved three sections of introductory microeconomics taught by the same instructor, and all sections participated on the same day in the twelfth week of instruction. The students, 59% of whom majored in business or economics, were informed beforehand that there would be guests on that date but were not told any further details. Each class began with a lecture by a different guest professor, who was introduced by the regular instructor. The only procedural difference between the three sections was the identity of the guest lecturer, and each constituted, therefore, a different treatment. Since there are alternative approaches to teaching professional ethics, two different ethics professors were invited and employed different methods. Treatment A involved what I will call “enlightened self-interest”: the professor argued that those who act in their narrow self-interest do not fare as well, in the long run, as those who behave in the general interest. Treatment B propounded what I will call “moral duty”: this professor focused on a method for choosing the right course of action and exhorted students to follow that action. 9 The third section, C, was a control: a statistics professor discussed applications of statistics to microeconomics. After about thirty minutes, the lecturer finished and departed, and the instructor

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9 These two treatments mirror the main division between schools of thought in ethics. One school focuses on achieving some outcome (the “Good”), whereas the other stresses moral rules or virtues (the “Right”). “Enlightened self-interest” can be seen as an example of the former and “moral duty” as an example of the latter.
asked the students to complete an evaluation of the guest lecturer. After collecting the
evaluations, the regular instructor then introduced the experimenter without explicitly making or
disavowing any connection to the previous lecture.

Given the classroom setting, the experiment was not computerized. Students were given a $3
show-up fee, inter alia, in order to reassure them that the experiment involved real monetary
payments. After other standard introductory procedures, every subject made three decisions, and
each decision was completed before introducing and moving on to the next. First, all allocated as
dictators in a dictator game: each subject was endowed with $10 and could transfer any integer
amount between $0 and $10 to an anonymously matched counterpart in different class. Next,
every subject estimated how much, on average, all subjects in their room had transferred to their
counterparts in the first decision. This was incentivized by deducting one dollar from their total
earnings for each dollar of error in their integer valued estimates from the (rounded) average.
Finally, all subjects participated in a prisoner’s dilemma with an anonymous student in a
different class from their own and from that used for the first decision: mutual cooperation
earned each $8, mutual defection earned each $4, and cooperating when the other defected
earned the cooperator $0 and the defector $10. Pains were taken to ensure double-blind
anonymity: subjects collected their materials and deposited their decisions confidentially and one
at a time, and the use of subject IDs, blank slips to ensure equal thickness of payment envelopes
and a randomly chosen student to distribute payments ensured individual earnings were known
only to the subject him- or herself.  

We begin by reviewing the results of the dictator and prisoner dilemma decisions, which are
illustrated in Figures 1 and 2, before a more detailed discussion that includes statistical tests. The
median dictator transfer across all treatments was $4 (the mean was $3.91), and numerous
subjects gave more than one-half, in apparent contradiction to fairness: 9% of dictators across all
conditions and 14% in the Moral duty treatment gave more than $5. Such transfers are high
relative to most prior dictator experiments, so I refer to giving in this first decision as generosity.
Mean dictator gifts are higher in the ethics treatments than the Control, indeed, giving is highest
in the Moral duty condition followed by the Enlightened self-interest treatment. The cooperation
rate across all conditions is 42.4%, and cooperation is also higher in the ethics treatments than
the Control, although the order is different: the highest cooperation rate is obtained in the

10 The final experimental instructions, which were revised after pilots, can be found in the Appendix.
Enlightened self-interest treatment followed by the Moral duty treatment.

*Figure 1*
Mean Transfers in the Dictator Game

*Figure 2*
Cooperation Rates in the Prisoner’s Dilemma
Table 2
Effects of Ethics Lectures on Generosity and Cooperation

<table>
<thead>
<tr>
<th></th>
<th>Generosity in dictator game (dollars given)</th>
<th>Cooperation in prisoner’s dilemma</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean</td>
<td>(standard deviation)</td>
</tr>
<tr>
<td>A. Enlightened self-interest</td>
<td>3.90</td>
<td>(2.43)</td>
</tr>
<tr>
<td>B. Moral duty</td>
<td>4.32</td>
<td>(2.37)</td>
</tr>
<tr>
<td>C. Control</td>
<td>3.21</td>
<td>(2.01)</td>
</tr>
</tbody>
</table>

Note: N equals 29 for treatment A and 28 for B and C.

The results are summarized in Table 2 and suggest that different types of ethics instruction trigger different behavioral effects: appealing to moral duty more strongly impacts generosity whereas highlighting enlightened self-interest is better at promoting cooperation. This seems plausible: moral duty arguments encourage unconditional moral behavior as with dictator generosity, whereas enlightened self-interest stresses mutual dependence, which relates to cooperation. Of these two claims, however, only the former is statistically significant: one-tail tests of the hypothesis that ethics instruction favorably affects behavior compared to the Control are significant only for the mean dictator gift in the Moral duty treatment (t=1.88, p=.032) but not for the proportion cooperating in the Enlightened self-interest treatment (z=.96, p=.168) (or the other two comparisons, i.e., A vs. C for the dictator gift and B vs. C for the prisoner’s dilemma). Although the 12.6% point difference between cooperation rates in A and C is not statistically significant with current sample sizes, if it proved robust, it would be economically significant: with randomly matched players, mutual cooperation would occur 83% more frequently in the Enlightened self-interest treatment than in the Control (in 23.3% of cases vs. 12.7% of cases).

It is possible that any variation in the experiment is not related to the content of the lectures themselves, but rather to some personal qualities of the lecturers. To explore this, the evaluation form completed by students right after the lectures elicited responses on a five point Likert scale (with 5=Very high and 1=Very low) to the following four questions: How do you rate the lecturer’s overall speaking skills?, … lecturer in terms of personal likability? … lecturer in terms
of enthusiasm? … lecturer’s knowledge of the subject matter? The results are summarized in Table 3. First, we note that all three lecturers received high average ratings with all but one of the nine scores exceeding 4. Comparing the Control to A and B, respectively, on the four questions, only three of the eight comparisons are significant, and all three of these indicate the lecturer in the Control was rated somewhat more favorably than the ethics professors. This fact casts doubt on the conjecture that the more favorable patterns of generosity and cooperation after the ethics lectures were due to some desirable personal characteristics of the lecturers.\footnote{It would be interesting to include these ratings in regressions, which would presumably strengthen treatment effects, but it was unclear how to design the experiment so as to relate lecturer ratings to experimental decisions at the individual level without violating anonymity or raising suspicions about the connection between the lectures and the subsequent experiments.}

\textbf{Table 3}

\textbf{Ratings of Lecturers}

\begin{center}
\begin{tabular}{lcccc}
 & Speaking skills & Personal likability & Enthusiasm & Knowledge \\
\hline
Mean scores & & & & \\
A. Enlightened self-interest & 4.23 & 4.27 & 3.87 & 4.70 \\
B. Moral duty & 4.55 & 4.48 & 4.52 & 4.86 \\
C. Control & 4.36 & 4.79 & 4.68 & 4.71 \\
Two-tail t-tests of differences in means (p-values) & & & & \\
A vs. C & .453 & .001 & .000 & .174 \\
B vs. C & .225 & .038 & .281 & .380 \\
\end{tabular}
\end{center}

Note: Five point Likert scale where 5=Very high and 1=Very low.

We have considered patterns of generosity and cooperation across treatments, but it is interesting to examine possible within subject correlation in decisions. Dictator transfers are highly positively correlated with their estimates of the average transfer of the group ($r>.56$ and $p<.001$ in all three conditions), and, although the average transfer of subjects in treatments A and B (but not C) is greater than their estimates of the group average, none of these differences is significant ($p>.21$). Thus, participant estimates resemble their actions, and their estimates are not, on average, biased. This might reflect a false-consensus effect, i.e., overestimating the similarity of one’s actions to those of others, or perhaps norm-compliance, i.e., a desire to match one’s own behavior to what others are expected to do. Is generosity related to cooperation? The results of this study suggest a resounding no: dictator gifts are uncorrelated with cooperation in
the prisoner’s dilemma (.22>r>.05 and .79>p>.25), and the dictator gifts of cooperators did not differ significantly from those of defectors in any treatment according to tests of differences in means (.93>p>.26). Thus, the dictator and prisoner’s dilemma decisions appear to have tapped into distinct motives, consistent with the evidence that they can be primed independently. Overall, Study 2 suggests that professional ethics lectures can produce a short-run behavioral effect and that the particular effect depends qualitatively on the type of moral argument, although the result for cooperation is tentative.

**Study 3: Volunteer Work: Distributive and Reciprocal Preferences**

Yet another approach to teaching ethics is experiential. Service learning, for example, involves civic engagement linked to academic institutions and is increasingly promoted for various putative personal and social benefits, including its positive effects on cultural tolerance and future community service participation. According to Campus Compact (2012), service learning at its member college campuses has grown steadily and was valued at $9.7 billion in 2012, 70% above the level in 2008. More generally, 65% of Americans reported volunteering in the previous year (Gallup, 2013), and volunteer work has been valued at 2.2% of GDP in the United States (Salamon, Sokolowski and Associates, 2004). There has been little experimental economic research on volunteering (as opposed to charitable donations), and existing work has focused on factors that affect the rate of volunteering (Al-Ubaydli and Lee, 2011, Conrads, et al., 2013) or the performance of volunteers (Gneezy and Rustichini, 2000). The only study on the effect of volunteering on moral motivation, to the author’s knowledge, is Xiao and Houser (2014), whose main result is that college students who are properly incentivized to volunteer are subsequently more likely to express an interest in future volunteering. Study 3 considers the more specific question of whether current or past volunteering is related to distributive or reciprocal preferences and, if so, how.

Since volunteering is, by definition, volitional, there is always the possibility of selection bias among those who volunteer. This, in turn, significantly reduces the strength of inferences about causality between volunteer activities and moral preferences. One approach would be to assign students randomly to a group that is required to do volunteer work or to one that is not. It would be interesting to study such mandatory service, but it would not be a study of volunteering, as it is usually understood. Moreover, it would be challenging to make service
mandatory among a college population and, therefore to rule out selection bias, since students usually enjoy some degree of latitude regarding such participation: they may choose to take or drop professors, courses, majors, colleges or even institutions of higher learning, and these choices might depend, at least in part, on such requirements. Thus, in this initial study of volunteering and moral preferences, the focus is on correlational evidence. Nevertheless, note that such analysis can be suggestive of causality: although correlation does not imply causation, the absence of correlation does suggest the lack of causation, so a positive result is auspicious.\footnote{Note also that, although experiments offer stronger evidence of causality than other methods, causal inference is always a matter of degree: even a perfectly randomized study does not give certainty about causality, e.g., because one in twenty tests of a non-relationship will be positive by chance and because one can never be completely sure that the conditions the differentiate treatment and control do not also hide some unintended and unnoticed causal factor.} Moreover, as I will argue, the particular pattern of findings here seems more consistent with a causal relationship between volunteering and moral preferences than the most obvious alternative explanations.

Whereas Study 2 explored short-run behavioral effects, Study 3 considers both short-run and long-run relationships between ethics training and behavior. In addition, in contrast to both of the previous studies, Study 3 includes consideration of reciprocal preferences. In particular, it can be seen as relevant to the influential movement in the social sciences and biology advocating “strong reciprocity” (see Gintis et al., 2004). More specifically, we consider here the claim in that literature that people are motivated to punish others, even in situations where they have no personal stakes or personal relationships in the matter at hand. Many explanations for this phenomenon are based on the malleability of such preferences, over varying periods of time, in response to experience. Here we examine the relationship of reciprocal preferences, including of involved third parties, to recent and past volunteering activities.

Study 3 employs previously unanalyzed data on volunteering that was collected for the experiment on distributive and reciprocal preferences reported in Croson and Konow (2009). I will now describe the features of that study, which are relevant to the analysis at hand. Subjects were recruited online from among the student population, and, after preliminary procedures, including the payment of a $5 show-up fee, there followed two dictator decisions. First, each subject in Group X decided how much, if any, of a $10 endowment to share with an anonymous counterpart in Group Y in six different $2 increments (i.e., 0, 2, 4, 6, 8 or 10 dollars). Second, there was a previously unannounced dictator decision in which each subject from a different
group chose how much of a $20 endowment to give to a Group X subject and how much to X’s paired Group Y counterpart. This decision employed the “strategy method”: second stage dictators made six decisions about how to divide the $20, one for each of the six possible first stage decisions, without knowing X’s choice. There were two treatments, which differed with respect to the identity of the second stage dictator. In the so-called “stakeholder” treatment, this was the same Group Y subject with whom the Group X subject was paired for the first dictator decision. In the so-called “spectator” treatment, it was someone from a third set of subjects, Group Z, who were paid a fixed $20 fee unrelated to their decision to allocate the separate $20 between the X/Y pair assigned to them. After the second dictator allocation, all subjects completed questionnaires that collected demographic information as well as information on types and hours of community service activities in the current semester and in the previous four years. Then actual Group X decisions and their corresponding Y or Z allocations, respectively, were made known, and subjects were paid.13

This experiment was designed to eliminate strategic motives and to enable us to associate each of these decisions with a distinct and different set of motives. The first Group X decision combines self-interest and distributive preferences. The Group Z allocation reflects distributive and reciprocal preferences, since Z, apart from distribute concerns, might additionally wish to reward or punish X for high or low first stage transfers, respectively. The Group Y allocation potentially results from the same motives as those of Group Z except for the added effect of self-interest, since the Y subjects have a stake in the second allocation. Here we use the Group X decisions to analyze the willingness to depart from self-interest and to act on distributive preferences, and we analyze the Group Y and Z decisions for identifying reciprocal motives (as well as the effect of self-interest on such motivation in the case of Group Y).

Table 4 presents results of regression analyses of the Group X gifts to Y. They reveal that these gifts are positively correlated with hours of volunteering: regression (1) shows that dictator gifts increase by 21 cents for every 100 hours of volunteering. It is interesting to consider whether the timing of the service activities matters. If both volunteering and dictator giving are caused by a tertiary variable like personality (i.e., stable individual traits), then both current and past volunteering should be related to gifts. If volunteering causes dictator giving, however,

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13 See Croson and Konow (2009) for further details of the experiment. Note that we are not using the Random Decision treatments for the analysis here, since Group X makes no first stage decision and, therefore, reciprocal motives are also not relevant for the second stage allocations.
either current or past activities might be relevant. On the one hand, recent events are often more salient, but, on the other hand, some theories posit that it is repeated acts of generosity that contribute to a disposition toward subsequent dictator giving (e.g., see the thesis based on psychological well-being in Konow and Earley, 2008). Regression (2) in Table 4 shows that dictator gifts are not significantly related to current volunteering but that they are significantly related to volunteer activities over the past four years: the 21 cents increase per 100 hours is equivalent to a 48 cents more given by the subject who worked the average number of volunteer hours in the past (227) compared to someone who did no volunteer work. Additional regressions that included demographic variables, such as age, race, gender and year in college, found no significant relationships with the exception of major: students with business or economics majors gave less than other majors ($1.13 and $1.14 in regressions 1 and 2, respectively), consistent with the aforementioned literature suggesting these majors tend to be less pro-social.

Table 4

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total current and past</td>
<td>0.21**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.09)</td>
<td></td>
</tr>
<tr>
<td>Current semester</td>
<td>–0.09</td>
<td>–1.13**</td>
</tr>
<tr>
<td></td>
<td>(3.62)</td>
<td>(0.53)</td>
</tr>
<tr>
<td>Past four years</td>
<td>0.21**</td>
<td>–1.14**</td>
</tr>
<tr>
<td></td>
<td>(0.10)</td>
<td>(0.55)</td>
</tr>
<tr>
<td>Business/economics major</td>
<td>–1.13**</td>
<td>–1.14**</td>
</tr>
<tr>
<td></td>
<td>(0.53)</td>
<td>(0.55)</td>
</tr>
<tr>
<td>R-squared</td>
<td>.14</td>
<td>.14</td>
</tr>
</tbody>
</table>

Note: Level of significance: *p<.10, **p<.05; standard errors in parentheses; N=60.

Second stage dictators (Y and Z) could condition their allocations to X on how much X gave in the first stage. Indeed, second stage dictators allocated more, on average, to X, if X was more generous. To examine reciprocal preferences, we take as the dependent variable this response, i.e., how much more did the second dictator allocate to X, on average, for each dollar increase in the amount X transferred to Y in the first stage? Table 5 presents the results of regression
analyses of this response. The first regression takes as the dependent variable the increase in second stage allocations to X averaged over all levels of X gifts (from $0 to $10). A dummy variable equals 1, if the second dictator was a Group Y allocator, meaning that the constant captures the response of Group Z allocators. This constant shows that Z allocators increased the amount given to X subjects by $1.31 for each dollar X increased its gift to Y. If Zs cared only about the distribution of funds between X and Y, this response should equal 1, but Zs exhibit reciprocal preferences by rewarding (or punishing) X by significantly more than $1. We see that this response is significantly lower by 40 cents, when the second stage allocator is a Group Y subject, indicating a more muted response by Ys to X transfers.

Table 5
Reciprocal Preferences: Regressions for Y and Z Responses

<table>
<thead>
<tr>
<th>Response of second dictator to:</th>
<th>all X gifts</th>
<th>low X gifts</th>
<th>high X gifts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.31***</td>
<td>1.28***</td>
<td>1.25***</td>
</tr>
<tr>
<td></td>
<td>(0.09)</td>
<td>(0.15)</td>
<td>(0.18)</td>
</tr>
<tr>
<td>Group Y allocator</td>
<td>−0.40**</td>
<td>−0.24</td>
<td>−0.51**</td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.20)</td>
<td>(0.24)</td>
</tr>
<tr>
<td>Current volunteer work (10s of hours)</td>
<td>−0.08***</td>
<td>−0.02</td>
<td>−0.19***</td>
</tr>
<tr>
<td></td>
<td>(0.02)</td>
<td>(0.04)</td>
<td>(0.04)</td>
</tr>
<tr>
<td>Past volunteer work (100s of hours)</td>
<td>0.04*</td>
<td>0.08**</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>(0.02)</td>
<td>(0.03)</td>
<td>(0.03)</td>
</tr>
<tr>
<td>R-squared</td>
<td>.26</td>
<td>.14</td>
<td>.31</td>
</tr>
</tbody>
</table>

Note: Level of significance: *p<.10, **p<.05, ***p<.01; standard errors in parentheses; N=60.

Turning now to volunteering, we break this down by current and past volunteer work, in light of the prior results indicating distinct effects (the coefficients are calibrated to reflect 10s of hours for current and 100s of hours for past given the large difference in periods covered by each, viz., one semester for current and four years for past). The coefficients indicate that the response of second stage allocators decrease with the amount of current volunteering and increases with amount of past volunteering (the latter effect is marginally significant). It turns out, however, that these effects depend on whether one considers positive reciprocity or negative reciprocity. That is, it is natural in this experiment to consider the response to low X gifts (less than one-half), which might be punished, and to high X gifts (more than one-half), which might
be rewarded. The second and third regressions in Table 5 break down the analysis of second stage responses in this manner. These show that Y and Z responses to X gifts are fairly similar in magnitude, regardless of whether the X gifts are high or low (although the Y effect for low gifts is smaller and no longer significant). But these regressions reveal an asymmetry with respect to volunteering. The negative effect related to current volunteering is due entirely to reduced reward for high X gifts, i.e., the reward to X for giving more is lowered. The positive effect related to past volunteering is due entirely to increased punishment for low X gifts, i.e., a sharper increase for increasing the X transfer or, since this is in the punishment range, a larger decrease in the allocation to X, if X gives less to Y.  

What explanations offer themselves for these relationships? Suppose some tertiary variable, like personality, causes both volunteering and affects reciprocal preferences. As with the case of X gifts, however, it is not clear why this would differ for current and past volunteering. Indeed, there is the further doubt about this story given that current and past both matter but not in the same way. I am unaware of any evidence from prior studies regarding these social preferences and volunteering, so we are left with conjectures. Perhaps those who are currently volunteering more are more inclined to regard it as a duty that does not require reward. And perhaps those who have accumulated many hours of volunteer work in the past come to view a basic level of generosity to be expected and, therefore, punish low givers more severely. This latter conjecture seems consistent with the aforementioned literature on strong reciprocity, which stresses the cumulative effects of social interactions that reinforce negative reciprocity. These questions require further analysis, but the fact that these effects differ count against the most obvious explanation that omits a causal relationship between volunteering and reciprocity.

**Discussion and Conclusions**

The studies reported in this paper have yielded differing results about economic ethics, suggesting there are both effects and non-effects. Moreover, the effects appear to vary qualitatively with the approach adopted. As a general point, this seems not only plausible but also seems the most interesting result. If there were no significant effects, it would be

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14 Further regression analysis shows that there is no significant relationship of levels of second stage allocations to volunteering, or any significant difference in response effects of volunteering between Y and Z allocators, or any significant effects on responsiveness of demographic variables, including major, age, race, gender and year in college.
inauspicious (even if it were not the final word). If, on the other hand, every method produced an
effect, it would not only seem odd, but there would also no challenge to economic ethics. I
conclude with a discussion of the findings and suggestions for further research.

Study 1 failed to find systematic effects of the philosophical approach that focuses on
teaching theories of ethics on everyday judgments, specifically, in the context of a topic of
importance for both economics and ethics, viz., distributive justice. Of course, future work could
examine the robustness of this finding to other philosophical approaches and other topics. But
this does seem generally consistent with research on business ethics and with the following
consideration: if moral intuitions are deeply ingrained and embedded in familiar contexts, then
they might not be easily swayed by abstract arguments, even if they do respond to contextual
elements. In addition, if moral intuitions are not only deep but plural (as empirical work arguably
suggests), then multiple moral theories might well appeal to different aspects of those intuitions
without leading the student to regard one theory or intuition as the victor. This stability might not
only be what we should expect, but, if we hold that actual values (or at least some of them) are
normatively valid, what we should desire.

There is another way in which some approaches should not necessarily be expected to
generate behavioral or attitudinal changes. Philosophical ethics chiefly involves providing the
means to reflect on normative questions. When applied to disciplines, for example, in the form of
bioethics, political theory, and economics and ethics, the primary goal is typically to deliver tools
that can inform such reflection and, perhaps, the formation and evaluation of policies. Whereas
economic ethics, as defined here, is a type of professional ethics and aims to affect attitudes or
behavior, economics and ethics, which is closer to philosophical ethics, seeks to impart
knowledge and/or skills. Thus, students of economics and ethics should not be expected to
become more moral, any more than students of health economics should be expected to become
healthier. In both cases, the principal targeted effect is indirect: students should acquire tools that
can aid them in formulating or evaluating measures that achieve ethical ends or promote greater
health, respectively. Thus, the absence of an effect on students, does not mean a type of
instruction is ineffective: one must consider both direct and indirect effects.

Study 2 examines professional ethics and its behavioral effects on students in economics
classes, and it underscores the importance of distinguishing different methods and different
effects. The evidence indicates that dictator generosity and cooperation in a prisoner’s dilemma
involve distinct motives and that appeals to moral duty increase the former; it also suggestive that emphasizing enlightened self-interest promotes the latter. The results are consistent with the existence of distinct moral motivations and behaviors and seem plausible: encouraging unconditional regard for others increases giving, whereas stressing mutual interdependence and self-interested reasons for caring about others is favorable to cooperation. Further research could examine other pedagogical approaches and other effects, such as on reciprocity and honesty.

Study 3 involved a two stage dictator experiment and found that volunteering activities are correlated with distributive and reciprocal preferences, although the exact effects depend on whether the volunteering is current or past. Dictator generosity is positively related to hours of volunteering in the past but not the present, and business and economics students are significantly less generous than other majors. This seems consistent with theories that posit that repeated acts of generosity contribute to subsequent dictator giving. Among second stage dictators, reward (positive reciprocity) was significantly weaker among those who volunteer more currently, and punishment (negative reciprocity) was greater among those who have volunteered more in the past. The latter seems consistent with a claim strong reciprocity, viz., that cumulative social interactions reinforce negative reciprocity. The alternative conjecture that a personality trait accounts for these effects on generosity and reciprocity does not seem consistent with the differing effects of current versus past volunteering. On the other hand, volunteering is, by definition, volitional, so one cannot rule out a selection bias. It would be interesting in future work to examine the effects of mandatory service: although this would not involve volunteering, it would provide stronger causal evidence on the relationship, if any, between service activities and pro-social preferences.

This paper represents an attempt to respond to recent calls for economists to revive the standing of their discipline as a moral science, specifically with respect to “economic ethics,” or the teaching of ethics in economic contexts. In its clearest form, economic ethics would encourage economists and students of economics to strive toward conduct that is in compliance with shared moral standards in their personal and professional capacities. This may be seen as a complement to more traditional “economics and ethics,” which provides the tools for incorporating ethics into economic policy and analysis.
REFERENCES


APPENDIX – NOT FOR PUBLICATION

Study 1 - Survey Questions

See the notes at the bottom for an explanation of the key to the original source and response categories used in Table 1, which is included in parentheses below each question.

1. A small newly independent island nation is considering how to allocate its one banana plantation and its one sugar plantation. There are only two farmers on the island interested in these plantations. The government chooses among the following two plans either of which would result in the same total production of both bananas and sugar.
   
   Plan X. Both farmers receive one-half of each plantation. Each farmer earns an average profit of $100 per day from bananas and sugar combined. Therefore, the total of both farmers’ profits is $200 per day.
   
   Plan Y. One farmer receives the banana plantation and the other farmer receives the sugar plantation. The farmers’ profits are unequal since the sugar plantation is more profitable than the banana plantation: average daily profit of the banana farmer is $100 and that of the sugar farmer is $200. At $300 per day, combined profits are greater under this plan because specialization reduces production costs.

   Please circle the plan which you consider more fair:
   
   Plan X   Plan Y
   
   (2: 5C; Plan Y)

2. A small newly independent island nation is considering how to allocate its one banana plantation and its one sugar plantation. There are only two farmers on the island interested in these plantations. The government chooses among the following two plans either of which would result in the same total production of both bananas and sugar.

   Plan X. Both farmers receive one-half of each plantation. Each farmer earns an average profit of $100 per day from bananas and sugar combined. Therefore, the total of both farmers’ profits is $200 per day.

   Plan Y. One farmer receives the banana plantation and the other farmer receives the sugar plantation. The farmers’ profits are unequal since the sugar plantation is more profitable than the banana plantation: average daily profit of the banana farmer is $90 and that of the sugar farmer is $160. At $250 per day, combined profits are greater under this plan because specialization reduces production costs.

   Please circle the plan which you consider more fair:

   Plan X   Plan Y

   (2: 5B; Plan Y)

3. Chris, who is blind, does not like TV and Pat, who is a vegetarian, does not like hamburger. Suppose that Chris and Pat work for the same company in the same capacity and earn the same base salary. The time comes for the end of the year bonus. Chris, who works much harder than Pat, receives a $2 coupon for a hamburger. The less productive Pat, on the other hand, receives as a bonus a $2000 wide screen television. Please rate this as:

   Fair Unfair

   (1: 5; Fair)
4. Parador is an underdeveloped country whose people live at subsistence level: only their basic needs for food, shelter and clothing are satisfied. The only assistance available is a one time grant of $100 million which the government of Parador has received. It can distribute this grant as it sees fit between two projects.

*Project X.* In eastern Parador there is malnutrition due to a drought. To prevent the starvation of the 500,000 people affected and to return them to subsistence level would require $100 per person, or $50 million.

*Project Y.* In western Parador there is an agricultural development program awaiting funding which would permanently raise its participants from subsistence level to a moderate standard of living. Its cost is also $100 per person.

What do you think is the most fair distribution of the $100 million between Projects X and Y (express in millions of dollars and make sure the total is $100 million)?

Project X: ______ million
Project Y: ______ million
(2: 6A; % giving Project X ≥$50M)

5. Suppose Mike and Bill begin working for a computer software company at the same time and in the same capacity. Initially they both earn a salary of $50,000 per year. After a trial period Mike demonstrates that he is hard working, productive and performs far beyond initial expectations. Bill, on the other hand, is lazy, unproductive and performs far below initial expectations. Their supervisor decides to give Mike a $10,000 per year raise and to cut Bill’s salary by $1,000. Please rate the supervisor's decision to raise Mike’s salary and to cut Bill’s as:

Fair
Unfair
(1: 1B; Fair)

6. The owner of a small office supply store has two employees, Mike and Bill. They are equally productive and hardworking and are both currently earning $7 per hour. The owner decides to move his store to a new location nearby where he knows business will be better. He lets his workers know that if they wish to continue at the new location he will be able to raise their wage. He explains that they will continue to have the same responsibilities but that one worker will earn $8 per hour and the other $12 per hour. He also explains that which worker gets the higher wage will be determined later on the basis of a coin toss. The workers can choose to go with the owner to the new location under these terms or to find similar work elsewhere for their current $7 per hour. They both choose to go with the owner. Please rate the store owner's terms for the new wages as:

Fair
Unfair
(1: 1A; Fair)

7. Mike and Bill are identical twins who were reared in an identical family and educational environment. They are the same in terms of physical and mental abilities, but Mike is more industrious than Bill. For that reason, after they begin their careers Mike ends up earning more than Bill. Please indicate whether you view such a difference in their earnings as:

Fair
Unfair
(1: 1C; Fair)
8. Bill and Sam manage a small grocery store at different times and on different days. The manager's duties are always the same and the days and times which each work vary pretty much randomly, but Bill works 40 hours per week while Sam works 20 hours per week. Suppose the manager's salary for a 60 hour week is $1200. Which of the following is the fairest division of this salary?

A. Bill gets $600 and Sam gets $600.
B. Bill gets $700 and Sam gets $500.
C. Bill gets $800 and Sam gets $400.

(3: 5; C)

9. Bob and John become shipwrecked on an uninhabited island where the only food is bananas. They can collect as many bananas as they want by climbing up a tree, picking them before they fall into the ocean and throwing them into a pile. Bob and John are identical in terms of physical and mental abilities except that Bob was born with one hand and John with two. Together they pick a total of 20 bananas per day, but because of his condition Bob picks fewer bananas per day than John. John takes 12 bananas from the pile leaving 8 for Bob. Please rate this as:

Fair  Unfair
(3: 1B; Unfair)

10. Davis and Thompson have restaurants in a shopping mall. Davis owns a video game machine with which he breaks even: it costs $40 per week to maintain and, in Davis’ restaurant, generates $40 per week in revenue. In Thompson’s restaurant maintenance costs would still be $40 but, because of the younger clientele there, weekly revenue would be $80. Davis decides to rent the video game machine to Thompson and continues to pay for the $40 weekly maintenance costs. Because Davis is related to the owner of the mall, he got a much more favorable location, and solely for that reason Davis runs a highly profitable business whereas Thompson operates on a very small profit. Please circle the weekly rent you consider fair for Davis to charge Thompson.

A. $50
B. $60
C. $70

(2: 2B; A)

11. A small photocopying shop has one employee who has worked in the shop for six months and earns $9 per hour. Business continues to be satisfactory, but a factory in the area has closed and unemployment has increased. Other small shops have now hired reliable workers a $7 an hour to perform jobs similar to those done by the photocopy shop employee. The owner of the photocopying shop reduces the employee's wage to $7. Please rate this as:

Fair  Unfair
(2: 11A; Fair)

12. A moderate sized company in a small community is the major local employer. The workers of the company are represented by their own independent local labor union. Sales of the company's product fall significantly, so the company cuts pay by 10%. Please rate this as:

Fair  Unfair
13. A house painter employs two assistants and pays them $9 per hour. The painter decides to quit house painting and go into the business of providing landscape services. With about the same time and effort, the former house painter's profits fall significantly in his new business. In landscape services the going wage is lower so he reduces the workers' wages to $7 per hour for the landscaping work. Please rate this as:

Fair Unfair

(1: 9B; Fair)

14. Suppose a factory produces a particular table which it sells to wholesalers. The factory has been selling all the tables it can produce for $150 each. Suppose that the factory has now found a supplier who charges $20 less for the materials needed to make each table. What price is now fair to the factory and to the wholesalers?:

A. $150
B. $140
C. $130

(2: 7B; C)

15. Suppose a furniture manufacturer is the single supplier of chairs to a retail store, and both firms have similar sales volume and profits. Suppose that both firms would agree that $100 is a fair price for the retail store to pay the furniture manufacturer for each chair: this price gives a fair return to the furniture manufacturer on its investment of time and money. Nevertheless, through government price controls the price is set very much lower. This leaves the furniture manufacturer with a very small profit on the chairs. Nevertheless, chair sales represent a small fraction of the furniture manufacturer's business since it produces many other profitable goods. Please rate this price as:

Very Fair Fair Unfair Very Unfair

(2: 8G; Fair or Very Fair)

Notes: The information in parentheses following each question indicates the publication in which the question originally appeared (1, 2, 3 or 4), the original question number, and the response category/categories reflected in the percentages in Table 1. The publication key is 1=Konow (2003), 2=Konow (2001), and 3=Konow (1996). Thus, for example, under question 14, (1: 9B; Fair) means this was Question 9B in Konow (2003), and the percentages in Table 1 are those choosing Fair to this question.

Study 2 – Experimental Instructions

[Introduction of guest lecturers by regular professor]
Treatments A and B:
Most of the economics we study in this course is based on the assumption that people always act to promote their self-interest, so I thought it would be interesting to bring a different perspective from guest lecturer who specializes in ethics. Dr. ____________ has kindly agreed to talk about ethics in an economic context.
Treatment C:
Most of the economics we study in this course deals with microeconomic theories, so I thought it would be interesting to bring a different perspective from guest lecturer who specializes in statistical applications of economics. Dr. ____________ has kindly agreed to talk about an applied microeconomic topic.

[Economics experiments by experimenter]
I am now handing out $3 to every person who showed up today. Please complete one of the Show-up Fee Receipt forms that are circulating to acknowledge your receipt of this fee. Make sure to complete this receipt using the pen that is also circulating. There are two copies of these forms – please enter your information on only one of the forms, not both.

This is an experiment about economic decision-making. If you follow the instructions carefully, you can earn a considerable amount of money in addition to the $3 you have already received for showing up today. You will receive these additional payments privately, in cash, after the experiment.

Now that the experiment has begun, we ask that you do not talk or communicate with one another in any way. If you have a question after we finish the instructions or at any time during the experiment, please raise your hand, and the experimenter will approach you and answer your question in private.

You may be familiar with psychology experiments. Psychologists sometimes make use of deception in their experiments whereas economists do not. Everything that you are told during this experiment about the procedures, decisions and outcomes is completely accurate and truthful.

Please note that your participation is voluntary. You have the right to withdraw at any time and to forfeit all payments you have received and will receive from your participation.

You will now collect your materials for the experiment. Each of you will go individually to the study carrel in the back of the classroom. Behind the study carrel there is a box with envelopes. You may select any one envelope you wish and then proceed to your seat. Please keep your envelope closed until you are told to open it.

Please now refer to the sheet that states “General Instructions” at the top. For the moment, leave your envelope closed. I will now go over the General Instructions, which you may read along with me.

General Instructions
Each person in this room, which we will call Room A, will be randomly paired with a different person in a different room, which we will call Room B. You will not be paired with any of the people in this room. You will never know the identity of your counterpart in Room B, nor will your counterpart ever know who you are.

We are employing a number of measures to guarantee your anonymity, that is, to ensure that no one, including your counterpart and me, the experimenter, will ever be able to trace any decision to you personally. I will now explain these measures. You chose your envelope, and, when you are finished, you will return your envelopes to the box from which you took them one at a time and confidentially. The materials in your envelopes are identified only by a subject ID. Since you chose your own envelope, only you know your subject ID. Before returning your envelope, you will remove from it a slip with your subject ID. You will keep this slip and use it later to claim your earnings. After the experiment, I will prepare and seal the payments for each
person by subject ID. Then a student will be randomly chosen to distribute the payments. I will leave the classroom while the student assistant matches subject IDs to sealed payment envelopes and sees that each subject receives the correct envelope. You will then pocket your envelope and open it later. That way only you will know your earnings: I will not know which person has a particular subject ID, and the student assistant will not know how much the earnings of any person are. In addition, the payment envelopes will contain not only the correct earnings in bills but also blank slips, where necessary, in order to ensure that all payment envelopes have the same thickness.

Please now put aside the General Instructions, but you may review them at any time. Open your envelope and take out the two contents of the envelope: one is a sheet that states “Allocation Decision” at the top, and the other is a slip with your subject ID on it. Please pocket your subject ID slip now, which you will later use to claim your earnings. I will now go over the “Allocation Decision” instructions, which you may read along with me.

**Allocation Decision**

A sum of $10 has been allocated to each of the subjects here in Room A. The subjects in Room B have not and will not receive any such payments. You may, however, choose to transfer an amount of your sum to your counterpart in Room B. Transfers can only be made in whole dollar amounts, as indicated in the table below. Please indicate below how much, if any, of your $10 you wish to transfer to your counterpart in the other room by circling that amount. You will have five minutes for this decision. When you are finished, please put this form back in your envelope and seal it.

The amount I choose to transfer to my counterpart is

- $0
- $1
- $2
- $3
- $4
- $5
- $6
- $7
- $8
- $9
- $10

If you have a question, please raise your hand, and I will approach you to answer your question. Please continue to maintain silence throughout the experiment. You may begin.

Time is up! Please make sure you place your Allocation Decision form in your envelope and seal the envelope.

We will now hand out packets that contain additional materials. Please keep your packet closed until you are told to open it.

Please open your packet and take out the sheet that says “Further Instructions” at the top. Leave the other materials in the packet. I will now go over those instructions, which you may read along with me.
Further Instructions

The packet you just received contains three envelopes. The first two envelopes involve two additional decisions you will make and the third is a questionnaire. Please leave these materials in your packet until instructed to take them out. After completing these forms, you will place all materials, including the Allocation Decision you just completed, in this packet. Then, as stated previously in the General Instructions, you will return your Allocation Decision envelope (enclosed now in your packet with the additional materials) to the box from which you originally took the envelope one at a time and confidentially. All of your decisions are still completely anonymous. The packet and the additional materials you just received are unmarked, including the subject ID spaces, which have been left blank. The additional materials, therefore, cannot be connected to you personally but only to a subject ID through your Allocation Decision form, which you also put in the packet. As explained previously in the General Instructions, the payments for the experiment will be made using a student assistant in a way such that no one will ever be able to trace any decision to you personally.

Please now remove the envelope labeled “Decision 2” from your packet. Leave the other envelopes in the packet. Put the other materials in your packet, including the Allocation Decision envelope, the General Instructions form and the Further Instructions form. Take the form out of the “Decision 2” envelope. I will now go over the instructions, which you may read along with me.

Decision 2

Your task at this stage of the experiment is to estimate to the best of your ability how much on average subjects in Room A have transferred of their $10 sum to their counterparts in Room B. For purposes of calculation, this average will be rounded to the nearest whole dollar amount. If you correctly estimate this amount, you will receive your total earnings from all decisions in this experiment. That is, you will receive the sum of what you kept from the first Allocation Decision plus whatever you might earn in Decision 3. For every dollar error in your estimate, however, your earnings will be reduced by one dollar. For example, if your estimate is $1 above or $1 below the average transfer, your total earnings will be reduced by one dollar. As another example, if your estimate is $2 above or $2 below the average, your earnings will be reduced by two dollars. Your estimate of the average transfer from Room A subjects to Room B subjects can only be made in whole dollar amounts, as indicated in the table below. Please indicate below your best estimate of this value by circling that amount. You will have five minutes for this decision. When you are finished, please put this form back in the Decision 2 envelope and seal it.

I estimate that the average transfer of Room A subjects to Room B subjects is

$0
$1
$2
$3
$4
$5
$6
$7
$8
$9
$10

If you have a question, please raise your hand, and I will approach you to answer your question. Please continue to maintain silence throughout the experiment. You may begin.

Time is up! Please make sure you place your Decision 2 form in your Decision 2 envelope and seal the envelope. Return this envelope to your packet.

Please now remove the Decision 3 envelope from your packet. Leave the other envelopes in the packet. Take the form out of the Decision 3 envelope. I will now go over the instructions, which you may read along with me.

**Decision 3**

This is the final decision of the experiment. Your earnings from this decision will be added to your net earnings from previous decisions. In this round, each person here in Room A will be randomly paired with a different person in a different room, which we will call Room C. The people in Room C are a different group from the Room B subjects in the first round of this experiment. You will never know the identity of your counterpart in Room C, nor will your counterpart ever know who you are. Your earnings depend on the actions you and your Room C counterpart choose. You and your counterpart will separately and independently choose an action, X or Y. Your combined actions will jointly determine your earnings in the following way:

<table>
<thead>
<tr>
<th></th>
<th>You earn</th>
<th>Your counterpart earns</th>
</tr>
</thead>
<tbody>
<tr>
<td>You choose X and your counterpart chooses X</td>
<td>$8</td>
<td>$8</td>
</tr>
<tr>
<td>You choose X and your counterpart chooses Y</td>
<td>$0</td>
<td>$10</td>
</tr>
<tr>
<td>You choose Y and your counterpart chooses X</td>
<td>$10</td>
<td>$0</td>
</tr>
<tr>
<td>You choose Y and your counterpart chooses Y</td>
<td>$4</td>
<td>$4</td>
</tr>
</tbody>
</table>

Please circle your choice of action X or action Y below. You will have five minutes for this decision. When you are finished, please put this form back in envelope 3 and seal it.

I choose action: X   Y

If you have a question, please raise your hand, and I will approach you to answer your question. Please continue to maintain silence throughout the experiment. You may begin.

Time is up! Please make sure you place your Decision 3 form in your Decision 3 envelope and seal the envelope. Return this envelope to your packet.

Please now remove the envelope labeled “Questionnaire” from your packet. Leave the other envelopes in the packet. Take the form out of the Questionnaire envelope. Please take the time to consider and answer all of the questions on the Questionnaire as thoroughly as possible. You will have ten minutes to complete this form. In particular, please take care in answering the questions on the final page regarding your service activities. When you reach that page, please read the instructions carefully, and if you have a question, please raise your hand, and I will approach you to answer your question.
When you are finished, please put the form back in the Questionnaire envelope and seal it.

Now you may proceed individually to the box behind the study carrel at the back of the classroom. Deposit your packet anywhere in that box. Please take your belongings with you, and you may leave immediately after depositing your packet.
Thank you for your participation.