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Are students blind to their ethical blind spots?

An exploration of why ethics education should focus on self-perception biases

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Abstract

Ethics blind spots, which have become a keystone of the emerging behavioral ethics literature, are essentially biases, heuristics, and psychological traps. Though students typically recognize that ethical challenges exist in the world at large, they often fail to see when they are personally prone to ethics blind spots. This creates an obstacle for ethics education – inducing students to act in an ethical manner when faced with real challenges. Grounded in the social psychology literature, we suggest that a meta-bias, the bias blind spot, should be addressed to facilitate student recognition of real-world ethical dilemmas and their own susceptibility to biases. We present a roadmap for an ethics education training module, developed to incorporate both ethics blind spots and self-perception biases. After completing the module, students identified potential ethical challenges in their real-world team projects and reflected on their susceptibility to ethical transgressions. Qualitative student feedback supports the value of this training module beyond traditional ethics education approaches. Lessons for management and ethics educators include a) the value of timely, in-context ethics interventions and b) the need for student self-reflection (moreso than emphasis on broad ethical principles). Future directions are discussed.

Keywords: Behavioral ethics, management, education, bias, blind spot, self-perception
Are students blind to their ethical blind spots?

An exploration of why ethics education should focus on self-perception biases

In the last decade, large strides have been made to improve business ethics education. In addition to increased inclusion of ethics in management curriculums, there has been a shift in pedagogy and content. Many educators have realized the traditional approach, which focuses on theory and principles, often fails to effect behavioral changes. This is, in part, because the traditional approach assumes people are rational agents – that avoiding ethical transgressions is a matter of simply identifying right from wrong and having good intentions (Rest, 1986). However, despite the best of intentions, people often fail to translate ethical motives into ethical action (Bazerman & Tenbrunsel, 2011). As a result, pedagogic approaches to ethics have begun to shift away from a focus on philosophy towards the ways that moral judgment and decision-making manifest as ethical, or unethical, behaviors (e.g., Arce & Gentile, 2015; Gentile, 2010).

This article begins by reviewing the value of ethics education for modern business schools, then contrasting educational approaches of traditional ethics and behavioral ethics. We suggest that behavioral ethics may benefit from incorporating relevant social psychological theories, such as the “bias blind spot” (Pronin, Lin, & Ross, 2002). In several domains of social psychology, interventions have been tested which improve both intentions and behavior. Using those methods as a guide, we present a framework for, and initial exploratory assessment of, a pedagogical training module. This ethics intervention was designed with the intention of increasing students’ recognition of their own biases and, in doing so, increasing the odds that general ethical awareness will translate into identification of real-world ethical challenges and behavioral modifications. Representative student feedback about their real-world ethical
dilemmas are presented as suggestive evidence in favor of this training module. We conclude with lessons for business ethics education.

**Importance of Ethics Education**

Though current business leaders presumably studied traditional ethics in their undergraduate and graduate programs, ethical transgressions are still prevalent. In the early years of the twenty-first century, Enron and other major corporate scandals created broad recognition of the importance of business ethics. In the last few years alone, more than a decade after Enron, unethical behaviors have proliferated within national and international corporations: Wells Fargo’s practices of fraudulent accounts; exorbitant pharmaceutical price increases; predatory for-profit colleges; aggressive subprime mortgage promotions; falsified Volkswagen emissions readings; and conflicts of interest in medical research. These unethical practices not only reduce general well-being (e.g., moral stress; DeTienne, Agle, Phillips, & Ingerson, 2012), but also have large practical costs; the Association of Certified Fraud Examiners (2016) estimates that organizations typically lose 5% of their revenue to fraud, and the US Government Accountability Office (2013) reports $9.1 trillion in home equity losses resulting from the 2008 economic collapse.

Consumers have lost trust in corporations (e.g., Vlachos, Tsamakos, Vrechopoulou, & Avramidis, 2009) and are vocal about their discontent (Creyer & Ross, 1997). Though consumers’ ethical intentions (e.g., to boycott an irresponsible company) do not always translate to behavior (Carrington, Neville, & Whitwell, 2014), businesses are realizing the importance of their reputations in a society that is highly interconnected through both traditional and social media. Establishing the ethicality of an organization can improve customer, investor, and

**Effectiveness of Traditional Business Ethics Education**

Traditional ethics education has primarily emphasized theory and analysis, such as the rules, principles, and standards for deciding what is morally right or wrong in the workplace (Ferrell, Fraedrich, & Ferrell, 2013). For example, a common approach to ethics education is to teach moral philosophies, including theories which fall into the “ends justify the means” category (e.g., utilitarianism, egoism) or the “ends do not justify the means” category (e.g., virtue ethics, deontology). This approach fits well with the premise that rational individuals move through four steps when in an ethical dilemma: moral awareness, moral judgement, moral intention, then moral action (Rest, 1986).

Stakeholder theory and analyses are also common to traditional ethics education (Donaldson & Preston, 1995; Weiss, 2009). This includes identifying parties connected to an organization (such as customers, employees, stockholders, communities, competitors, etc.), analyzing their interests, and deciding how each should be treated. For example, students may be presented with a hypothetical scenario of a company facing an important ethical decision. Students map out relevant parties, weigh pros and cons of different actions, and reach a decision. Though this seems like a strategic approach to ethical dilemmas, it assumes individuals are capable of identifying ethical challenges in the real world, beyond the bounds of a neatly circumscribed academic exercise. In fact, research suggests that people often fail to identify unethical behavior in others (Chugh & Bazerman, 2007) and in themselves (Tenbrunsel, Diekmann, Wade-Benzoni, & Bazerman, 2010).
Traditional ethics education increases ethical awareness, moral judgment, and moral action with varying effectiveness (Luthar & Karri, 2005). One study found that ethics instruction failed to increase students’ awareness of ethical issues in a business context (Halbesleben, Wheeler, & Buckley, 2005). Other research suggests that ethics education may increase the fundamental attribution error (FAE: a perceptual bias whereby individuals attribute others’ unethical behavior to fixed traits, but one’s own shortcomings to situational circumstances; Jones & Nisbett, 1972), such that students are likely to regard their own decisions as more ethical than their peers’ decisions (Lau, 2010). These perverse effects are a major concern, suggesting that there is still work to do to educate students about ethics in a way which translates beyond academic knowledge to real-world recognition and application. Improvement may be realized by shifting away from traditional ethics and towards curricula that focus on behavioral ethics.

**Behavioral Ethics and Recognition of Bounded Ethicality**

Despite providing students with a broad understanding of ethics theories, traditional approaches arguably fail to fully develop the skills necessary for ethical behavior. Recognizing the gap between general knowledge and applied skills, the Association to Advance Collegiate Schools of Business expects curricula to include “experiential and active learning designed to improve skills and the application of knowledge in practice” (AACSB, 2013, p. 28). Behavioral ethics is helping to fill this gap.

Behavioral ethics explores why people behave unethically, with the ultimate goal of shaping human action towards ethical decisions (Tenbrunsel & Smith-Crowe, 2008). Rather than assuming people are inherently good or bad, psychological biases are viewed as the mechanisms through which well-intentioned people engage in wrong-doing (see Bazerman & Tenbrunsel, 2011, for thorough coverage of these biases). For example, people may fail to see the ethical
implications of workplace actions performed when following orders from an authority (obedience to authority bias; Milgram, 1963).

These ethics blind spots result in bounded ethicality (Chugh, Bazerman, & Banaji, 2005), a key tenet of behavioral ethics. This theory is based, in part, on what is known about failures of rationality in other areas of judgment and decision-making (see Ariely, 2008). Specifically, humans are subject to bounded rationality, such that they are limited in their ability to access, comprehend, and process information (Simon, 1955, 1990). Though people tend to feel in control of their thoughts, human judgment is often the result of a fast, nearly automatic system which relies on heuristics (see Kahneman, 2011). These heuristics are mental shortcuts that allow people to move quickly and easily through their complex world, saving resources for instances that require concentration and deliberation. But they often sacrifice accuracy. One goal of behavioral ethics is to educate people about these psychological traps so that they may be better equipped to avoid them.

Blind spots lead people to be overconfident in their own ethicality (Klein & Epley, 2016) and make decisions without reflecting deeply (Tenbrunsel et al., 2010). People tend to maintain perceptions of themselves as ethical by referencing strongly held beliefs, even if their behavior presents conflicting evidence (Bazerman & Tenbrunsel, 2011). This ignorance about the extent to which our behaviors are subject to biases can be costly. For example, when doctors are asked whether their prescribing behavior is influenced by gifts from pharmaceutical companies, they generally report they are objective (Archer, 2013). Unfortunately, research shows that doctors are affected by these conflicts of interest, often prescribing new, more expensive drugs (despite being no more effective) when pharmaceutical companies give gifts or other benefits (Wazana,
2000). In these cases, even when the stakes are high, professionals and experts struggle to see the impacts of biases on their behaviors.

These psychological traps create challenges when trying to teach students to recognize and respond appropriately to ethical issues. Because of this, we propose that self-perception biases should be included as a crucial piece of behavioral ethics education.

**How Social Psychology May Improve Behavioral Ethics Education**

While individuals are typically able to identify *other people’s* susceptibility to biases, they see *themselves* as relatively immune to such biases (Pronin et al., 2002). This “bias blind spot” (BBS) is a meta-bias – a bias about the extent to which we are biased. For example, people readily perceive when others are influenced by group membership, such as political affiliation (in-group favoritism; Tajfel & Turner, 1979), but deny that their own behavior is shaped by group loyalty. Because of its broad effects, the BBS may undermine behavioral ethics education, such that students fail to recognize their own susceptibility to biases and therefore disregard ethics training as irrelevant. Therefore, the BBS or closely related concepts (such as the FAE) should be included in behavioral ethics curriculum.

The bias blind spot may result from over-reliance on introspective evidence (rather than behavioral evidence) when determining if the self has been subject to biases (“introspection illusion”: Pronin, Gilovich, & Ross, 2004). For example, people might reflect on reasons why they voted for a particular presidential candidate, find a great deal of introspective evidence that they were fair and rational, then reaffirm their actions as unbiased. Conversely, when looking outside themselves, people judge others based on their *behavior* (e.g., voting along party lines signals the other person’s bias).
This asymmetry between how individuals perceive themselves versus others is closely related to the fundamental attribution error (Jones & Nisbett, 1972), a self-perception bias in which people attribute others’ behaviors to internal characteristics and dispositions (e.g., you failed to hold the door for me because you are rude), but attribute their own behavior to situational or environmental factors (e.g., I failed to hold the door for you because my bus was late and I am in a rush). These self-perception biases are important because, despite definitional education about heuristics (e.g., learning what the obedience to authority bias is), individuals often do not recognize biases within themselves. Most importantly, the introspection illusion (Pronin et al., 2004) suggests that simply asking a person to stop and think about whether they have fallen prey to an ethical psychological trap, such as the obedience to authority bias, will likely prove ineffective.

Evidence of Social Psychology Interventions to Overcome Biases

Despite the tendency for people to underestimate their own susceptibility to biases, interventions may be effective to change behavior. Researchers have demonstrated an educational intervention that mitigates the BBS and introspection illusion effects. Pronin and Kugler (2008) presented participants with a purported magazine article called, “Unaware of our unawareness.” The article, written by the experimenters, was based on research about non-conscious influences on judgments and behaviors (e.g., priming: Bargh, Chen, & Burrows, 1996 and framing: Kay & Ross, 2003). Following this simple, in-context educational intervention, participants did not demonstrate the BBS (i.e., they rated their own susceptibility to bias as similar to others).

Beyond the work focused specifically on the BBS, there is additional evidence that biased thinking can be reduced. Research on the Implicit Association Test (IAT: Greenwald, McGhee,
(Schwartz, 1998) suggests that, while it is difficult to erase individuals’ implicit biases, it is possible to effect temporary change. The IAT is a computerized psychological test which measures the strength of associations between groups and their stereotypes. For example, the Black/White IAT measures individuals’ response times when pairing photographs of Black faces and White faces with positive and negative words (e.g., pleasant, unpleasant). This is considered an effective measure of implicit biases, which underlie modern racism (Dovidio & Gaertner, 2000). Exposing people to strong counter-stereotypic exemplars results in less prejudiced responding on the IAT, suggesting that biases are elastic (they can be stretched, but eventually return to their original state). For issues of prejudice (one heuristic/bias), it seems that small, but frequent, interventions may be most promising (e.g., Blair, 2002; Dasgupta & Asgari, 2004; Dasgupta & Greenwald, 2001).

Research on honesty paints a similar picture; small, timely interventions often have big impacts on individuals’ behavior. For example, more honest behavior results from asking people to recall the Ten Commandments or reminding them about an honor code immediately before an opportunity to cheat (Mazar, Amir, & Ariely, 2008). Hand-written signatures may have similar ethical benefits (Kettle & Haubl, 2011), because people are motivated to see themselves as honest and signatures prime one’s identity (Chou, 2015; Shu, Mazar, Gino, Ariely, & Bazerman, 2012).

Educating students about the fundamental attribution error in a classroom setting has proven beneficial (Stalder, 2008). Social psychology students, provided with in-depth information and exercises about the FAE, were more aware of their own susceptibility to the FAE and generated more situational attributions (i.e., less bias) for other’s actions. Other researchers have demonstrated that education about the FAE reduces its likelihood, but that these
interventions are limited by the extent of each individual’s bias blind spot. People vary in the extent to which they are biased against seeing their own susceptibility to biases – those who demonstrated stronger bias blind spots were more likely to persist in demonstrating the FAE (Scopelliti, Morewedge, McCormick, Min, Lebrect, & Kassam, 2015).

This evidence from social psychology suggests two things. First, that the bias blind spot (a self-perception meta-bias) is a threat to effective behavioral change in business ethics. Even if students understand that ethical traps exist, they are likely to see themselves as less susceptible to ethical lapses than others, therefore failing to identify and respond to ethical dilemmas in their lives. Second, that in-context training (even small interventions) may be an effective approach to reduce the BBS. This would lead to an increased recognition of ethical dilemmas, an important first step in ethical behavior.

**The Current Study**

This exploratory study aims to connect the behavioral ethics literature with what we know from social psychology (in particular, the bias blind spot; Pronin et al., 2002). Focusing on a classroom training module, the study addresses the following questions:

1. How can we teach and encourage students to recognize and behaviorally respond to ethical dilemmas in their work?
2. Can we reduce ethics blind spots by improving students’ awareness of their own susceptibility to biases?

**Method**

**Overview of Class Context**

The ethics education module (design and delivery described below) was developed by one of the current authors and administered in an interdisciplinary undergraduate innovation
course at a public university in the United States. Students were sophomores, juniors, and seniors from various majors (e.g., computer science, chemistry, marketing, early childhood education). These students worked within teams of 3-5 students on a consulting project with an external business client. This course consisted of approximately 17 teams. To protect student confidentiality and encourage honest responding, demographic information was not collected; however, providing a representative proxy for demographics, the overall campus undergraduate student body is 44.1% female, 30% racial/ethnic minority members, with a mean age of 23.2 years.

In this course, students encountered ethical dilemmas in their projects (including conflicts between teammates, disagreements with clients, stakeholder needs, and communication-related challenges) through a problem-based learning (PBL) approach. PBL has been shown to encourage student learning about ethics in management (Lavine & Roussin, 2012), engineering (Chang & Wang, 2011; Hoffmann & Borenstein, 2014) and medicine (Jones, Peiffer, Lambors, & Eldridge, 2010). Brownell and Jameson (2004, pg. 558) highlight the relationship between PBL and behavioral ethics, noting “PBL helps students to appreciate multiple perspectives, recognize non-rational elements of decision making and confront ethical quandaries.” Of the many approaches for PBL, one is to incorporate live case projects, including consultations with local business clients (Kennedy, Lawton & Walker, 2001). This context provides opportunities for students to “develop the skills, the scripts, the confidence and the competence to implement their values-driven choices” (Gentile, 2011, pg. 305) as they navigate the ethical dilemmas inherent to real-world projects with diverse collaborators and external clients.

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1 Team assignment was random (with the exception of ensuring each team had at least one senior student with prior PBL experience) and consulting projects/clients were randomly assigned to the teams.
Design and Delivery of Ethics Education Module

During the fourth week of the semester, approximately half of the students in the class were randomly selected to participate in a behavioral ethics educational module (34 of 81 students). These students were randomly distributed across the PBL teams (i.e., each semester-long team was comprised of students who did and who did not receive the ethics training). Students who participated in the ethics module watched a 30-minute video about ethics, psychological traps, and bias blind spots which was developed by one of the authors (detailed description of the video content follows). Next, these students participated in a faculty-moderated discussion about the concepts in the video and their applicability to academic and professional contexts. Importantly, after this targeted lesson in week 4 and discussion in week 5, no further lessons in the course specifically dealt with ethics.

The ethics training module was designed to incorporate pedagogical approaches from traditional and behavioral ethics with content about self-perception biases. The training module was organized around ethical decision-making at three levels – individual, organizational, and industry (Ferrell & Gresham, 1985; Hunt & Vitell, 1986; Trevino, 1986). Within each level, the educational module presented information about biases, heuristics, and forces that lead people to behave in unethical ways. Of particular importance, the discussion of individual-level factors included the fundamental attribution error, teaching students that self-perceptions may be biased, allowing them to hold overly positive perceptions of their own ethicality. Students were informed at the beginning of the video that its content would be discussed in the following class session.

Individual level. First, to illustrate the prevalence of biases and bias blind spots, and to emphasize that as individuals “we all” are susceptible to their influence, the instructor shared a
personal anecdote in which “good” people behaved unethically. The instructor recounted their time as an MBA student at the University of Notre Dame in 2005, while the school was coping with potential criminal acts committed by their graduates working for Arthur Andersen (Cohen, 2003). The educator discussed Arthur Andersen’s role in Enron’s accounting fraud and the fact that Arthur Andersen was a top employer of Notre Dame graduates. Ethical transgressions of these graduates occurred despite being in direct conflict with the principles underpinning the university’s founding and daily operations. This personalization was intended to reduce the extent to which students see themselves as immune to ethical transgressions (i.e., reducing the bias blind spot) and to facilitate students’ honest reflection and discussion of ethical dilemmas. While the particular content is likely not critical, the personal account demonstrated the impact of business ethical transgressions for a person familiar to the students (i.e., the instructor).

The intervention then covered concepts from Hoyk and Hersey (2008), focusing on the many psychological traps potentially responsible for wrongdoing. “Primary traps” directly influence people to behave unethically (e.g., obedience to authority, the corrupting effects of power). “Defensive traps” allow people to diffuse guilt in the aftermath of unethical behavior (e.g., self-serving biases, reduction words). “Personality traps” make individuals more susceptible to ethical wrongdoing (e.g., the aforementioned FAE, low self-esteem, empathy). To underscore the universal influence and magnitude of these traps, the content also included video from a recent ABC News Primetime investigation (Borge, 2007) that replicated the classic Milgram (1963) obedience to authority experiments. The instructor highlighted that, while the underlying bases of these traps may be ethically-neutral (e.g., our tendency to categorize and label others to simplify our complex world) or even good (e.g., empathy for others), they can manifest in behaviors that have negative ramifications. In conclusion, the goals were to a) reduce
stigma that might prevent students from honestly reflecting on, and sharing, personal experiences of ethical transgressions and b) give students a well-stocked “tool kit” to identify and articulate reasons why they might behave unethically (i.e., Hoyk and Hersey (2008)’s 45 psychological traps).

**Organizational level.** A case study (Osawa, 2012) was incorporated to highlight how Olympus Corporation’s culture, structure, and leadership impacted firm performance and a wide array of stakeholders. Students considered organizational-level issues they might encounter while working in teams on their class projects. Specifically, the instructor highlighted the importance of establishing widely understood and shared standards/expectations, balancing the creation of market vs. stakeholder value, and ensuring ethical leadership within their team and client organization.

**Industry level.** The last section highlighted common ethical issues specific to the clients industries. For example, because one team worked with a micro-finance client, the instructor included material highlighting that industry’s specific issues (e.g., increasing default rates, high interest rates, claims of predatory lending practices) and impact on various stakeholders (Evans, 2010). In another example, because one team was working on a public transportation project, the instructor discussed ethical issues surrounding short-term savings from fossil fuel transportation vs. long-term benefits of alternative fuel vehicles.

**Structure of Supervised Classroom Discussion**

At the conclusion of the video, the instructor foreshadowed the following week’s discussion. Students were asked to arrive at class with answers to the following questions: 1) At an individual level, do you foresee any of the primary, defensive and/or personality traps arising during your project this semester (Hoyk & Hersey, 2008)?; 2) At an organizational level, who
are the stakeholders impacted by your project? Are there stakeholders who are not currently being considered but should be brought to your clients’ attention? Are there organizational issues that might create ethical dilemmas over the course of the semester?; and 3) Are there industry-wide issues that should factor into the execution of your project?

At the beginning of the subsequent week’s conversation (week 5), the instructor asked students if they viewed the entire online training video and prepared answers for the aforementioned questions. Conveniently, the ratio of students who were fully prepared to those who were less prepared was approximately 1:1. Then, working in teams of two, fully prepared students were responsible for helping a less-prepared partner a) understand the presentation’s content and b) generate their own answers for the assigned questions. Students shared their answers with their peers after a twenty-minute co-working period. This technique ensured that 100% of the students in the ethics intervention had familiarity with the ethics material and, perhaps more importantly, thought about ways they, their teammates, and their client might be susceptible to unethical behavior.

**Evaluation of Ethics Educational Training Module (Student Feedback Surveys)**

During the last class of the 15-week course (i.e., 11 weeks after intervention training and 10 weeks after discussion), the instructor obtained feedback regarding students’ perceptions of ethics. The survey assessed behavioral ethics (the recognition of ethical issues in their projects and of their own susceptibility to ethical transgressions) and traditional ethics (awareness of ethics at individual, organizational, and industry levels). All students in the class completed this survey, whether or not they received the ethics training module, and optional open-ended questions allowed for a qualitative evaluation of the intervention.
For a complete exploration of the students’ end-of-semester responses, Appendices 1 and 2 present all student responses. These responses are summarized in Table 1, indicating the frequency of student comments that espoused the tenants of the ethics training module. Comments were included in these counts if they directly acknowledged ethical issues/traps or the importance of ethics in general. Comments were not included in these counts if they a) contradicted the tenants of the ethics training module or b) were irrelevant, unclear, or unintelligible. In the following section, the responses of the students who received the ethics intervention are discussed in a narrative format.

[insert Table 1 here]

**Results**

Student end-of-semester comments support the efficacy of the ethics training module in allowing students to recognize, confront, and correct ethical dilemmas within the context of the team projects. Due to the interests of this exploratory study, the discussion focuses on the comments of students who received the ethics training module, to illustrate the potential benefits of this intervention.

**General Awareness of Ethical Issues**

Students’ comments expressed that behaving ethically is important and that ethics are important for innovation. For example, one student reported that “it's important to develop a good understanding of ethics and build ethically strong businesses.” Another recognized that although “the client may still be able to innovate [when behaving unethically], these ethical issues can later sabotage their ability to [implement] innovations.” In a similar vein, one student expressed that “if they [the client] are unethical, they may have more options to be ‘innovative’, just in the wrong direction.” Overall, students seemed to possess a robust awareness of both the general importance of ethics for successful innovation and creation of value.
Recognition of Ethical Issues on Team Projects

When asked if they encountered potential ethical issues on their teams’ innovation projects, students who received the ethics training module often directly connected components from the module to their experiences. One student noted how their “team was aware of [ethical] traps and [because of this] we were able to avoid them.” Another commented that they now “understood how to avoid the pitfalls and [ethical] traps.” In addition, that same student suggested that failing to monitor ethical issues can “cause individuals to work for [themselves] and not for the team” and while creating “more options to be ‘innovative’ in [unethical] ways, these self-serving actions will ultimately promote ‘the opposite of innovation.’” Some students expressed concern about unrealistically “high expectations” and “pressure” from the clients. One highlighted the need to “follow their [the client’s and the industry’s] rules”, despite the ethical issues that might arise. Overall, it seemed that the ethics module positively influenced students’ abilities to recognize, and alter their responses to, real-world ethical issues on their team projects.

Recognition of Ethical Issues for Oneself and Intentions to Behave Ethically

Students’ comments also indicate that the training module influenced their recognition of their own susceptibility to ethical lapses. One student discovered their tendency to “take the easy way” and a realization that, despite short-term gains, these shirking behaviors might “lead to a less productive end product.” In recognition of the prevalence of ethical transgressions, several students noted that “everyone is susceptible at some level.” Others reflected on their past behaviors to “cut corners”, “owning responsibilities when it comes to deadlines”, and failing to confront other’s unethical behaviors because of their propensity to be “easily influenced by other peoples’ reactions [and] negative responses.” Many students expressed a willingness to work to avoid these ethical transgressions in the future. For example, one student indicated that they will
“grow from [the experience of an ethical issue]” and another “will work to take [unethical behavior] out of my life.”

Comparison to Students Who Did Not Receive Ethics Training

Overall, the students who did not receive the ethics training module appeared to respond differently to the questions about ethics. When asked if there were ethical issues on their team projects, few identified problems (only six of thirty-five comments). More common were claims that “we didn’t have any ethical issues” or “I didn’t notice anything unethical in our project.” Focusing on potential ethical problems at individual, organizational, and industry levels, control students made comments such as, “there were no issues; the project went off without a single hitch”, “I don’t think ethics has to do with whether or not a client organizes things properly”, and “I don’t know how this affects our client.” Though some students naturally recognized a susceptibility to ethical transgressions, there were also strong claims from students that they were immune. For example, “I believe that I would not do something that is unethical, no matter the circumstances” and “I am not inclined to commit such transgressions.”

Summary

Despite the preliminary nature of this data, there are valuable insights from this exploration for management educators. One student from the ethics training group nicely summarizes these takeaways by writing: “I try to avoid ethical issues by keeping my eye out for them. If you know there's an issue, then you can solve it.” The preliminary data support that students had a well-defined understanding of the general importance of ethical issues that exist in real-world business situations. However, the assessment moves beyond general awareness to focus on the self. Typical college courses often lack opportunities to diagnose and respond to ethical issues, and students are susceptible to psychological biases that prevent them from
honestly reflecting on, and learning from, their own ethical lapses. Consequently, a synthesis of behavioral ethics training with PBL provided new opportunities for students to “know there’s issues” that might cause them to behave unethically and to equip them with the tools to “help them solve them.”

**Discussion**

The current study revealed that, after taking part in an ethics intervention which focused on self-perception biases and psychological traps, students recognized ethical challenges in their real-world innovation projects. Importantly, students were also likely to recognize their own susceptibility to biases and were committed to avoid ethical transgressions. Students’ feedback provides insight into the impact of the intervention on ethical reasoning and behaviors of students. These insights are particularly noteworthy because the assessment of students’ experiences took place eleven weeks after the intervention was delivered (a marked improvement over similar studies where participants are assessed immediately following interventions), suggesting durability of the training, at least within the context in which it was delivered.

**Lessons for Behavioral Ethics Education**

**Lesson 1: Small, but timely, in-context interventions work.** This study suggests that an effective way to improve ethical behavior may be to provide small, in-context interventions to students. Rather than focusing on broad, one-time ethics training programs, educators could be trained to incorporate behavioral ethics through frequent inquiries about ethical blind spots within each new project. When the prompt is tied to a specific project - and students are reminded that a) ethical traps exist and b) they may be blind to the presence of their own biases - students may perceive themselves and their work differently.
In this study, the student project was not merely a simulation or hypothetical case. Though case-studies such as Olympus and Enron are discussed, students also spent time reflecting on their own team, client, and industry. The teams worked with real clients to provide a service, creating meaningful consequences of both success and failure. In the same way that behavioral economics research relies on real decisions (e.g., gambles using real money; e.g., Hertwig & Ortmann, 2001), it may be the case that behavioral ethics education should rely on real (rather than case or simulation-based) learning. Research suggests that real and hypothetical decisions are not equivalent (e.g., Pronin, Olivola, & Kennedy, 2008), due in part to psychological distance (Liberman, Trope, & Stephan, 2007). For example, students might recognize biases and psychological traps in a hypothetical case, while simultaneously thinking that they would never head down an unethical path themselves.

**Lesson 2: Focus on the self to reduce ethics blind spots.** This study attempts to demonstrate an important tenant of behavioral ethics – that there is a difference between knowledge of general ethics concepts and actual ethical awareness and behavior. While much of ethics education strives to build a general ethical literacy or moral awareness (e.g., Rest, 1986), our student feedback suggest that ethics education may improve by incorporating psychological traps with education about self-perception biases. Qualitative comments suggest that the ethics intervention was effective in mitigating the bias blind spot (BBS) within the context of the teams’ applied projects and that students readily identified ethical challenges in their work (rather than denying them).

We suggest that it is crucial that ethics education focus on both ethical traps and self-perception biases (e.g., BBS, FAE). One risk of only educating students about ethical traps is that it simply makes them more aware of how everyone else is prone to them. For example, the
Giving Voice to Values framework (Gentile, 2010) does an excellent job discussing biases that people possess in ethical dilemmas (e.g., rationalizing decisions or falling into common scripts), but this may not change behavior if individuals believe they are personally immune from those biases. Thus, we believe the discussion of the fundamental attribution error (FAE) was a crucial component of our intervention, because it highlighted self-other perceptual asymmetries – by doing so, it encourages students to question if their self-perceptions were fair or if they had fallen prey to the BBS. Increasing students’ awareness of the likelihood that they are biased, rather than allowing them to rely on flawed introspections, is critical for advancing ethics education.

**Limitations and Future Directions**

**Additional evaluation through experimental design and analysis.** This study provides a preliminary exploration of the effectiveness of this behavioral ethics intervention. Students provided feedback indicating a strong recognition of real-world ethical challenges and of their own fallibility when it comes to psychological traps and biases – a crucial first step towards shaping behavior to be more ethical. However, the analysis relies only on preliminary qualitative data and does not allow for statistical assessments of the impact of the intervention.

Future studies of this intervention should include a carefully controlled experimental design, allowing researchers to compare the experiences of students in the ethics intervention to those who did not receive the intervention. This design should continue to collect the rich, qualitative data (e.g., open-ended feedback about experiences), but should add key quantitative data (e.g., responses to Likert-type scale items assessing awareness of ethical challenges and self-perceptions of susceptibility to bias). Pre- and post-training measures could be collected to assess the magnitude of change.
A design such as this would allow for confirmation of the initial patterns observed in this study, as well as the exploration of additional pedagogical questions. For instance, in addition to evaluating individual-level benefits of the intervention, an experimental design would allow for between-team comparisons (e.g., does the domain of the team’s project impact the effectiveness of the intervention?) and within-team evaluations of contagion (e.g., if only part of the team receives the intervention, does their new perspective on ethics spread to other members of the team?). This information would strengthen the current support for inclusion of self-perception biases in behavioral ethics education.

**Directionality and scope.** Because these student comments were collected near the end of the project, we could not determine if the reduction of the BBS led to increased awareness of ethical problems, or vice-versa. However, prior research supports the notion that clarity of self-perception (i.e., recognizing one’s own susceptibility to biases) allowed students to see possible ethical traps present in their work.

We have speculated that the training was effective because it took place within the context of the class/project. However, we do not have data indicating whether this reduction of the BBS generalized to other contexts as well. For example, it is possible that students were faced with a similar team project in another course, but did not recognize ethical challenges or their vulnerability to unethical behavior in those contexts. Unfortunately, we do not have data illustrating whether or not students’ reduced BBS was limited to the interdisciplinary team context in which they were tested, because we do not have assessments from other classes.

**Conclusion**

This pedagogical intervention highlights a potential opportunity for current ethics education – that, despite learning about the many ways people can be influenced to act
unethically, real behavioral change depends on students’ beliefs that they are personally susceptible to such influences. Thus, based on the current findings, we suggest that ethics education should include a focus on self-perception biases (e.g., the bias blind spot or the fundamental attribution error). After doing so, simple, in-context interventions may be effective for encouraging recognition of ethical dilemmas and ethical behaviors.
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Ferrell, O.C., Fraedrich, J., & Ferrell, L. (2013). *Business ethics: Ethical decision making and
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Ferrell, O.C., & Gresham, L.G. (1985). A contingency framework for understanding ethical
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Table 1.

_Frequencies (and percentages) of students providing free-response comments for each question on the end-of-semester survey, separated by those who received the ethics training module and those who did not. Total comments and the number of comments acknowledging ethical traps/issues are reported, with questions organized by those focused on behavioral ethics versus traditional ethics._

<table>
<thead>
<tr>
<th>Students who received</th>
<th>Students who did not receive the ethics training module</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=34</td>
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<td></td>
<td>N=47</td>
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</table>

<table>
<thead>
<tr>
<th>Full text of question</th>
<th>Number of student comments</th>
<th>Comments recognizing ethical issues</th>
<th>Number of student comments</th>
<th>Comments recognizing ethical issues</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Questions assessing behavioral ethics (recognition of ethical issues on the real-world team project and personal susceptibility to ethical traps)</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Question 1a: We uncovered potential ethical issues on our team’s innovation project.</td>
<td>26 (76%)</td>
<td>16 (62%)</td>
<td>35 (74%)</td>
<td>7 (20%)</td>
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</tbody>
</table>
Question 1b: If you answered yes to the previous question, do you agree that the ethical issues uncovered will affect your client’s ability to innovate?

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<th>10</th>
<th>10</th>
<th>8</th>
<th>7</th>
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<tbody>
<tr>
<td>(29%)</td>
<td>(100%)</td>
<td>(17%)</td>
<td>(88%)</td>
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</table>

Question 6: I am personally susceptible to ethical transgressions.

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<th></th>
<th>25</th>
<th>16</th>
<th>32</th>
<th>17</th>
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<tbody>
<tr>
<td>(74%)</td>
<td>(64%)</td>
<td>(68%)</td>
<td>(53%)</td>
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</table>

Question 7: I will work to avoid ethical transgressions.

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<th></th>
<th>17</th>
<th>15</th>
<th>27</th>
<th>21</th>
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<tbody>
<tr>
<td>(50%)</td>
<td>(88%)</td>
<td>(57%)</td>
<td>(78%)</td>
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</table>

| Questions assessing traditional ethics (recognition of ethical issues in general) |
|---|---|---|---|
| n | n | n | n |
| (% of sample) | (% of comments) | (% of sample) | (% of comments) |

Question 2: Ethical issues exist at individual levels that may affect innovative processes. These might include personality issues and/or “traps” that anybody can fall into (e.g., conflicts of interest, peer pressures, etc.) that cause people to behave unethetically.

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<thead>
<tr>
<th></th>
<th>24</th>
<th>21</th>
<th>29</th>
<th>22</th>
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<tbody>
<tr>
<td>(71%)</td>
<td>(88%)</td>
<td>(62%)</td>
<td>(76%)</td>
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</table>

Question 3: Ethical issues exist at organizational levels that may affect innovative processes. These might

<table>
<thead>
<tr>
<th></th>
<th>26</th>
<th>23</th>
<th>18</th>
<th>12</th>
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<tbody>
<tr>
<td>(76%)</td>
<td>(88%)</td>
<td>(38%)</td>
<td>(66%)</td>
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</table>
include poorly defined standards and expectations, a lack of ethical leadership, or an emphasis on market performance at the expense of stakeholder value.

**Question 4:** Ethical issues exist at industrial levels that may affect innovative processes. These include industry-wide issues that affect one or more stakeholders of the industry.

<table>
<thead>
<tr>
<th></th>
<th>15</th>
<th>11</th>
<th>16</th>
<th>6</th>
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<tbody>
<tr>
<td>(44%)</td>
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<tr>
<td>(73%)</td>
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<tr>
<td>(34%)</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>(29%)</td>
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</tbody>
</table>

**Question 5:** Ethics are influential for processes of innovation.

<table>
<thead>
<tr>
<th></th>
<th>28</th>
<th>25</th>
<th>26</th>
<th>21</th>
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</thead>
<tbody>
<tr>
<td>(82%)</td>
<td></td>
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<tr>
<td>(89%)</td>
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<tr>
<td>(55%)</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>(81%)</td>
<td></td>
<td></td>
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</table>
Appendix 1

Complete list of comments from students who received the ethics training module, collected in Week 15 of the course (11 weeks after the training module). Responses in bold indicate comments suggesting these identified ethical issues on their team projects, the ways they are personally susceptible to ethical traps, or the prevalence of ethical issues in general. Statements were not bolded if they: a) were irrelevant, unclear, or unintelligible; or b) did not espouse the tenants of the ethics training module.

<table>
<thead>
<tr>
<th>Student</th>
<th>Full text of student written response to each question</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Question 1a: We uncovered potential ethical issues on our team’s innovation project.</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>The activity made the material more fun and easier to remember.</td>
</tr>
<tr>
<td>2</td>
<td>No ethical issues.</td>
</tr>
<tr>
<td>3</td>
<td><strong>Potential issues, they never became actual issues.</strong></td>
</tr>
<tr>
<td>4</td>
<td>We were trying to create a more ethical environment…for the environment.</td>
</tr>
<tr>
<td>5</td>
<td><strong>There were a few but we already thought of them.</strong></td>
</tr>
<tr>
<td>6</td>
<td><strong>Time constraints. Project changes.</strong></td>
</tr>
<tr>
<td>8</td>
<td>We didn’t find any ethical issues on our team.</td>
</tr>
<tr>
<td>9</td>
<td>No ethical issues discussed.</td>
</tr>
<tr>
<td>10</td>
<td>Our team has been well lead and has not run into unethical issues.</td>
</tr>
<tr>
<td>Line</td>
<td>Text</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>13</td>
<td>We had a lot of plans fall through from discussions, and ideas we had were somehow being done. It's not too concerning, but it still is.</td>
</tr>
<tr>
<td>14</td>
<td>The client wouldn't give us access to import things.</td>
</tr>
<tr>
<td>15</td>
<td>When meeting with potential parties of interest, many of them had in mind a different scope of work and influence than our actual project, leads to conflicts of interest.</td>
</tr>
<tr>
<td>16</td>
<td>We have not had any ethical issues as a team and it was clear during the activity.</td>
</tr>
<tr>
<td>18</td>
<td>We actually took time afterwards and got to the roots of some of the stereotypical expectations that we thought we would encounter and realized we didn’t have any. It made the team closer.</td>
</tr>
<tr>
<td>19</td>
<td>There were no plausible ethical issues.</td>
</tr>
<tr>
<td>20</td>
<td>We discovered that there could be potential ethical issues, but found that there was a low chance of them affecting us.</td>
</tr>
<tr>
<td>21</td>
<td>How to keep your word when your client falls through. We promised deliverables and we couldn’t keep that promise.</td>
</tr>
<tr>
<td>22</td>
<td>More so ethical issues from others, such as reselling the product, that we need to account for.</td>
</tr>
<tr>
<td>24</td>
<td>Our team was already aware of some of the traps and we were able to avoid them.</td>
</tr>
<tr>
<td>25</td>
<td>Brought to my attention a recent issue in the team.</td>
</tr>
<tr>
<td>27</td>
<td>We understood how to avoid the pitfalls of ethical traps.</td>
</tr>
<tr>
<td>28</td>
<td>We avoided the traps and pitfalls.</td>
</tr>
</tbody>
</table>
29 Couldn't think of any ethical issues? Literally trying to spread positivity and get people healthy.

32 We avoided ethical traps.

33 While the info was useful, we did not experience such issues within our group.

34 There were ethical issues regarding our team and action to be taken against those failed to contribute. Additionally, ethical issues regarding the promotion and our course of action with social media.

Question 1b: If you answered yes to the previous question, do you agree that the ethical issues uncovered will affect your client’s ability to innovate?

1 These ethical issues can cause the client to be unable to think outside the box to be able to innovate.

6 The client may still be able to innovate, but ethical issues can sabotage innovation.

12 She needs to take more control and accountability for the idea. She has a great idea, she just needs to be a little more enthusiastic about potential ways to grow her business.

13 They’re a transit system on a tight budget, so a lot can happen unless they take a risk (which they won't).

14 We found out later that their database is handled through a third party so we just had to create an app that just linked to it.

15 Funded partners withhold money/resources which they didn’t need to operate.

21 He was not the one who pulled out, his partner was. It might hurt his reputation strongly, but not in the long run.
22 Just if their product is not well protected, then its impact will be reduced.

27 Yes and no. If they are unethical they may have more options to be "innovative", just in the wrong direction. They do have the option of being ethical, or may just be more difficult and expensive to do thing the right way.

28 It affects the way they can create their product and their way of presenting their product.

Question 2: Ethical issues exist at individual levels that may affect innovative processes. These might include personality issues and/or “traps” that anybody can fall into (e.g., conflicts of interest, peer pressures, etc.) that cause people to behave unethically.

1 The trap that we as students can only accomplish so much.

2 I currently can't think of any.

4 Our team was full of full time students with full time jobs, finding time for them to work was the hardest

5 Other priorities, circumstances not shared with the team.

6 Many of our ideas were turned away, and time constraints rushed work.

7 In my group, we had no problems with this. But I feel it is there no matter what.

9 Pressured to deliver data and results.

10 No issues.

11 Getting over excited and moving too quickly.
We didn’t have many, if any overall, but the issue is there.

_____ wouldn’t meet for the longest time.

i.e., Personal issues causing poor work ethic, failure to notify.

At a personal level, it is easy to take the “easy way” at sometimes, which might lead to a less productive end product with my client.

Yeah we are all different but our differences have yet to hinder our team process. If we do run into an issue, it gets resolved quickly.

Not stepping up for extra work.

_____ still wanted us to work with his partner after all the bad stuff went down. But these issues can be overcome.

Our client and we may have experienced issues from delegating tasks and shifting responsibility.

Client had extremely high expectations with work that we were underqualified for.

Saying that their work will be done, and then coming empty handed without deliverables to the next team meeting.

Yes they occur, not sure 0-7 accurately describes it? Don’t think any occurred. There is always the possibility though I couldn’t find any problems.

Triangulation

Team functions, triangulation, past experience with prior teams.
Assigning blame, avoiding responsibility.

Team members were justifying not completing work because others were failing as well.

Question 3: Ethical issues exist at organizational levels that may affect innovative processes. These might include poorly defined standards and expectations, a lack of ethical leadership, or an emphasis on market performance at the expense of stakeholder value.

1. Having too much of an open ended project, setting guidelines would be helpful.
2. I guess one issue was initially poorly defined goals, but our team talked with our client and defined them.
3. At first our client was very broad about his expectations of our deliverable.
4. Our client had no goal except for "anything is an improvement". We had to determine what would be a good goal for them.
5. Not necessarily in our team, but corporate greed.
6. Standards were poorly defined.
7. Our client asked for us to use their database to create an app. But we were denied access.
8. High expectations that were too high to complete in the time allowed.
9. None that I know off.
10. Our team has worked well and met all expectations.
A deadline was missed in the beginning of the semester due to poor planning. "Fail to prepare, prepare to fail".

We were brought on with the task of helping the visually impaired, but they tried to say it was for general accessibility.

Client started with very strict set of requirements but changed their minds right away.

Inflexibility with exiting infrastructure; to - new structures, unwillingness to grant funding, lack of faith.

I didn’t see any of these issues on my team.

We did have one ethical issue that was completely out of our control and we had to experience that and grow from it.

Lack of well defined expectations.

Working with a client who doesn't fully define his expectations was very different.

Expectations early on were unclear but were resolved.

We had very well defined standards but our lack of knowledge and experience made it harder to reach those standards.

None, but yes if there is no clear expectations to plan to achieve, the team an individuals are more susceptible to act selfish and block innovative thought process.

It exists though our client holds herself to high standards and expectations.

Honor your word, triangulation, proper emailing.
32 If people did not stick to their word, in which triangulation, will take effect.

33 Poor initial leadership, low motivation.

34 Our leader, because he was so busy with his fraternity, we allowed him to stop leading, our standards were not met and we did a poor job as a team in making sure he was accountable for his actions.

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**Question 4:** Ethical issues exist at industrial levels that may affect innovative processes. These include industry-wide issues that affect one or more stakeholders of the industry.

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4 Our client wanted cheap short term solutions, and we struggled to remain inside that idea.

5 Disparity between record labels and our clients.

6 Carbon footprint and budget cut.

9 Long term benefit vs. short term gain.

10 That’s how business works.

13 _____ is the (city name) bus system, but holding that prevents them from taking innovative risks.

14 Client's database deals with a third party.

15 Bus companies have different goals in - buses - our project.

16 I didn't see these issues on our team.

18 Our client was so open to ideas, it became hard to come up with ideas.
None.

It's an industry norm for - to not be quite right in the head. Lots of drugs are involved, that's just the truth.

Steal someone's patent ideas, there are many things that could happen.

None exist in our team.

The ethical issues at the golf-industry will impact this team because we have to follow their rules.

Question 5: Ethics are influential for processes of innovation.

Some times you may need to be unethical to be innovative, but always follow the Arnold (Scwarze nesser) misspelled quote "don’t break the law, but break the rule"

Not every invention is created with the best intentions.

They are, but not as much as it should be in more circumstances.

Strong scruples can keep an idea from -

If you can find a problem then that usually means there is room to innovate a solution.

They influence the progress speed of innovation sometimes because the ends don’t always justify the means.

It's hard to passionately innovate when something is unethical.

Your ethics will affect your decisions. Your past experiences will have a huge impact on your future decisions.

I think it's important to develop a good understanding of ethics and build an ethically strong business.
Bad ethics mean bad communication. If a team can’t communicate, they’re doomed to fail.

You need ethics if you ever want to work with anyone.

Everyone must be on the same page and interpret the same idea in order to move forward coherently.

Sometimes people do things to better the needs of themselves instead of the team as a whole.

A project with a huge number of ethical issues may be less likely to succeed and may backfire on itself. Taking care of these issues, both within the team and outside of it, will ultimately influence the success of the project.

Of course ethics influence innovation because innovation needs to be the focus. Ethical situations, distract that focus.

Innovation by itself is not really affected by ethics, but implementing the idea may be.

If you're making a product and you find that one of the aspects of the product does not conform your ethics the that aspect.

You need ethics to work with others and be creative.

It is a fine statement. Ethic affect the way everyone behaves.

Without ethics, teamwork is undermined: trust is impossible.

Defining a clear ethical stance makes goals clearer to team members and lead to more effective teamwork.

Yes ethics force the individual to work for the team, not having ethics and selfish intentions cause conflict and will promote "the opposite of innovation".
Because it's a true statement.

Not sure how to answer this.

It's pretty hard to innovate if one's ethics are flawed.

Having knowledge being open and easily accessed.

To have innovation you must be ethical. Bad ethics will lead you to faulty innovation.

Without ethical behavior, one loses trust and faith in one another.

Question 6: I am personally susceptible to ethical transgressions.

Most of the time, but there are situations where you may need to be unethical.

Sometime the temptation to cut corners is alluring.

Everyone is, if I said I wasn't it'd be unrealistic. But I try to avoid them as much as possible.

It really just depends on the situation. I try to avoid it as much as possible.

I'm not really susceptible to ethical transgressions.

We all are, no one is perfect.

Yes, everyone is a tad susceptible to ethical transgressions, but I'd like to think I am relatively a good person.

I like to think through situations from a different point of view.

I believe I have a good understating of what is right and what is wrong when it comes to ethical behavior.
I've made some mistakes, but nothing ethically unsound. I own up to my mistakes.

I try to keep these issues to a minimum and be open when I can.

Everyone is susceptible at some level.

I am easily influenced by the way other people react to what I say/do and am afraid of negative responses. This can obviously influence what actions I wind up taking or not taking.

I'm pretty thick skinned.

I am a sociopath and am therefore unable to commit such transgressions.

I think anyone is susceptible to ethical transgressions.

I am bad at owning responsibility when it comes to deadlines.

Peer pressure, desire to work as a team "For all have sinned, and come short of the glory of God" - Rom 3:23.

God sees what I do.

As jokes yes, but never in serious situations.

Everyone is, how do you control them?

Everyone is susceptible to ethical transgressions. Even the most moral people can succumb if they have a lapse of willpower.

I have a heavy thought process in many of my ethical decisions.
I am a usually strong individual so I stay by my word.

Everyone is susceptible, one needs to recognize and avoid situations where ethics may be tested.

Question 7: I will work to avoid ethical transgressions.

But just because I feel horrible about it, does not mean I may not be forced to in any line of work.

It's who I am and what I want.

It would be better for everyone to avoid ethical transgressions.

I try to avoid ethical issues by keeping my eye out for them. If you know there's an issue, then you can solve it.

As a good natured person, I will try my best.

I will.

I already take steps for this, -

I always attempt to do what I think is ethical: at work I try to help customers and coworkers whenever possible (within the bounds of work rules) and attempt to provide positive responses when I should, and inform others of issues.

Always, it's better to be as ethical as possible.

I think it is important to stay away from temptations or shortcuts that make the innovation process easier.

I believe ethical transgressions can be avoided with the right mindset.
"Be ye holy, as I am holy" - Pet 1:16. It's my God's desire. What can be more important?

But I can't babysit everyone else who decides to take the easy way out.

I will work to try to take it out of my life.

I was raised to always try and do the right thing and that's a value I hold strongly to.

Be in good standing with Human Resource workers.

Being ethical helps companies stay true to their word, which helps combat corruption.

Note: N=34; Written feedback was optional, resulting in a different number of responses on each question.
Appendix 2

Complete list of comments from students who did not receive the ethics training module (control condition), collected in Week 15 of the course. Responses in bold indicate comments suggesting these students identified ethical issues on their team projects, the ways they are personally susceptible to ethical traps, or the prevalence of ethical issues in general. Statements were not bolded if they: a) were irrelevant, unclear, or unintelligible; or b) did not directly espouse the tenants of the ethics training module.

<table>
<thead>
<tr>
<th>Student</th>
<th>Full text of student written response to each question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>We have a small public government project with no real ethical implications.</td>
</tr>
<tr>
<td>2</td>
<td>Our clients take many precautions against discrimination, whether it’s gender, race, ethnicity or disability.</td>
</tr>
<tr>
<td>3</td>
<td>We uncovered nothing unethical relating to the project.</td>
</tr>
<tr>
<td>4</td>
<td>Everyone has their own unique way of learning, doing or innovating.</td>
</tr>
<tr>
<td>5</td>
<td>Our team got along quite well and followed the team charter so there haven't been many ethical problems.</td>
</tr>
<tr>
<td>6</td>
<td>We didn’t have any ethical issues.</td>
</tr>
<tr>
<td>7</td>
<td>I feel there aren’t any ethical issues that are in the here and now in our team or surrounding projects.</td>
</tr>
<tr>
<td>8</td>
<td>I don't feel like there was really a big enough issue to have any ethical component. Our solution/problems were not related to ethics.</td>
</tr>
</tbody>
</table>
9  Good topics to think about.
10  Everyone works differently and has different strengths.
11  We talked mostly about positive psych and loving your job. We briefly talked about ethics, but not to any extent.
12  She is mostly doing what others say to do.
13  I don't know if it counts but someone was stealing our client's products and reselling them.
14  Client giving personal/credit card information to the team. Great trust, but not comfortable with having that information.
15  I didn’t notice anything unethical in our project.
17  Our client brings a neutral presence to the team/project. She "cut us lose "and checks up, making any issue between us non-existing.
19  We tried to create environment gains.
20  We ran into some conflicts within what our client actually wanted.
21  We're converting an existing thing into a more mobile format.
22  We didn’t go in depth about ethical issues of our individual teams. We mostly discussed the TED talks.
29  We completed the work ethically, therefore, there are no transgressions.
30  My team and I completed the work ethically.
We were contacting potential customers without contacting our client first.

We didn’t uncover any issues throughout our time working.

Making people aware about an illness.

Our ethical issues were none, we knew when it is time to work and when to have fun.

Attendance. Team problems. What to do with group members if they don’t do anything or a period.

Being present in meetings. Concentrating on issues or problems in front of you and making sure that you can balance family with work.

There were none that we found, we have had a very stable and consistent team.

Our client's interactions did not indicate.

Our innovation project had to do with the producing and marketing of a scientific instrument, which did not go against any easily foreseeable ethical standard.

We've worked cohesively without any issues beyond a time related one such as falling behind.

Been a pretty smooth ride; only major problem was miscommunication and that has not been resolved.

Our team seems ethical and strong.

The TED talks were more about personal motivation rather than ethical choices related to the team.
**Question 1b:** If you answered yes to the previous question, do you agree that the ethical issues uncovered will affect your client’s ability to innovate?

4. Depending on our team's ability to innovate and our level of motivation determines how much we give our client.

9. Yes, not many people think about what we talked.

10. She has new ways of working with her product in being able to let more people know about it and new ways to sell it.

14. She could be burned by people when giving our that information.

20. It's hard to innovate when you have no clue what you want to do.

33. People need to be more aware.

36. Not get idea across. Problem with team work.

37. If your head is caught up with other issues you may be flustered and not focus or act to your full potential.

**Question 2:** Ethical issues exist at individual levels that may affect innovative processes. These might include personality issues and/or “traps” that anybody can fall into (e.g., conflicts of interest, peer pressures, etc.) that cause people to behave unethically.

2. Conflicting schedules was the only issue the team or clients ran into, causing delays to some deadlines.

3. Some people have multiple roles in multiple organizations, which can lead to conflicts of interest between various roles. We saw this in non-profit organizations.
4 We could have been susceptible to personality differences, knowledge and ability to do what the client needs.
5 Apart from getting side tracked, there haven't been many issues worth noting.
6 These can occur but we didn’t have any with our client.
7 A member of our client's group quit and really impacted our project negatively. The client suffered great loss from a partner quitting and most likely will have to find another member.
8 I don’t know if they really affected us because our team got along so well and openly communicated about issues when we could.
10 Having to keep up with social media.
12 Our client falls to peer pressure fairly easily.
13 Did not happen with us, but I can understand that issues like this can cause distortions.
14 Same answer as 1b.
15 Didn't notice any.
19 We have a hard time communicating because our client is very busy.
20 Our team ran into some conflict which I believe had a negative effect at first then became positive towards the end.
22 After our project reset some team members lost trust in the client which I feel is a kind of trap.
23 Software piracy (I'm not paying $300 for thing)
Personality conflicts.

There were no issues; the project went off and proceeded without a single hitch.

There were no issues that my team did not own up to or correct.

We didn't have issues that impacted any of us.

Client wants more than we can do in the time provided. High expectations from clients.

We worked on a big portion of our project and made big changes to the overall outcome of it; at the end of the semester our client looked for more because of what we accomplished.

No ethical issues were encountered.

Potential issues at the individual levels arose mostly when scheduling meetings, but otherwise our team could work together well. Issues that might impact our client in the future could potentially be poor relationships with other clients if our team acts poorly as a liaison.

We have not encountered any issues that may affect our client.

People's points of views and approach to a problem may differ from one another. A person could be persuaded to choose one over a solution that fix the problem best simply because it may come from the client and leader. So they will feel obligated to agree so as to not jeopardize the relationship.
Overzealous belief that one option of many was the only chance we had. However the situation was rectified and understandings were reached. So I do not believe it will be a problem in the future.

Our clients work in a field where ethics are wishy washy and I hope they will get out.

The most important is finding your passion which may not be the project at hand. But must find motivation to work hard at what is currently assigned. This will affect how people make decisions and if it’s ethically correct.

**Question 3:** Ethical issues exist at organizational levels that may affect innovative processes. These might include poorly defined standards and expectations, a lack of ethical leadership, or an emphasis on market performance at the expense of stakeholder value.

1. The client had a very large goal of "increase -" we really had to get them to elaborate to decide by how much they wanted to increase it.
2. Our clients must always consider their bosses and run everything through their legal office.
3. Can't think of any.
4. If we didn’t stay organized and communicate then we wouldn’t have gotten so far.
5. When we do get side tracked, it would take 5 to 10 minutes to get back on track, so it would have been nice if the leader was a better facilitator.
6. Not stating what the client really wanted from the beginning.
Our project was fairly open-ended to start so a lack of clearly defined goals may have hampered our early work.

Lack of expectations on where to go.

I don’t think ethics has to do with whether or not a client organizes things properly.

None demonstrated with myself, team or client.

Didn't notice any.

We had a hard time getting all the work submitted to our leader in order for him to inform our client.

At the start, there were poorly defined expectations from the team, however with much communication, issues were well resolved.

We had no ethical issues with the client or his organization.

At first there were some issues, but those were worked out quickly and efficiently.

Not working hard enough, but it's hard to do everything perfectly.

Thinking we were all qualified for the position of coding, when we all came from strong other backgrounds.

Didn’t encounter.

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Question 4: Ethical issues exist at industrial levels that may affect innovative processes. These include industry-wide issues that affect one or more stakeholders of the industry.

Can't think of any.
I don’t know how this affects our client.

Not sure how to answer this one.

Having to go through people above them to get things approved.

Obviously ethics in the music industry at large are tenuous. Or at least seemed that way to me after experiencing what we did.

Not our client, but this could be very true.

None demonstrated.

Didn’t notice any.

Our client may have different views than us.

"Hey I can do this thing - and free just give me $100/yr for a license"

No noteworthy issue.

No issues.

None to note.

They affect the stake holders, but our project won’t right away if it is not finished. Possible issue a working API.

No issues.

Conflicting opinions from stakeholders may hinder quick decision making.
Question 5: Ethics are influential for processes of innovation.

1. If you are innovating for a company with little to no ethics, there are way more possibilities for you to explore.
2. This is true, but technically unethical practices can be just as innovative, if not morally incorrect.
3. You usually won’t do something or make a decision for innovation if it goes against your ethics.
4. If a team does not abide by a set of morals, then the team will be put on stand still the majority of the time hindering productivity.
5. If you are doing something completely new, people might question the ethics because some are afraid of change.
6. Ethics are important to consider but are not necessarily influential in the actual process.
7. Being able to do the best that you can. Trying to work well with everyone and trying not to fall for peer pressure.
8. I don’t think they have much influence on the innovation process, but rather on the sustainability of the organizations as a whole.
9. Innovation is the process of making ideas into impact, each piece of the definition has ethics involved.
10. Don't be a scumbag.
11. Ethics are a guide or a set of rules to prevent one from going too far.
12. They are needed because it influences how we went about selecting products for our client.
13. If ethical struggles are clear in the process of innovation, it can halt or even hurt the development of ideas.
23 They affect how one generates and does ideas e.g. ID theft, dirty deals, etc.

27 Someone may bribe for ideas or even force people to work in unfair conditions.

28 If you are making a social impact, then you should try to be ethical.

29 True, because to create a truly innovative product, a team of innovators must make sure to act ethically; otherwise, there may be negative effects on the team and product uses, which can destroy any project (e.g. Enron).

30 Ethics has a lot to do with the invention and ownership of ideas.

32 Issues that arise can make teammates uncomfortable and not want to contribute. This didn't happen with our group.

36 How hard you work, motivation.

37 You need to have a strong mindset and ethics to keep a strong team.

39 Ethical actions can provide more communication which leads to innovation.

40 Innovation is the transformation of ideas into impact, and utilizing unethical ideas results in unethical real-world impact.

42 You can be limitless in innovation but corrupt ethics ruins reputations or even harm others.

43 Most processes from communication to problem solving involves ethics at some levels.
Ethics are the common ground between a team, client, customer and more. The innovation process requires interaction with people at all times. Ethics are important as a framework for morals, conducts and more between people.

*Question 6: I am personally susceptible to ethical transgressions.*

1. Everyone is susceptible to ethical transgressions, it's a part of the human condition to be fallible, especially if you don’t know that you are participating in an ethical transgression.
2. Everyone is. There are always problems of this sort in one way or another.
3. Everyone is susceptible to ethical transgressions. People must be vigilant and work hard to avoid making unethical decisions.
4. I usually don’t do unethical things.
5. I do my best to resolve my transgressions if presented so that progress continues without a pause.
6. It is difficult to work on something if it's completely against my ethics.
7. I am non-judgmental in all aspects and therefore ethics issues don't really follow me,
8. I have been known to take the easy road on occasions.
9. We all can be bribed or pushed to do something.
10. I make sure to keep my word and make sure that I do what I am supposed.
I can be tempted to do what is easy instead of what is right.

Everyone is at some level. Unless you are a robot.

Lack of training can lead to accidental ethical transgressions.

Lots of big words.

I believe that I would not do something I feel is unethical, no matter the circumstances.

I believe that I never caused an issue ethical problems.

I am a phenomenal a**hole.

Sometimes I can be caught up in mob mentality. Go with the majority rule.

Temptation is there, therefore one can fall to temptation.

It will always be around but one can work away from it.

While I try very hard always to be ethical, nobody is perfect.

I am not inclined to commit such transgressions.

I am not - but I do my best to act ethically in every situation.

I do my best to steer clear of these and make my voice heard if any bad transgressions are considered.

Having pressure to do something. Struggling and not knowing what to do.

My girlfriend is far away and I get caught up in that before my school work.
39 I try not to act unethically.

40 My ethical standards could be considered sub-par by some, but it's a moral compass I live by.

42 Sometimes rules must be bent as long as the law isn't broken or someone isn't harmed

44 I've yet to make any notable or impactful ethical transgressions. Most conflicts I've been the personal cause of have been solved/fixed quickly and efficiently and none were ethical.

47 Not sure, very dependent of the situation.

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*Question 7: I will work to avoid ethical transgressions.*

1 Everyone tries to be - of, and avoid ethical issues.

2 Of course. Trying to be your best is all you can do.

4 I will always do my best to make the most ethical decision.

5 By setting aside our differences, progress can be made rather than hinder.

6 I try to put my personal feeling outside when I walk into the classroom, but it's not always that simple.

8 I have, especially in the last year, tried very hard to work hard and work in honest ways, avoiding ethical transgressions.

10 I don't want to let anyone down, so I make sure I try to do what I say. If for some reason I'm not able to, I let others know.
In my job ethics are especially important. I work constantly to make sure I am doing the right and legal thing.

Because I know I am susceptible, I can work to avoid it.

Ethics is a large part of my character and is important in my training and development as a leader.

This sounds like the right answer and I can tell I was in the "control group"

By being forward thoughtful of ideas I can avoid being unethical.

I try not to be a phenomenal a**hole.

I always attempt to avoid unethical decisions.

Bad ethics = Bad business and Bad business = repercussions (legal, financial, etc.).

One can avoid surrounding themselves, and there are always ways people can talk about it.

Being ethical is important to being a business man and innovator, I will try to be ethical.

I will continue to work as ethically as possible.

I work daily to remain within ethical bounds and will continue to do so.

Being the best you can be is important. Get Help!

Keeping a clear mindset and concentrating on the task at hand.

Sometimes we need to be unethical to do justice or right a wrong.

Innovation involves risks; hopefully none that involve ethical transgressions.
43 Avoiding doesn't make the problem go away, finding solutions to the problem is better for the present and the future.

44 The more I avoid ethical transgressions, the more I will be and present myself as a capable professional.

46 Because I am helping to start a company in a competitive field, I will work to be ethical in competition.

47 My ethics and different ethics.

Note: N=47; Written feedback was optional, resulting in a different number of responses on each question.