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Keywords

Scholarship of Teaching and Learning, SoTL, Principled moral reasoning, Students' moral reasoning skills, Students' ethics

Developing and Assessing Undergraduate Students' Moral Reasoning Skills

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Abstract

"What does deep ethical understanding look like and how can we measure the progression of this aptitude?" Qualitative and quantitative data collected from students in Contemporary Moral Problems courses over two successive semesters revealed that the development of moral reasoning skills is a slow process. The progression of moral reasoning does not occur in a linear fashion nor is there a point at which a person will have satisfied all of the necessary and sufficient conditions for good moral reasoning. Student artifacts collected present moral reasoning skills as more of an ebb and flow, a type of *coherence model* with ongoing adjustment of one's beliefs, moral principles, values, and factual information.

Introduction

Undergraduate education in the United States has been charged from its inception with the responsibility of developing moral reasoning skills and ethical behavior in students (McClellan, 1999). Traditionally, these attributes were an assumed outcome of a good liberal arts education. Today, however, the acquisition of moral reasoning skills is often relegated to specialized moral issues or professional ethics courses and is rarely found as an assessed learning outcome in undergraduate colleges and universities. As Derrick Bok notes, "Although offerings on applied ethics are common, they are seldom required." As a result, "majorities of students graduate without receiving instruction in ... moral reasoning or in the subjects needed to prepare them as knowledgeable citizens in a democracy ..." (2006, pp. 147, 311-12). Effectively developing students' moral reasoning skills requires a focused, holistic approach within our institutions of higher education. If we simply rely on course distribution requirements or an isolated ethics class to produce morally educated graduates, we are doomed to failure (Hersch & Schneider, 2005).

National initiatives also stress the importance of principled moral reasoning as a core component of civic responsibility and the need to intentionally foster undergraduate students' moral reasoning skills to prepare them for citizenship in the twenty-first century (e.g., Halstead & Pike, 2006). Learning objectives recommended to equip students for responsible citizenship include "discerning the ethical consequences of decisions and actions" and taking responsibility for upholding "society's moral health" (Ramaley & Leskes, 2002, p. xii). Civil societies require moral citizens; its youth must develop into participating, reflective, moral adults. A political society's vitality depends on educational training that is dedicated to specific moral ideals; ideals of virtue, character and morality (Callan, 1997; Carr, 2006). Core democratic principles such as impartiality, tolerance and respect for others are grounded in moral principles (Colby, Ehrlich, Beaumont & Stephens, 2003). The ideal citizen "must understand self, morality and society, be motivated to act in the best interests of the common good and have the requisite skill effectively to do so" (Althof &

Berkowitz, 2006, p. 510). A properly functioning civil society calls for citizens willing to advocate for those who cannot and who place the general welfare of society above their own self-interests. Citizens need to recognize that they "share a common humanity" and understand that respect must extend "from particular persons to society in general" (Youniss & Yates, 1999, p. 369). The development of students' moral reasoning skills is a prerequisite for ongoing civic engagement and responsible citizenship in today's world and thus should be a fundamental goal of higher education.

The level of principled moral reasoning college students achieve is positively linked to post-graduation levels of community involvement and sense of civic responsibility (Rest, Thoma & Edwards, 1997). Recent studies on students' real-world behavior also highlight the need for focusing additional attention on college students' moral reasoning skills and the importance of developing high-quality teaching and learning resources to support instructors in meeting that need. For example, a 2006 survey of over 36,000 high-school students revealed "entrenched habits of dishonesty" and marked inconsistencies between reported ethical values and actual conduct (Josephson Institute of Ethics). Evidence from numerous studies also shows a significant positive correlation between students' exposure to moral reasoning activities in college courses and the acquisition of principled moral reasoning skills (Good & Cartwright, 1998; Gielen & Markoulis, 1994; Schlaefli, Rest, & Thoma, 1985). Research further indicates that a single ethics course only minimally impacts progress towards deeper, more reflective ethical thought processes or students' use of principled moral reasoning (Smith & Oakley, 1996; Ponemon, 1993). Given the importance of graduating students with moral reasoning competency, my research investigates the level of developmental progress that students actually make in a one semester ethics course.

Research Aims and Objectives

The motivation for this research into the development of undergraduate students' moral reasoning skills was driven by two related goals. As a philosopher teaching introductory courses, I wanted to better understand the ways that my students think about ethical issues, how my course activities might help students develop deeper and more reflective ethical thought processes, and how I could use those activities to make student learning visible. In addition, I hoped to utilize my research findings to provide pedagogical models for use within my discipline, across the academy and to become a more effective and scholarly teacher.

The vehicle for the research project was a *Contemporary Moral Problems* course, traditionally enrolling sophomore/junior-level students with little or no previous formal experience in philosophy. One of the biggest challenges in this course is that students typically enter with strongly-held views about ethical issues – views shaped by family histories, life experiences, religion, and modern culture. Traditional philosophy pedagogy does little to move students beyond these preconceptions. For meaningful learning to transpire we need to consider students' pre-college experiences and uncover any assumptions and preconceptions (Baxter Magolda & Terenzini, 1999). Lee Shulman describes learning as a *dual process* in which prior knowledge, beliefs and understandings must be exposed and critically reflected upon before students can build new knowledge (1999). Effective learning activities thus, need to address previously constructed knowledge with all of its inaccuracies and misconceptions (National Research Council, 2000).

Moral problems courses are typically taught in lecture-based formats that outline alternative “sides” of an ethical issue (Sommers, 1993). This pedagogical method, however, fails to recognize that students come into class with their own value structure firmly in place and provides little opportunity to use that structure as the foundation for more meaningful and long-lasting learning. I had been frustrated to discover that students often leave my ethics courses with the same naïve views they entered with, “understanding” the issues and rejecting all alternative views, but failing to develop effective moral reasoning processes to rationally work through the ethical decisions they will face in their own lives. The three biggest challenges of teaching ethics in college is moving students beyond positions of moral relativism (there are no universal moral truths; morality is relative to each culture or individual) (Rhem, 2006), moral skepticism (since people continue to disagree about what is moral, ethics cannot be proven), and moral nihilism (there are no truths about ethics; it’s all just a matter of opinion). Unless we can help students understand the untenability of these positions they will not see the importance of actively engaging in discourse to resolve moral issues facing today’s society. To better promote deeper and more reflective ethical thought processes, it was important that my course activities both uncover student preconceptions about ethical issues and implement appropriate pedagogical methods to help students gauge their own progress in the development of ethical reasoning skills.

Inquiry Approach and Methods

The central question of my research started as, “What classroom pedagogies are effective at advancing the development of students’ ethical understanding and fostering life-long moral reasoning skills?” My inquiry began with a careful review and evaluation of every course reading, exercise and assignment asking, “How does this content element contribute to the development of students’ moral reasoning skills?” Whenever I could not adequately offer a response, the material was cut from the course. Once this evaluation process was complete, only about one fourth of the old course content remained. The surviving content was then supplemented with new literary and media prompts; the pedagogical materials however, were now focused on depth of understanding rather than breadth of coverage. Instead of having students work through ten different moral issues, for example, the applied portion of the course would focus on four topics: physician-assisted suicide, euthanasia, abortion, and the patenting of BRCA 1 and 2 genes. Discussions about “what constitutes a workable moral theory?” and “who or what is worthy of moral consideration?” were extended from three to eight weeks of the 15-week class.

Using this revised course, my plan was to evaluate various pedagogical activities for overall effectiveness in promoting students’ moral reasoning skills. Those activities that yielded evidence of advancing students’ moral reasoning would be retained, augmented and potentially replicated in other parts of the course; those activities that lacked favorable results would be removed and replaced with proven pedagogies. A problem arose however, when my colleagues began to question what standard would be used for measuring students’ progression of moral reasoning. How would I know when students’ ethical understanding increased? What would “novice” or “advanced” moral reasoning look like? I did not have a concrete answer. My research investigation thus transitioned from something Pat Hutchings (2000) characterizes as a “what works” type SoTL question into the “what is” question of “What does deep ethical understanding look like and how can we measure the progression of this aptitude?”

Ethicists are generally focused on prescriptive recommendations, outlining how things *should* be rather than descriptive accounts, about how things actually are. Consequently, I had very little exposure to theories of moral development. As my research began I envisioned that after determining clear, measurable stages of moral development in my students, I would compare my findings to other established models of moral reasoning such as Perry's Model (1970), Kohlberg's Stages of Moral Development (1981) and Gilligan's Theory of Moral Development (1982). Certainly I had some sense that undeveloped moral reasoning in college students would include relativistic, dogmatic, and religious absolutist ways of thinking and the highest level would display a consistent application principled moral reasoning. The stages in-between these two ends of the spectrum, I envisioned would emerge from students' artifacts. Data collection started with a hierarchical working model of moral reasoning and the hypothesis that development, similar to Kohlberg's theoretical framework, would progress in a linear fashion.

For the fall 2005 semester, I introduced three ways of assessing students' moral reasoning development.

1. A **pre-assessment case exercise** was designed to establish a baseline for each student's ethical understanding and to capture preconceptions about the nature of morality. This exercise was completed by all students prior to any exposure to course materials.
2. Throughout the semester students wrote essay responses to targeted questions on assigned reading materials. At the end of the semester, students were asked to create **a reflective portfolio** analyzing their initial pre-assessment case essay and two additional essay exercises of their choice. After reflecting on their initial views concerning the moral issues of euthanasia, physician assisted suicide, and abortion students composed an essay discussing if and how their moral reasoning had changed over the semester.
3. Students created an **electronic poster** designed to document their ethical reasoning processes on a particular moral issue.

In addition to these primary artifacts, evidence of student learning was collected from in-class collaborative exercises, examinations, and focused reading responses not included in the reflective portfolio. For these responses, students were expected to compose 2-3 page essays requiring prescriptive moral evaluations on particular case scenarios, philosophical and literary readings. For example, one homework assignment required students read Jeremy Bentham's "Of the Principle of Utility" along with Ursula LeGuin's story "The Ones Who Walk Away from Omelas" and compose an essay addressing a series of questions. Students were also given an end-of-semester questionnaire asking what types of classroom activities contributed to their moral reasoning development and what things they would change in the course.

First Inquiry Results and Discussion

Initial research data was gathered from a class of 19 honors students at North Carolina A&T State University, a Historically Black University (HBCU). All students were provided IRB consent forms, told about the project goals and given an opportunity to ask questions about the research. The consent forms were held by a colleague until final grades were

submitted. Table 1, provides some general information about the student makeup of the class.

Table 1					
Fall 2005 Contemporary Moral Problems Students					
SEX	RACE	AVG. AGE	AVG. EARNED CREDIT HOURS	AVG. GPA	AVG. SAT
15 = F 4 = M	19 African Americans	20.05	67.84 or Sophomore	3.467 on 4.0 scale	1027.22

The central question of my research project had become "What does deep ethical understanding look like and how can we measure the progression of this aptitude?" The initial hypothesis was that moral reasoning development could be captured in a hierarchical model and my goal was to identify the various stages' salient features within its linear progression. I envisioned that the lowest, underdeveloped and the highest, principled moral reasoning stages would be easily identifiable and that the challenge would arise in delineating meaningful categorization of moral reasoning progression between the two ends of the spectrum. But in reviewing the data from fall 2005, it became clear that the development of ethical understanding is a complex, slow process. The goal of classifying stages of moral development was far more difficult than I originally envisioned as the students' artifacts showed very little shift from their initial ethical positions during the course. Table 2 below provides some representative comments from students' reflective portfolios.

Table 2
Comments Indicating Little or No Change in Students' Moral Reasoning Processes
<i>"Throughout this class I have remained constant on most of my original moral standards."</i>
<i>"I found that my views remained the same. I still believe morality differs among different cultures, religions, ages, etc.; therefore morality does not remain the same among different people."</i>
<i>"[M]ost of my views have remained the same over the course of this semester. I still believe that people determine what is right or wrong based on their upbringing which can include factions such as religion, ethnicity, and the way in which they reason."</i>
<i>"As I reread the work I submitted not even four months ago..., I can see slight changes in my opinion of moral issues. I have concluded that these changes are minor in the sense that my inner being has not necessarily adopted a new set of beliefs, instead I have been informed on a vast majority of terminology and other doctrines I was unaware of prior to the...discussions."</i>
<i>"My views were built solidly on a foundation of strong religious belief and family values. That will never change."</i>

"Yes stealing is wrong and should not be morally permissible, but the motive for stealing was good intentions. ...My thoughts on this case remained the same."

"Since enrolling into this course my views on morality have not dramatically changed. I rely solely on my faith to address these concerns or determine the morality of many of these types of situations."

As the comments indicate, after 15-weeks of carefully designed course activities, many students remained committed to cultural relativism, religious absolutism and values that had been inculcated for decades remained dominant. The final examination completed within a week of the reflective portfolio however, demonstrated that when challenged with ethical case scenarios, students would select universal moral principles and properly apply these principles to arrive at prescriptive moral evaluations. I was puzzled by the apparent disconnect in students' moral reasoning skills. One consideration in the differential abilities may arise from an issue's sphere of connectedness to the students. The [final exam cases](#) were essentially scenarios revolving around ethical conduct in business transactions. Detached from the actual events described in the cases, students displayed no reluctance in making objective, prescriptive evaluations about these "other people's problems." But the portfolio required students to reflect on their own previous evaluation of the actions of an unemployed, mentally unstable man who was fined after 30 years of retrieving coins from a city fountain and the emotionally charged issues of abortion, physician-assisted suicide, and euthanasia. The portfolio topics were considerably more connected to my students' lives and thus objectivity and rational evaluations, I believe, were far more difficult.

This disconnect between students' abilities to equally apply universal moral principles in detached as well as related case scenarios might be explained through social psychology research. Psychologists have long posited that attitudes affect behavior and the greater one's self-interest or *vested interest* in a given issue, the greater the strength of one's attitude-behavior bond (Crano & Prislin, 1995). When students were asked to offer prescriptive evaluations on issues where the consequences had little impact in their lives, the application of unfamiliar, yet intellectually sound moral principles was easier. With these detached case scenarios, the attitude-behavior connection was weak and therefore students could more readily overcome previous moral reasoning patterns. But when the potential consequences of an issue were closer to students' lives, the stronger vested interest made changes in students' moral reasoning behaviors less likely to occur.

As indicated in Table 3, some of the reflective portfolios did display small changes in students' moral reasoning processes. These modifications centered primarily on a deeper understanding of morality's function within society and the recognition that some type of universal standard was necessary for a workable moral theory. Students had spent about a week considering the question "why be moral" with an emphasis on situations where it is unlikely that one's moral improprieties would become known (as in Plato's "Ring of Gyges" story) and had worked collaboratively to arrive at morality's purpose. Many of the course activities were intentionally designed for students to discover why inclusiveness and universality were essential features for a practicable moral standard. These two adjustments in students' moral reasoning were not, therefore, unexpected. In fact, I had anticipated that the entire class of 19 students would readily accept and adopt these two ideas central to ethical understanding. The questions of "why be moral" and "what features

do we need in a moral theory" are not controversial or emotionally charged, and do not readily conflict with deeply held values. What was the barrier?

Table 3 Comments Indicating Small Changes in Students' Moral Reasoning Processes
<i>"If I were to change something from my comments it would be my view on the function of morality. I believe the function of morality is to set universal laws which allow every member of society to co exist in harmony."</i>
<i>"One thing about my decision making that has changed is that I would think more about morality in a less subjective way....I also think that the function of morality isn't just to make people feel good about themselves but is also like a scale that's there to make sure the right and fair action gets done."</i>
<i>"When the semester commenced, I was naïve to many of the situations we discussed in class and most of my views were based solely on religion, for that is the only true access I had ever had to morals. ...As I look back upon my initial response, I believe that my assessment would remain the same; however, my method of evaluation would have been different."</i>
<i>"Although my views have not been altered, my perceptions of many situations have changed. I believe that this class has opened my eyes to many ways to view things rather than simply through religion."</i>

I begin every semester with a qualification about the aims of an ethics course. The goal is not to change or alter students' moral positions but provide them with the tools to reflectively endorse their views and to evaluate the consistency of their positions. A few students' reflective portfolios did display recognition that consistency and universal principles were imperative for sound moral reasoning. Shifts in a previously held position on the issue of abortion and about the relationship between law and morality were also revealed. But as Tables 2, 3 and 4 show, none of the students had an epiphany that the requirements for correct moral reasoning had been revealed and thus they were now ready to adopt these reasoning processes. The class was interesting, made students think, and challenged their ideas, but had very little, if any, impact on students' overall moral reasoning processes. The development of principled moral reasoning skills had not occurred with any students in the class.

Table 4 Comments Indicating Greater Changes in Students' Moral Reasoning Processes
<i>"I also entered this course completely against abortion, but as we held class discussion about the topic, my views began to change."</i>
<i>"My first opinion of Mr. Cercelletta's actions was that they were immoral because it was illegal. ...This reasoning was incorrect because I assumed that because something is illegal it is immoral, but this is not always the case."</i>

"When I initially made moral evaluations I took into account several factors; I considered the legality of the issue, the norms of society, religion, and my own conscience. Throughout...the semester I have found that how I made my evaluations were flawed."

"Overall, my views have changed greatly and I realize that my pervious [sic] ways to make decisions were inconsistent and dogmatic. I now think about the overall happiness of the people involved."

At first the "uncovered knowledge" from the evidence gathered was extremely discouraging and I began to question the efficacy of my profession. Why teach ethics if significant learning is unlikely? These students were the cream of the crop, the best and the brightest at my university. They arrived on the first day of class with books in hand, ready to face whatever challenges the course presented. As a class, I could not have hoped for a more responsive, engaged group of research participants. But the data was clear; the students' moral reasoning had made negligible, if any, progress over the course of the semester. After many emails and conversations with colleagues, fellow ethicists and other Carnegie scholars, it seemed my initial research results might serve to shape the way moral reasoning is taught. If, as I suspected, learning ethics is not the same as learning quadratic equations or a periodic table because of students' strongly held preconceptions shaped by their family histories, life experiences, religion, and modern culture, then the development of deep moral reasoning would require time and repetition across the curriculum. My theory was that for many students an ethics course simply plants seeds that if properly watered and nourished may sprout in future semesters or even after graduation. With this uncovered knowledge my challenge for the second inquiry was to capture the kind of moral development that students are actually capable of making over a semester with the recognition that achieving consistent principled moral reasoning is probably not attainable in 15 weeks. This result did not signal an end but a new path, for as Lee Shulman frequently points out, the scholarship of teaching and learning often involves uncovering things we would rather not know. But the alternative--ignorance about how our students learn--is not preferable.

The end-of-semester questionnaire comprised of four open-end questions provided additional data for consideration in structuring a second moral problems course. Although only 11 of the 19 registered students completed the questionnaire, some clear themes emerged. Table 5 below lists the questions and some sample student responses.

<p align="center">Table 5 Student Comments on End-of Semester Evaluation of Course Activities</p>	
<p>1. What specific classroom activities or assignments did you think promoted development of your moral reasoning skills?</p>	
<p><i>"Having to write down initial views on issues and then using them as a reference @(sic) the end of class"</i></p>	
<p><i>"Discussing the homework assignments as a class."</i></p>	
<p><i>"The assigned readings and focused reading assignments...promoted development of my moral reasoning skills."</i></p>	
<p>2. What activities or assignments did you find not useful or relevant to moral reasoning skills development?</p>	

<i>"I did not necessarily see the Myriad BRCA 1 & 2 assignment of any importance."</i>
<i>"Honesty I felt that everything done this semester was relevant and useful to moral reasoning skill development."</i>
<i>"I found the Myriad BRCA 1 and 2 patents assignment unuseful (sic) to my moral reasoning skills development."</i>
3. If you were participating in PHIL266 next semester, what would you like to see changed?
<i>"I would not want to talk about BRCA 1 & 2 but something <u>VERY</u> controversial."</i>
<i>"I would like to have less essay homeworks."</i>
<i>"Probably the BRCA 1 & 2 assignment changed to something more interesting and less scientific such as the same sex marriage issue."</i>
4. If you were participating in PHIL266 next semester, what two things would you like to see repeated?
<i>"The final project that we completed consisting of electronic poster, presentation, term paper, etc."</i>
<i>"Focused reading assignments, online quizzes."</i>
<i>"Group/team work"</i>
<i>"A group project at the end—term paper, electronic posters, presentations"</i>

Refining the Research Question and Methodology

The unanticipated slowness in students' progression of moral reasoning development necessitated that I rethink the stages of categorization in terms of much smaller steps. So spring 2006 research focused on identification of **any** development, rather than looking for great strides. Prior to beginning my research project, I had evaluated, honed and augmented my pedagogical materials keeping only those assignments that I felt directly contributed to the development of students' moral reasoning skills. Although the intentional curriculum revisions worked well, some additional refinements were necessary. The end of semester reflective portfolio assignment and first exam essay responses showed students generally made great strides in understanding the relationship between law and morality. The reflective portfolio assignment also revealed students' confusion regarding the workability of religious dogmatism as a universal moral standard for society, yet on the second exam students generally applied practicable moral principles in evaluating case scenarios. As previously noted, this disconnect in the data from the two artifacts, if analyzed with social psychology theories, might be attributable to students' connectedness to and vested interest in the issues. But some additional moral theory scaffolding and rewording of the portfolio assignment might add clarity and increased understanding.

For this inquiry, participants came not from a small honors class but from a larger class of a traditional student mix. In the first investigation, some activities, such as the focused reading homework exercises and formative assessments, seemed to promote student learning and provide an early indication of student misconceptions. As I initiated my second semester research, I was concerned that the shift in the student makeup of the course might produce variation in previous pedagogical successes. Table 6 below provides some general information about the characteristics of the student research subjects. Two other points are of interest about the makeup of this second group of students. Although the

average student age was 22.6 years, the actual ages ranged from a 16 year-old early college student to a 73 year-old woman. Secondly, half of the second class (18 of the 36 enrolled students) was comprised of social work majors, while the first course had no more than two students from any one major.

SEX	RACE	AVG. AGE	AVG. EARNED CREDIT HOURS	AVG. GPA	AVG. SAT
21 = F 15 = M	33 African Americans 1 White 1 Hispanic 1 Other	22.61	72.50 or Junior	2.683 on 4.0 scale	837.19

Based on the end-of-semester questionnaire feedback from the first student research participants, the applied topic evaluating the moral permissibility of patenting BRCA 1 and 2 genes was dropped and the topic of same-sex marriage was added for the second semester course. The student population at my historically black university consists predominantly of practicing Baptists. Homosexuality is not readily accepted within the African American or the Baptist communities, so I knew this topic selection was volatile. But since HIV/AIDS is the number one cause of death for African American women between the ages of 25 to 34, I felt a moral imperative to attempt this "difficult dialogue" (Centers for Disease Control and Prevention). If honest student participation was to occur on this potentially explosive issue, it was essential that a sense of trust be established within the classroom; so I scheduled this topic for the final weeks of the semester.

A pre- and post-survey questionnaire designed to uncover student preconceptions and to track how student's ethical views may have changed over the semester was added for the second research inquiry. In the 37 question survey, 32 questions were constructed using a four-point Likert scale and 5 questions were open-ended. The [survey questions](#) explored general processes of making ethical decisions as well as attitudes on specific moral issues.

Second Inquiry Results and Discussion

The pre-survey questionnaire was administered during the first week of class through Blackboard course management system. As students began to take the survey I immediately noticed confusion with Question 37 which asked students to "Identify three things that you think are morally commendable." Typical pre-survey responses to this question included answers of "murder, theft, rape, killing", etc. indicating that my students did not understand the definition of the word. Not wanting to skew the pre-survey data, I decided to clarify the question's wording for the post-survey; the question was changed to read "Identify three things that you think are morally commendable or praiseworthy."

My decision to encourage survey participation by offering extra credit points for completion of the questionnaire created an additional impediment for data collection. For the pre-survey questionnaire 29 of the 36 enrolled students participated. Since students received extra credit points for completing each questionnaire, six students responded to the post-

survey who had not participated in the pre-survey. So at the end of the course only 26 students (72%) had completed both the pre- and post-surveys. Optimally, I would have liked 100 percent participation, but I was reluctant to make survey completion a course requirement. An alternative strategy might be to tie the extra credit points to completion of both the pre- and post-surveys such that students do not receive any credit unless they finish two questionnaires.

Question	No. of Observations	Mean Difference (Post - Pre)	T-Statistic	Significance Level
1	26	-0.269	-2.573	0.016
8	26	0.231	1.656	0.110
12	26	0.461	2.287	0.031

As shown in Table 7 above, Questions 1, 8 and 12 of the survey questionnaire produced statistically relevant data on a t-test analysis. For the questionnaire, the Likert selections were given the following numerical values: 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. The wording of the three questions showing t-test relevance is listed in Table 8.

Question 1	Law and morality are the same.
Question 8	Gays and lesbians should not be discriminated against.
Question 12	The principal moral consideration in abortion is the question of whether the fetus is a person.

Fortunately, for all three questions students moved in a direction that was reinforced by course materials. In Questions 8 and 12 the post-survey results revealed shifts toward the strongly agree end of the scale whereas with Question 1 students moved toward the strongly disagree end.

The validity of t-test analysis for Likert scale data is sometimes questioned. Some may argue that the t-test is best designed for ordinal rather than ratio data as one cannot truly know whether a respondent's "agree" selection leans more toward the "disagree" or "strongly agree" options. Assigning representational numbers to Likert categories assumes that the strength of a respondent's agree choice selection is equi-distance from a strongly agree or disagree option. To address this t-test limitation, I also performed a chi-square analysis of the data. Table 9 below indicates that Questions 1 and 8 produced statistically relevant data but Question 12 lacked statistical relevance.¹

Question	No. of Observations	Chi-Square	Degrees of Freedom	Significance Level
1	26	17.381	4	0.002

8	26	38.198	9	0.000
12	26	8.546	6	0.201

The pre- and post-survey data was reassuring as my goal with this second research group was to discern **any** changes in moral reasoning development, no matter how small the step. Although the statistical data analysis has significant limitations and did not really produce much more than one might expect from random chance in a 32-question survey, this weak quantitative data aligns with qualitative evidence and therefore might be worthy of consideration.

The addition of the same-sex marriage topic to the second semester course created some truly challenging teaching moments. The subject matter was introduced by presenting factual data on the evolution of the U.S. institution of marriage, offering some terminological clarification, and then providing brief histories on Defense of Marriage Acts, civil unions and same-sex marriage laws. The class read several articles, critically examined both sides of the issue, considered the relevant Supreme Court cases, and understood that this controversy centered on principles of liberty and equality. Thankful that the semester had ended without incident, I doubted that same-sex marriage would ever reappear on my syllabi. But the reflective portfolio assignment produced some surprising results. This volatile, "difficult dialogue" topic elicited remarkable values shifts in my students. Why the change—especially on one of my students' most deeply held values? Table 10 below provides some sample student portfolio responses. One interesting note is that attitudes of tolerance, a willingness to consistently apply principles of equality, and general compassion towards the same-sex marriage issue were not predominant views during the classroom conversations. A few female students verbally expressed "it doesn't harm me, or other unconsenting adults so I have no problem with it" sentiments, but no males publicly condoned the morally permissibility of same-sex marriages. Yet all of the below comments on Tables 10 and 11 are from male student participants.

Table 10 Sample Student Portfolio Responses Indicating Changed Moral Reasoning
<i>"...issue of same-sex marriage, initially I did not agree with it. I still do not agree with it, but I do believe that same-sex marriage partners should not be discriminated against."</i>
<i>"...my initial view of same sex marriage changed. My view of this ethical issue changed because I evaluated the issue on a level deeper than the surface."</i>
<i>"When it comes to same-sex marriages my views have changed as well. I had to try to look at the situation from a different standpoint. These people simply want the opportunity to show their love and commitment to their partners."</i>

As shown in Table 11, the reflective portfolios also revealed students' ability to recognize biases and preconceptions.

Table 11 Sample Portfolio Responses with Student Recognition of Biases and Preconceptions
<i>"My views concerning the issue of same-sex marriage have changed also. Because of my conditioned homophobic mental state, my initial assessment of this ethical issue held that it was unnatural, therefore, morally impermissible to allow individuals to solidify their</i>

<i>homosexual relationship through marriage."</i>
<i>"...I was against same-sex marriage but that was largely due to homophobic, irrational, and heavily religious influence."</i>
<i>"[M]y own prejudice [sic] views on gay people got in the way...but what I learned in class and in the reading is nothing wrong with them getting married. ...My mother has been married for 23 years to my Dad and she even said that gay people have just as much right to be miserable as straight people..."</i>
<i>"...the one that may surprise people is my views on same-sex marriage. My own prejudice [sic] views on gay people got in the way..."</i>
<i>"In reflecting on the four applied ethics issues that we considered in this course I would have to say that my initial views have defiantly [sic] changed toward these issues...until now I never really knew how to make an assessment dealing with any of these issues without being partial to one side."</i>
<i>"Now that I think about it, I cannot deal with the issue of marriage in an objective standpoint because of my parents' divorce. I get too emotional and emotions cause hurt. Hurt that wouldn't be caused if people just didn't get married in the first place..."</i>

Summary of Research Findings

Moral reasoning involves the inculcation of values. For values to change, it seems like there must be alignment, a type of coherence with other deeply held values, or the recognition of overwhelming evidence that a particular value is flawed. During the reshaping of the Contemporary Moral Problems course materials, I intentionally tried to incorporate readings that I knew would have resonance with a predominately African American student population. This connecting of moral issue readings to other important student values appears to successfully promote moral reasoning development. For the topic of the relationship between the law and morality, I supplemented textbook materials with Dr. Martin Luther King's "Letter from Birmingham Jail." Students wrote a focused reading essay for Dr. King's letter. We then spent the entire next class teasing out the nuances of Dr. King's views on unjust laws, his prescriptive recommendations for what to do when the law and morality conflict, and why he thinks injustice anywhere cannot be ignored. Evidence gathered from examination essays, reading responses, end-of-semester questionnaires, and students' reflective portfolios indicate that this underscoring of traditional philosophical material with readings admired and revered by my students was highly effective.

A second instance of value coherence occurred with the topic of same-sex marriage. In learning about the evolution of marriage laws, students discovered discriminatory U.S. statutes barring African Americans from obtaining marriage licenses and prohibiting miscegenation. Not until 1967 with the Supreme Court ruling on *Loving v. Virginia*, were mixed race marriages legally protected. Students also found resonance with the proponents of same-sex marriages' appeal to the Equal Protection Clause of the 14th Amendment. Many of my students' grandparents, aunts, uncles, and other relatives had vehemently fought for "equal protection under the law," and so this part of the Constitution was particularly salient.

Students' ability to rationally apply moral principles is challenged by emotionally charged issues or beliefs that have been reinforced by multiple sources or over long periods of time. To elicit recognition that one's deeply held values are flawed or inconsistent, students need

time to think, time to recognize and accept the incoherence within one's value set. As my research has shown the progression of students' moral reasoning development is a very slow process. For students to develop deep ethical understanding and foster the life-long moral reasoning skills necessary for civic responsibility, they must have repeated exposure to ethical scenarios over periods of time much longer than just one semester. If we are to graduate students with the moral reasoning competencies required for twenty-first century civic participation, students will need more than a single, isolated ethics course.

Conclusions

In the months following my two Contemporary Moral Problems research courses, I began to revisit the question of "what does deep ethical understanding look like?" As a philosopher trained in applied ethics, my foundation prepares me for prescriptive not descriptive analysis. Although an empirical comparison between moral psychology theories and the research data collected was intended, such an evaluation was not possible because of the minimal progression of students' moral reasoning development over a 15-week period.

When I reflect on a representation of undergraduate students' moral reasoning development, a hierarchical model or even holistic model fails to capture how I envision students' advancement. The progression of moral reasoning does not occur in a linear fashion nor is there a point at which a person will have satisfied all of the necessary and sufficient conditions for good moral reasoning. Student artifacts collected in my research present moral reasoning skills as more of an ebb and flow, a type of *coherence model* that is in constant need of adjustment as new information becomes known. Similar to John Rawls' "reflective equilibrium" process that is used to arrive at the principles of justice for society, moral reasoning development requires a deliberative ongoing adjustment of one's beliefs, moral principles, values, and factual information to arrive at an acceptable coherence. Rawls describes the reflective equilibrium process as working "from both ends...going back and forth" where our judgments, beliefs and provisional convictions have been "duly pruned and adjusted" (1971, p. 20). Within moral reasoning inquiry, issues arise and one makes a moral judgment, which is then assessed within one's value set to ascertain if the judgment conflicts or coheres with other strongly held values. Likewise, Shulman's depiction of learning as a "dual process" where "the inside-out and the outside-in movements of knowledge—alternate almost endlessly" echoes the knowledge adjustments required for moral reasoning learning (1999, p. 12).

Research Implications and Future Inquiry

Given the coherence model of moral reasoning, I plan to retool my pedagogical material and abandon the traditional "history of ethics" approach used in Contemporary Moral Problems courses. If the aim of these courses is to help students develop deeper and more reflective ethical thought processes, then time should be spent on perfecting the application of a particular set of moral principles rather than exposing students to *all* of the viable options. Normative ethical theories are generally categorized into three major groups: deontological (duty-based theories where the rightness or wrongness of an action is based on adherence to moral rules or laws), consequentialist (where the rightness or wrongness of an action is based on its outcome or consequences), and virtue ethics (focuses on the moral character of the agent, requires adopting and upholding principles that promote individual and societal flourishing). In most moral problems courses students cover multiple variations of these three workable theories in addition to impracticable approaches such as cultural relativism, religious absolutism, and dogmatism. Of importance in preparing undergraduates for engaged citizenry is that one adopts universal moral principles, applies these principles

consistently, is able to mediate conflicts in values, and recognizes a responsibility to challenge unethical practices.

To help promote students' moral reasoning development in future courses, I plan to focus on only one principled moral theory, virtue ethics, and to have students practice applying these principles throughout the semester. A virtue ethics theoretical approach has resonance among diverse student populations, can be easily applied within a broad variety of disciplines, has both western and non-western historical origins, and is practiced in many cultures. Additionally, when I presented fall 2006 students with a hypothetical scenario where as the newly elected mayor of the city they must select a set of moral standards to guide employees and citizens in ethical decision-making, students overwhelmingly selected (12 out of 18) virtue ethics as their chosen standard. The reasons given included its simplicity, the fact that everyone seems to have "a virtue," and it "would apply to all persons regardless of their race, color, gender, or religious beliefs." Moral education that includes training in virtues and character, in addition to ethical principles, might also help bridge the gap between students' reported ethical values and their actual conduct (Josephson Institute of Ethics).

While the small student sample size of this research and the special nature of an HBCU population limit the generalizability of the results, I believe the study's conclusions are worthy of consideration when designing moral reasoning learning activities. Research data collected from students in my Contemporary Moral Problems courses revealed that the development of moral reasoning skills is a slow growth process, requiring time and repeated exposure to ethical scenarios for deep development. Since moral reasoning competency is a prerequisite for ongoing civic engagement and responsible citizenship in today's world, this learning outcome should become a measured goal within higher education.

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Notes

¹ With a data set of 26, a chi-square analysis presents other problems. For valid analysis the chi-square operates on the assumption of expected 5 cases per cell, or at least 5 responses in each potential category. Of the three questions analyzed, Questions 1, 8, and 12, the chi-square analysis yielded 7, 14, and 11 cells respectively with less than the required five cases. Thus the chi-square statistical analysis on this data set may be less reliable than the t-test analysis.

Examples of some of the actual materials used in the two research studies can be found at the below URL addresses.

The pre-assessment case exercise can be viewed at:

<http://castlws.carnegiefoundation.org/access/content/user/klhorns@ncat.edu/TreviFountainCase.pdf>

The final exam cases are available at:

<http://castlws.carnegiefoundation.org/access/content/user/klhorns@ncat.edu/Final Exam Case Scenarios.pdf>

The pre- and post- survey questions are accessible at:

<http://castlws.carnegiefoundation.org/access/content/user/klhorns@ncat.edu/Pre-Survey Questions.pdf>