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## Promoting Community and Political Engagement Through Undergraduate Educational Practices: The Role of Identity Formation

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### Abstract

Relational Developmental Systems (RDS) provided an integrative framework to examine how college students' intrapersonal attributes, particularly sense of identity in transactions with different educational experiences, were related with self-reported community and political engagement and other intrapersonal dimensions. Students who participated in service learning and community service had more hours of public service, higher valuation of prosocial commitment and political activity, and higher levels of empathy than controls. The added value of integrating these educational experiences with a multi-faceted approach to ethics was reflected in even higher prosocial commitment and empathy scores, and a positive relationship with political activity. Students' sense of identity was associated with their valuation of prosocial commitment and political activity and level of empathy. These findings provided support for the value of providing educational experiences that motivate students to seek opportunities to put their moral commitments into action and that enable them to take the perspective of others and respond with empathy.

Colleges and universities have responded to calls “to make moral, civic, and political development central goals of undergraduate education” (Colby, 2008, p. 391) by offering students many opportunities to engage in community service. Although evidence supports the multiple benefits of service participation, the connection between service and citizenship is not well understood, and there has been a neglect of the political engagement component of citizenship (Bryant, Gayles, & Davis, 2012). There is a particular need to identify educational practices and contexts that are effective in fostering students' moral development and their community and political engagement. The challenges are to determine what specific student intrapersonal attributes to target and to identify what educational contexts foster the development of these attributes.

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Recent advances in developmental science offer the promise of addressing these challenges (Overton, 2013). First, there is increasing evidence about the role of *intrapersonal attributes* or *competencies*, defined as attitudes, behaviors, beliefs (e.g., self-efficacy), and dispositions (e.g., conscientiousness) in students' success that may be influenced by college environments and context but traditionally have not been targeted as educational goals (National Academies of Sciences, Engineering, and Medicine, 2017). Second, emerging adulthood has been recognized as a particularly dynamic period of biopsychosocial development during which the intrapersonal competency of identity formation is the foremost developmental task (Arnett, 2000). Third, the relational developmental systems (RDS) perspective has demonstrated promise as an integrative framework for conceptualizing both character development and moral development in terms of the transactions of individuals with their social environments (Lerner & Schmid Callina, 2013, 2014).

The purpose of this study is to apply the RDS perspective to examine how students' intrapersonal attributes in transactions with different educational experiences are related with their community and political engagement during the college years. This study takes the form of an ecologically valid natural experiment in that there is no random assignment of students to specific educational experiences. Rather, study participants are categorized in terms of their involvement in different types of educational experiences.

### **Relational Developmental Systems Perspective**

The RDS perspective represents a *paradigm shift* from a reductionistic nature or nurture model to an integrated biopsychosocial conception that emphasizes relations among levels of organization with three points of synthesis—biology, person, and culture (Overton, 2013). The focus is on the bidirectional transactions of the person with her environment that enable individuals to be *active agents*, self-constructing, self-organizing, and self-regulating. Variations in individual-environment transactions influence the trajectory of development. As Lerner and Schmid Callina (2014) explained, the RDS emphasis on holistic analysis of the interrelationship of levels is not meant to exclude investigation of the contributions at a single level, but the ultimate aim is to reintegrate the part into the whole. Furthermore, the focus is not on person by context *interaction*, which connotes that the entities are separate and independent, but rather on mutual *transactions*, between individuals and contexts (the individual  $\leftarrow \rightarrow$  context relation). The person-context transactions are the primary unit of analysis.

Research on moral development and education has typically focused on person-level attributes, including cognitive processes, personality dispositions, character, values, and emotions. There is ample evidence that students demonstrate growth in principled moral reasoning during college and that moral reasoning is associated with moral action (Pascarella & Terenzini, 2005). However, the implication of the RDS perspective is that efforts to promote moral development and functioning should focus on the bidirectional *transactions* through which the person both shapes, and is shaped by, his educational experiences. Kim and Sankey (2009) applied the RDS perspective to moral education and viewed moral development as the result of emergent self-organization stemming from the person's transactions with her constantly changing social environment. Similarly, recognizing the importance of between-level relations in moral functioning, Reed (2009) argued that moral education should focus at least as much or more on system change as on individual change. From the RDS perspective, multiple intrapersonal attributes influence the individual's selection of educational experiences that in turn influence the

individual's development. There is a particular need now to delineate the intrapersonal attributes that, in transactions with educational practices, foster moral development and civic and political engagement during the college years.

### **Emerging Adulthood and the Developmental Task of Identity Formation**

Arnett (2000) proposed that the increasing length of the transition from childhood to adulthood in our postindustrial society constitutes a new developmental phase of *emerging adulthood*. Spanning roughly the ages of 18–25, emerging adulthood is subjectively experienced as a distinct phase of development during which the brain, particularly the prefrontal cortex, is undergoing a remodeling process of synaptic pruning and reorganization in support of higher-order functions, including evaluative judgments, the integration of cognition and emotion, and self-regulation. These developmental processes influence students' engagement with undergraduate educational experiences, and in turn their educational experiences influence their cognitive and personal development.

Within an RDS perspective, the biologically based drive toward growth combined with the expectations, constraints, and opportunities provided by the social environment give rise to the concept of developmental tasks that need to be mastered throughout the life course. Identity formation, the self-authorship process of coming to terms with new potentialities for thinking, feeling, and acting and rearranging one's self-image accordingly, is the foremost developmental task of adolescence and emerging adulthood (Arnett, 2000). Identity serves three important functions (Adams & Marshall, 1996). It is a self-regulatory system; it motivates a striving for distinctiveness, belonging, and coherence between values, beliefs, and commitments; and it is an integrating structure for self-understanding and giving meaning and direction to our lives.

### **Moral Identity as a Motivator of Moral Action**

Moral identity is conceptualized as an individual difference that reflects the extent to which the self is organized around values and moral commitments and conceptions about what it means to be a moral person (Hardy & Carlo, 2011). Augusto Blasi (1980, 2004) proposed that moral identity served as a bridge between moral reasoning and moral action and comprised three components: the centrality of moral values in one's identity; a sense of personal responsibility for taking moral action; and integrity or the desire to live consistent with one's moral commitments (Hardy & Carlo, 2011; Walker, 2004). The desire for identity integrity is considered the primary mechanism in motivating congruence between moral judgments and actions: "the more individuals see moral virtues and values as important to their sense of self, the more likely they are to engage in moral behavior" (Hardy & Carlo, 2005, p. 252).

A recent review of 77 studies provided empirical support for the hypothesis that moral identity strengthens individuals' readiness to engage in prosocial interaction and abstain from antisocial or harmful behavior (Krettenauer & Hertz, 2015). The effects were explained in terms of one of the functions of moral identity: "the integration of the self and morality such that self-concerns and moral concerns become unified" (Krettenauer & Hertz, 2015, p. 139). Relatedly, in a study with 97 university students, Frimer and Walker (2009) found that the tendency to coordinate both self and communal values positively predicted moral behavior. This uniting of morality and the self can be viewed as a distinguishing achievement for moral development: "The best answer to the question, why be moral,

may thus be, because that is who I am, or, because I can do no other and remain (or become) the person I am committed to being” (Bergman, 2002, p. 123).

### **Moral Identity Development Through Opportunities for Moral Action**

From an RDS perspective, identity formation involves the continuous transactions of the person with the characteristics of the social environment, particularly with regard to expectations, the range of available opportunities, and the degree of environmental support for the key identity processes of exploration and commitment (Adams & Marshall, 1996). “Moral identity is open to revision across the life course, particularly when one is given opportunities for moral action” that “underscores the importance of providing youth with opportunities for service learning and community service” (Lapsley, 2008, p. 40).

There is ample evidence that service learning in particular, which refers to experiential learning activities that involve participation in projects of benefit to the community that are part of a course or academic program, is associated with a number of positive outcomes, including a reduction in negative stereotypes, an increase in tolerance for diversity, and an appreciation of other cultures (Eyler & Giles, 1999). Participation in community service has been linked to a greater sense of social responsibility, personal agency, and commitment to act politically for social change (McIntosh, Metz, & Youniss, 2005). Type of community service also matters. Community service that involves a social cause or direct personal contact, for example with persons in homeless shelters, the elderly in nursing homes, or children in Special Olympics, was associated with greater increases in social concerns than participating in tutoring, coaching, or raking leaves (McIntosh et al., 2005). Similarly, one explicit objective of service learning is to develop students’ critical consciousness about their sense of agency and efficacy in addressing the systemic issues underlying social, political, and economic inequities (Youniss & Yates, 1997). In particular, it has been argued that service learning has an impact on how students see themselves and others, and for many students, service learning is a transformative experience (Eyler & Giles, 1999). Service learning provides opportunities for students to develop their capacities for perspective-taking and empathy; and multiple associations have been found among empathy, perspective-taking, moral reasoning, and prosocial behavior (Eisenberg, 2005; Eisenberg, Fabes, & Spinrad, 2006).

Research has begun to focus on the transactional process involved in service opportunities. For example, Bryant and colleagues (2012) analyzed a longitudinal dataset comprised of the survey responses of 3,680 college students from 46 institutions and found that social activism goals precede charitable behaviors; students’ high school behaviors and values upon entry to college shape the college culture and their inclinations to pursue cocurricular engagement, and college culture and cocurricular engagement are positively associated with social activism and charitable involvement.

From the RDS perspective, the educational implications of these findings are clear. Fostering the integration of self and morality during emerging adulthood could motivate students to seek out opportunities to put their moral commitments into action, and providing opportunities for moral action could serve to strengthen students’ sense of moral identity.

### **Relationship of Service Experiences to Other Forms of Civic Engagement**

Whereas the predominant conceptualization of citizenship is that of individual actions that help people in need, Walker (2002) called attention to the lack of differentiation between service participation and

political participation. Adler and Goggin (2005) proposed two dimensions of engagement: community activities involving prosocial (helping others) behaviors (e.g., donating blood, tutoring) and political activities (e.g., voting, advocating for a policy).

Support for differentiating among dimensions of civic engagement has been provided by the findings of a longitudinal study (Obradovic & Masten, 2007) that examined the relationship of adolescents' level of involvement in activities and organizations with two types of civic engagement 10–15 years later: citizenship (willingness to carry out prescribed civic responsibilities, such as voting and serving jury duty) and volunteering (helping those in need). Activity involvement in adolescence predicted both types of civic engagement, but the strength of the relationship was stronger for citizenship than volunteering, and the strength and pattern of predictors also differed, indicating that citizenship and volunteering should not be aggregated.

Recently, Porter (2013) provided empirical support for the idea that political identity motivates political action in the same way that moral identity motivates prosocial behavior, that is, through holding oneself accountable for maintaining consistency between one's political values and one's behavior. The findings of a survey of 1578 high school students indicated that political identity was positively related to political action, but not related to nonpolitical service, whereas moral identity was positively related to service but negatively related to traditional-political action (e.g., contacting a political representative).

In sum, this review provides support for RDS as an integrative framework to guide systematic research on the bidirectional transactional relationships of students' intrapersonal attributes with undergraduate educational practices that aim to promote moral development, prosocial commitments, and political activities. More specifically, there is empirical support for the relationship of a number of intrapersonal attributes, including personal and other-directed values, identity, perspective-taking, and empathy with participation in service experiences and also with prosocial commitments and political activities. The conceptual and empirical basis now exists to undertake research to examine the interrelationship of intrapersonal attributes, educational experiences, and prosocial commitments and political activities. In turn, the findings will serve to guide the further development of educational practices to promote moral development and civic engagement in terms of both prosocial commitments and political activities.

### **Study Context and Design**

In 2012, the Teagle Foundation awarded a grant to three institutions (pseudonyms: Southern Independent University; Midwestern Catholic University; Northern Independent College) with a programmatic-level commitment to moral and civic education to undertake research projects to evaluate and enhance the effectiveness of their programs in promoting civic engagement. Within and across these institutions, the commitment to moral and civic education was implemented in various ways: through courses and programs throughout the curriculum, opportunities for service through university departments and cocurricular programs, or through a constellation of courses constituting a minor or a certificate program.

This study reports findings from the project conducted at the Southern Independent University (SIU; Carnegie classification: private, not-for-profit R1, with a total undergraduate student population of 6,532). The university offers a wide array of service learning and community engagement opportunities in

which students can elect to participate. Over the past decade, SIU has invested significant resources in cultivating a culture of service-learning through a variety of academic and cocurricular programs, such that students in all programs of study have access to service-learning or community engagement opportunities before they graduate. Many of these opportunities are offered through the university's Ethics Institute, which also sponsors other academic and cocurricular activities. Across the university, academic departments and cocurricular programs unaffiliated with the Ethics Institute also offer service-learning or community engagement opportunities. Nonetheless, some students do not participate in any of these opportunities. This spectrum of engagement allows cross-sectional comparison among three sub-groups of students based on their type of educational experience.

*Ethics Institute Programs (EIP)*: Study participants self-identified (cross-checked against Ethics Institute records) as having participated in one or more of the Institute's programs. The mission of the Ethics Institute is to promote innovative research, teaching, and community/policy engagement in the field of ethics broadly conceived. The Institute's focus for undergraduates is offering a range of curricular and cocurricular programs to foster moral reflection and commitment, integrated with community engagement, academic research, and theory-informed practice. The range of opportunities the program offers includes, among others: a community based pre-matriculation program in collaboration with local NGOs; a cluster of first-year seminars on global citizenship; independent summer research projects on ethical issues; overseas community engagement working with migrants and refugees; research courses where students do collaborative research with underserved communities at home and abroad; and a research lab where students pursue civic engagement projects with underserved local high-school students. All Ethics Institute programs and coursework represented included significant moral reflection.

*General Engagement Programs (GEP)*: Study participants were identified based on self-reported participation in one or more types of community engagement programs or service learning courses not affiliated with any programs or courses sponsored by the Ethics Institute. These included community service/engagement cocurricular clubs; community engagement or service in the US or abroad; enrollment in any service learning course; and participation in one of the university's signature summer community engagement programs.

*Control group*: Study participants who did not self-identify as participating in any type of community engagement programs or service learning courses and who were not affiliated with any Ethics Institute programs or courses were included in the control group.

Consistent with the RDS conceptual framework, it was hypothesized that individual differences in students' prosocial commitments and political activity are a function of intrapersonal attributes in transactions with different types of educational experiences; that is, students' intrapersonal attributes influence their decision to engage with different types of educational experiences that, in turn, influence their further development. Therefore, the appropriate study design is not random assignment of students to specific educational experiences but rather a natural experiment in which study participants are categorized in terms of the different types of educational experience they chose prior to the study. Participating in the study involved students completing a survey designed to assess a number of intrapersonal attributes the research literature suggests as potential contributors to moral development and civic and political engagement, with a particular focus on moral and political identity. The analysis plan involved assessment of mediation effects as well as main effects in the relationship of educational experiences to self-reported prosocial commitment and political activity.

## Research Questions and Hypotheses

This study addressed three research questions and hypotheses. First, did students' self-reported indicators of civic engagement (hours of service, the personal importance of prosocial commitment and political activity) and other intrapersonal attributes (moral and political identity, empathy, perspective-taking, and values) differ based on the type of educational experience? Hypothesis 1: EIP participants would report higher levels of these variables than GEP participants, with both subgroups reporting higher levels than controls.

Second, was students' sense of identity related to the value they placed on prosocial commitment and political activity and the other intrapersonal attributes? Hypothesis 2: Students' sense of identity would have a positive relationship with students' self-reported indicators of civic engagement and other intrapersonal attributes, and more specifically, that moral identity would have a relatively larger effect on students' reported level of prosocial commitment, whereas level of political identity would have a relatively larger effect on students' reported political activity.

Third, did students' sense of identity mediate the relationship of educational experiences with prosocial commitment and political activity? Hypothesis 3: Moral identity would mediate the relationship of educational experiences with prosocial commitment, and political identity would mediate the relationship of educational experiences with political activity.

## Methods

### Participants

Students were recruited to participate in an electronic survey-based study at several points in time from fall 2014 through spring 2016 using three mechanisms: e-mail invitations to a random sample of 4000 undergraduates (response rate = 10%); listing the study in the political science and psychology and neuroscience undergraduate research pools (participants earn course credit); and invitation to students having participated in Ethics Institute programs in academic years 2014–2015 and 2015–2016. The survey included demographic information and questions drawn from various measures in the literature. The purpose of the study was indicated to students on the informed consent form: “We are eager to know how participation in educational programs at [SIU] affects your moral imagination, integrity, and senses of empathy and humility.” Altogether, 1,163 students completed the survey. [Table 1](#) presents participant demographics by educational experience subgroups. Relative to expected frequencies based on proportion of the total sample, there was a higher proportion of females in the EIP and GEP groups and males in the control group, a higher proportion of upper-year students in the GEP group, and lower proportions of White/Caucasian and upper-year students in the EIP group.

### Variables and Measures

Researchers working from within the RDS perspective should focus on a four-part central question: how the interrelationship of individuals' fundamental attributes, their status attributes, and characteristics of their contexts are associated with particular facets of their adaptive functioning (Lerner & Schmid Callina, 2013, p. 377). Each of the variables and measures employed in this study reflects awareness of these nested questions.



Table 1

**Demographics and Type of Educational Experience**

Variables		Program		No program	Total across groups freq.	X <sup>2</sup> test of independence <sup>b</sup>
		Ethics institute obs. (ex.) freq. <sup>a</sup>	General engagement obs. (ex.) freq.	Controls obs. (ex.) freq.		
Gender	Male	40 (46) 33%	204 (229.8) 34%	197 (165.2) 45%	38%	X <sup>2</sup> = 15.77 d.f. = 2 p < 0.001 ***
	Female	81 (75) 67%	401 (375.2) 66%	238 (269.8) 55%	62%	
Race/ ethnicity	White	51 (62.4) 42%	302 (311.4) 50%	243 (222.2) 56%	51%	X <sup>2</sup> = 8.89 d.f. = 2 p = 0.012 *
	All other	70 (58.6) 58%	302 (292.6) 50%	188 (208.8) 44%	48%	
Class year	First-year	69 (56) 57%	209 (279.8) 35%	257 (199.3) 60%	46%	X <sup>2</sup> = 70.03 d.f. = 2 p < 0.001 ***
	Upper-year	52 (65) 43%	396 (325.2) 65%	174 (231.7) 40%	54%	
N		121	606	436	1163	

<sup>a</sup> Obs. = observed count; ex. = expected count; freq. = observed frequency%.

<sup>b</sup> Missing values excluded when calculating the test statistic. \* p < 0.05, \*\*\* p < 0.001.

*Fundamental attributes* measured included the variables moral identity, political identity, perspective-taking, empathy, personal values, and other-directed values. *Moral identity* was measured by summing participants' ratings of "how important or central" (1 = Not at all – 7 = Very much so) the following four items were to their identity: "Being someone who is guided by moral commitments"; "Considering the moral dimensions of issues"; "Integrity, acting according to the values, beliefs, and principles you claim to hold"; and "Taking personal responsibility for your actions" (Cronbach's alpha:  $\alpha = .74$ ). *Political identity* was measured by summing participants' ratings of "how important or central" (1 = Not at all – 7 = Very much so) the following two items were to their identity: "Being someone who is politically active" and "Engagement in the political process" (Cronbach's  $\alpha = 0.88$ ). Two seven-item subscales of the Interpersonal Reactivity Index developed by Davis (1983) were used to measure *perspective-taking* (Cronbach's  $\alpha = 0.77$ ) and *empathy* (Cronbach's  $\alpha = 0.78$ ).

*Personal* and *other-directed values* were assessed based on approaches developed by Schwartz (2012) for values and Aquino and Reed (2002) for moral traits. Participants were asked to rate statements with regard to "How truthful each statement is in describing you" (1 = Not at all – 7 = Very much so) in two ways: "Being someone who has this characteristic is an important part of who I am"; and "I hold myself accountable for acting in accordance with this characteristic." The sum of these two ratings across the three values in each subset was used as the measure of the strength of values commitment. The statements comprising *personal values* were "being open minded," "being just/fair," "being caring/compassionate" (Cronbach's  $\alpha = 0.79$ ). The statements comprising *other-directed values* were "being honest/trustworthy," "having respect for others," and "benefiting others" (Cronbach's  $\alpha = 0.83$ ).

*Status attributes* (demographics) included variables for *race/ethnicity* (“White/Caucasian” = 0, all others = 1), *gender* (male = 0, female = 1), and *class year* (first-year = 0, upper-year = 1). As Table 1 shows, the sample population includes disproportionate numbers of White/Caucasian individuals vs. other ethnicities, and disproportionate numbers of first-years vs. other class years. Dichotomizing the categorical variables for Race/Ethnicity and Class Year provides more balance across groups.

*Context characteristics* are included as a three-level factor variable for educational experience, with group membership discussed above: Ethics Institute Programs = 2, General Engagement Programs = 1, and control group = 0.

*Facets of adaptive functioning* include variables for civic engagement: *prosocial commitment*, *political activity*, and *hours of service per week*. Prosocial commitment consisted of the sum of participants’ ratings (1 = Not at all – 5 = Extremely important) of the “importance to you personally” of three items drawn from the Cooperative Institutional Research program (CIRP) survey designed by the Higher Education Research Institute (HERI): “Helping others who are in difficulty,” “Becoming involved in programs to clean up the environment,” “Participating in a community action program” (Cronbach’s  $\alpha = 0.57$ ). Political activity consisted of the sum of participants’ ratings (1 = Not at all – 5 = Extremely important) of the “importance to you personally” of two items drawn from the CIRP: “Influencing the political structure,” “Keeping up to date with political affairs” (Cronbach’s  $\alpha = 0.82$ ). Hours of public service per week was assessed by participants’ responses to the item: “How many hours per week do you participate in public service?” (1 = 0 hours; 2 = 1–5 hours; 3 = 5–10 hours; 4 = 10–20 hours; and 5 = More than 20 hours). (This variable is treated in the analyses as continuous and quasi-linear).<sup>1</sup>

## Analytic Models

Hypotheses 1 and 2 predicted correlations between the input variables of educational experience (Ethics Institute Programs, General Engagement Programs, and controls) and identity (moral identity and political identity) with the outcome variables of hours of public service per week, prosocial commitment, political activity, personal and other-directed values, perspective-taking, and empathy. Demographics (gender, race/ethnicity, and class year) were also included as input variables. We estimated the strength of these relationships using a generalized linear mixed model (GLMM), using the MCMCglmm package for R (Hadfield, 2010). The GLMM is appropriate for two principal reasons. First, the multiple outcome variables are correlated, and it was necessary to account for this correlation in assessing the strength of effects. Second, the individual differences in the data suggested the use of a mixed effects model in which individuals are viewed as selected from a larger population, and population variances are estimated and used in the estimation of model effects. That is, rather than fitting either a unique correlation coefficient for each individual or a single coefficient for all individuals, mixed models allow individuals to differ while summarizing variability across the sample population. Between-group differences are reported in terms of standard deviations for factor input variables, while effects of continuous input variables are described in terms of the standard deviation increase in the outcome variable associated with every one standard deviation increase in the input variable.

<sup>1</sup> For all reported analyses, we standardized each summed variable by subtracting the mean and dividing by the standard deviation in order to facilitate interpretability of the coefficients.

Because the data were not normally distributed, a nonparametric two-sample Kolmogorov-Smirnov test was also used to test Hypothesis 1 regarding the role of identity, and further assess between-group differences in levels of moral and political identity for educational experience groups.

To test Hypothesis 3, the mediation package for R (Tingley, Yamamoto, Hirose, Keele, & Imai, 2014) was selected to model the relationship of educational experiences with prosocial commitment, with moral identity as the mediator, and the relationship of educational experiences with political activity, with political identity as the mediator. Due to the strong assumptions of causal mediation analysis, the models tested for direct and causal mediation effects as well as sensitivity analysis (Sales, 2017).

## Results

The GLMM model output is presented in Figure 1, as forest plots of outcome variables grouped by each input variable (Derzon & Alford, 2013).<sup>2</sup> Points plotted are the means of the posterior distribution of each outcome variable; horizontal lines are 95% credible intervals. The x-axis depicts effect size in terms of standard deviations. A vertical line is positioned at zero on the x-axis; points with credible intervals that do not include zero (representing a statistically significant relationship between input and outcome variable) appear darker than points with credible intervals that do include zero.<sup>3</sup>

### Relationships of Variables With Educational Experience

As expected in Hypothesis 1, the GLMM analysis indicated that there were significant effects of educational experience on a number of outcome variables. EIP participation had a positive relationship with students' prosocial commitment and political activity scores, weekly hours of public service, other-directed values, and empathy scores. Nonetheless, the effect size for each of these outcome variables is relatively small. That is, relative to the baseline (controls), participation in EIP was associated with standard deviation increases of 0.46 in students' prosocial commitment scores, 0.24 in political activity scores, 0.45 in hours of public service per week, 0.19 in other-directed values scores, and 0.37 in empathy scores.

Similarly, GEP participation had a positive relationship with weekly hours of public service per week, prosocial commitment, and empathy. No significant relationship was found with political activity. Again, the effect sizes were relatively small. Relative to the baseline (controls), participation in GEP was associated with a standard deviation increase of 0.43 in weekly hours of public service, 0.28 in students' prosocial commitment scores, and 0.15 in students' empathy scores. Thus, participation in EIP and GEP had a comparable positive effect on weekly hours of public service. However, the effects of participating in EIP compared with participating in GEP were sixty percent higher on prosocial commitment and more than double on empathy.

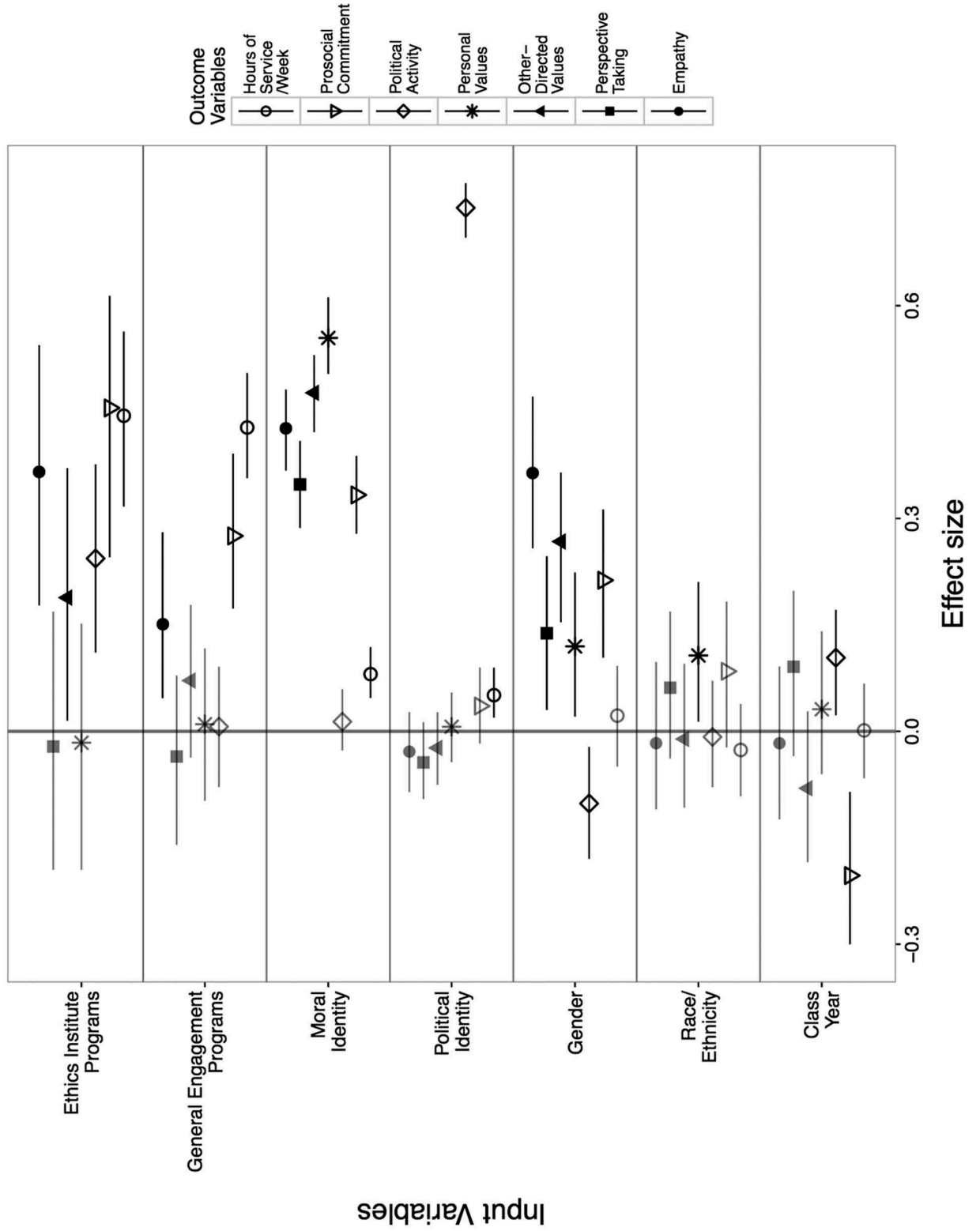
We also used a two-sample Kolmogorov-Smirnov test to test Hypothesis 1 and further assess differences in the distributions of identity and empathy scores across educational subgroups. There

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<sup>2</sup> The GLMM ran for 9,991 iterations after burn-in with a thinning interval of 10, and most variables had the expected effective sample size of 1000.

<sup>3</sup> Modeled using MCMCglmm statistical software package for R (Hadfield, 2010). The full model summary is in Table A1 of the Appendix, reporting coefficients (means of the posterior distribution of the outcome variables), 95% credible intervals, effective sample size, and p-values.

Figure 1. Plot of Model Output From MCMC GLMM, Showing Variable Relationships and Effect Sizes



were no significant differences in the distributions of moral identity scores between any of the subgroups. Although there was no significant difference on political identity score distributions of the controls and GEP participants ( $D = 0.06$ ,  $p$ -value = 0.33), there were significant differences in political identity scores of the EIP and control subgroups ( $D = 0.23$ ,  $p$ -value < 0.001) and of the EIP and GEP subgroups ( $D = 0.21$ ,  $p$ -value < 0.001). Both the control and GEP subgroups had a higher proportion of political identity scores on the lower end of the scale, while the EIP subgroup had a higher proportion of scores in the middle and on the higher end of the scale.

Empathy scores were significantly different between the control and GEP subgroups ( $D = 0.12$ ,  $p$ -value = 0.001) and the control and EIP subgroups ( $D = 0.23$ ,  $p$ -value < 0.001) but not between the GEP and EIP subgroups ( $D = 0.11$ ,  $p$ -value = 0.15). Both the EIP and GEP subgroups had a higher proportion of empathy scores on the middle and higher ends of the scale, while the controls had a higher proportion of empathy scores toward the lower end of the scale. Even when controlling for covariates in the GLMM, these relationships were still significant.

### **Relationships of Moral and Political Identity With Outcome Variables**

As Hypothesis 2 predicted, moral identity had a small but significant positive association with hours of public service and was the strongest predictor in the model of all of the outcome variables except for political activity (for which it was not a predictor). For every one standard deviation increase in moral identity score, the model predicts a corresponding 0.33 standard deviation increase in the prosocial commitment score and 0.43 standard deviation increase in the empathy score, along with standard deviation increases of 0.55 in personal values, 0.48 in other-directed values, and 0.35 in perspective-taking.

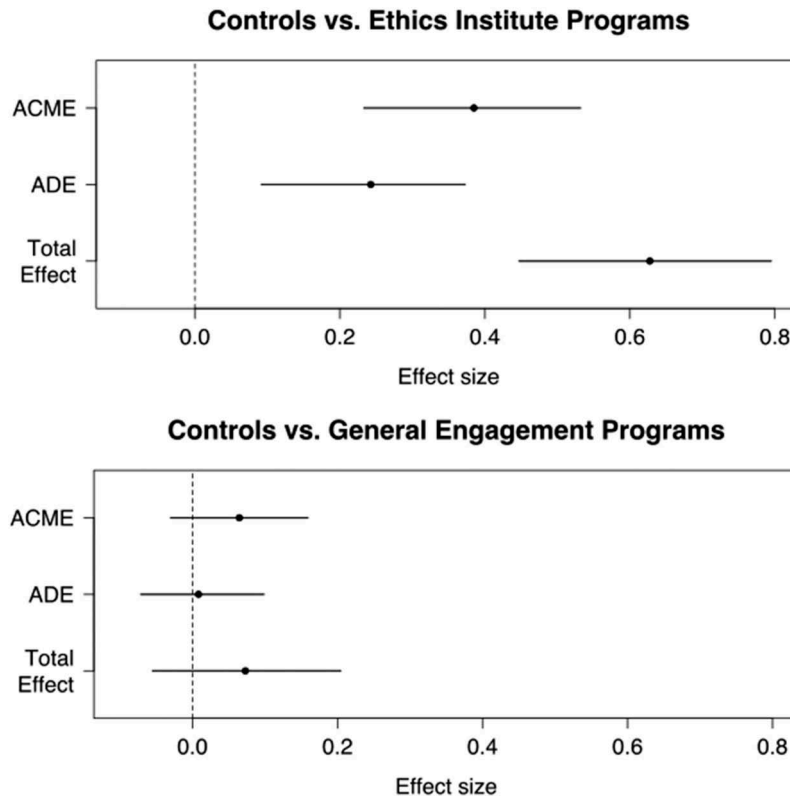
Also consistent with Hypothesis 2, political identity had a small but significant positive association with hours of public service, and the largest positive effect with political activity, with every one standard deviation increase in political identity score corresponding to a 0.74 standard deviation increase in the political activity score. There were no significant relationships with prosocial commitment or any other outcome variables.

### **Relationships With Demographics**

Relative to males, being female had a small negative effect on the political activity score and a positive effect on empathy scores comparable to EIP participation. Being female had a positive effect on the prosocial commitment score by a little less than half as much as did EIP participation (0.23 standard deviations). Female students also had higher personal values, other-directed values, and perspective-taking scores than male students.

There were few significant class year and race/ethnicity effects. Students who did not select White/Caucasian as their sole racial/ethnic identity had higher personal values scores than White/Caucasian students, an effect of about the same magnitude as seen for female students. Upper-year students had lower prosocial commitment scores than did first-year students, but higher political activity scores.

Figure 2. Political Identity as Mediator on Political Activity for Educational Program Participants vs. Controls

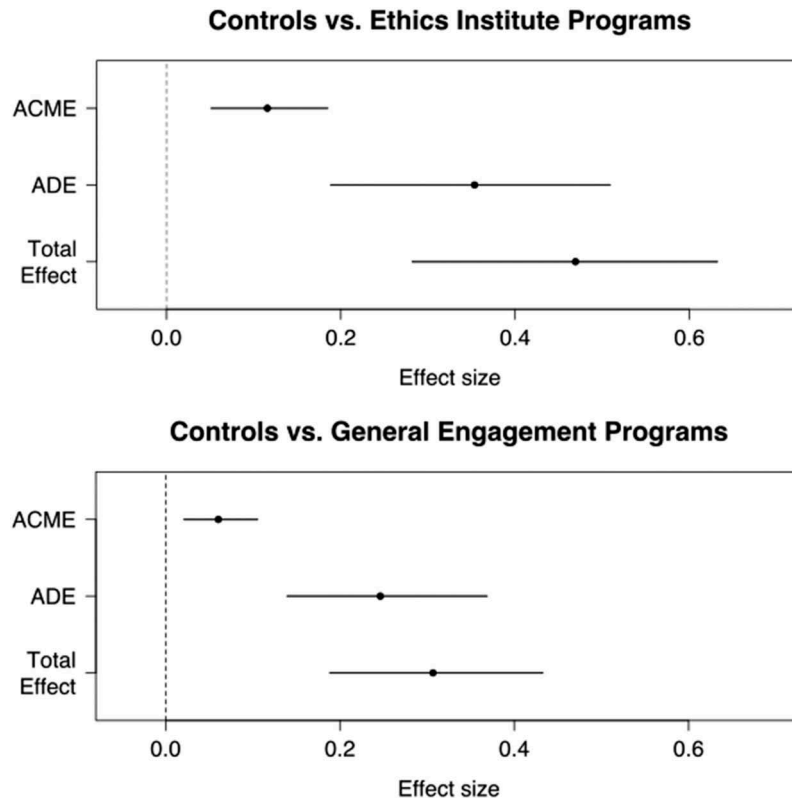


### Mediation Effects

Mediation analysis indicated partial support for Hypothesis 3. We did not find support for the hypothesis that moral identity would mediate the relationship of educational experience with prosocial commitment. Although there were direct effects for educational experiences on prosocial commitment scores, there were no direct effects of educational experiences on the hypothesized mediator variable of moral identity. Therefore, the proposed mediation analysis for prosocial commitment could not be conducted (Imai, Keele, & Tingley, 2010; Preacher & Hayes, 2008; Tingley et al., 2014).

However, support was provided for the hypothesis that political identity would mediate the relationship of educational experiences with political activity. Figure 2 presents the results of the analyses comparing mediation and direct effects of political identity on political activity for EIP and GEP participants vs. controls. Figure 2 shows both the average causal mediation effect (ACME) and the average direct effect (ADE) for the relationship of educational experiences with political activity. The ACME is the difference of the effect of the mediator (political identity) in treatment vs. control conditions, while the ADE captures the effect of the treatment condition (type of educational experience) on the outcome (political activity) that does not depend on the mediator.

Figure 3. Empathy as Mediator on Prosocial Commitment for Program Participants vs. Controls



The results provided strong support for political identity as a mediator between EIP participation and a high political activity score, but not for GEP participation. Figure 2 shows that not only are the effect sizes (points on the x-axis) of both ACME and ADE for the General Engagement Program group quite small, but they are not significantly different from the control group because the 95% BCa confidence intervals include zero. In contrast, both the ACME and ADE effect sizes for the Ethics Institute Program group are larger and significantly different from the control group because the confidence intervals do not include zero (significant at the  $p < 0.001$  level). While the GLMM had already indicated a strong direct relationship of EIP participation with students' political activity score, the mediation analysis demonstrated that the mediation effect of political identity for this treatment group was even larger than the direct effect.

Given the finding in the GLMM of the strong positive relationship EIP participation and GEP participation each had with empathy, we also examined the role of empathy as a potential mediator between educational experience and prosocial commitment. Figure 3 shows the results of the analyses comparing mediation and direct effects of empathy on prosocial commitment for EIP and GEP participants vs. controls.

The results of the analyses offer some support for the role of empathy as a mediator between both EIP and GEP participation and a high prosocial commitment score. As indicated by Figure 3, relative to

controls, both program groups showed a highly significant ACME as well as a highly significant ADE (both significant at the  $p < 0.001$  level), although mediation effect sizes were small.<sup>4</sup> These findings also raised the question whether empathy might have a mediating effect on moral identity for students involved in different educational experiences. While significant ACME for both program types (though not ADE) was found, compared to controls, the effect sizes were quite small (and although effects were consistent across separate runs of the bootstrap procedure, estimates of the confidence interval limits varied considerably).<sup>5</sup>

## Discussion

Consistent with an RDS perspective, this study provides evidence that individual differences in intrapersonal attributes in transactions with different types of educational experiences are related with students' self-reported prosocial commitment and political activity during the college years. That is, with the individual  $\leftarrow \rightarrow$  context relation as the unit of analysis, individual differences in students' intrapersonal attributes influence their engagement with educational experiences that in turn influence their intrapersonal attributes such that there are significant differences in these student/experience subgroups not only with regard to intrapersonal attributes but also prosocial commitment and political activity.

The major findings of this study, supporting Hypothesis 1, indicate that students who participated in service learning and community engagement opportunities through either Ethics Institute Programs or General Engagement Programs reported weekly public service at higher rates than the control students who did not participate in these educational experiences. Furthermore, EIP students had prosocial commitment scores that were 40% percent higher than GEP participants' scores, relative to controls. In addition, students in both types of educational experience had higher empathy scores relative to controls, and the students in the EIP had empathy scores that were more than double those of students in the GEP. This association of participation in service learning and community engagement educational experiences in general, and through the Ethics Institute in particular, with higher levels of empathy relative to controls, is noteworthy given findings that the empathy scores of college students have been decreasing since 1979 (Konrath, O'Brien, & Hsing, 2010). Support was also provided for the value of differentiating between moral and political identity (Porter, 2013), and among dimensions of civic engagement, more specifically between community activities involving prosocial (helping others) behaviors and political activities (Adler & Goggin, 2005; Obradovic & Masten, 2007; Walker, 2002).

Whereas difference in subgroups of students who did and did not participate in service learning and community engagement experiences could be anticipated based on past research, there are several possible explanations for differences between the EIP and GEP subgroups. The curricular and experiential

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<sup>4</sup> All mediation analyses were conducted using the mediation package for R (Tingley et al., 2014). Models ran with 1500 simulations; 95% BCa confidence intervals are bias corrected and accelerated nonparametric bootstrap confidence intervals (Preacher & Hayes, 2008). We also conducted sensitivity analyses for both preceding mediation models to ascertain whether or not the sequential ignorability assumption was violated and found that results were robust.

<sup>5</sup> Additionally, sensitivity analyses indicated that the analysis for GEP participants was not robust to violations of the sequential ignorability assumption, although results of the analysis for EIP participants was robust (Imai, Keele, & Yamamoto, 2010). A table of the results and plots of the sensitivity analyses can be found in the [Appendix](#).



components of Ethics Institute Programs are differentiated from the experiences encompassed by General Engagement Programs by two signature features: a focus on moral reflection on ethical questions and the integration of community engagement, academic research, and theory-informed practice. These features may be differentially attractive to students and in turn contribute to students' levels of empathic concern while also motivating putting their moral commitments into action through prosocial commitments. Relatedly, Mayhew and King (2008) found that moral reasoning was affected both by type of curricular content and by pedagogical strategies (active learning, reflection, and faculty-student interaction) and that opportunities for students to engage in discussions and reflect on moral issues are important for spurring growth in moral reasoning. The relatively higher levels of political activity demonstrated by EIP students, as compared to controls and their GEP counterparts, are also notable because the EIP experiences, both inside and outside the classroom, are not focused on political processes, *per se*. Rather, these experiences engage contemporary political and public policy issues through the lens of ethics, which may contribute to students' political awareness and the perceived salience of political activity.

Consistent with Hypothesis 2, there was a significant relationship of students' sense of identity with the value they place on prosocial commitment and political activity and also with other person level variables. Moral identity was the strongest predictor for all of the outcome variables except weekly hours of public service and political activity (for which it was not a predictor). Thus, there is strong support for moral identity as an integrating structure that is positively related with personal and other-directed values, perspective-taking, and empathy—all intrapersonal attributes that are associated with prosocial behavior. In contrast, political identity had a small positive relationship with hours of public service (slightly smaller than the effect of moral identity), was related to neither prosocial commitment nor the other person level variables, but was the strongest predictor of political activity. These findings are consistent with the increasing focus on identity formation as an integrating structure for giving meaning and direction to one's life and support the association of moral identity with prosocial behavior (Hardy & Carlo, 2005, 2011; Krettenauer & Hertz, 2015) and political identity with political activity (Porter, 2013).

Hypothesis 3, which predicted that educational experiences would be associated with students' sense of identity and that identity in turn would mediate the relationship between educational experiences and prosocial commitment and political activity, was only partially supported. Level of moral identity did not vary significantly with educational experience, and thus was not a mediator between educational experiences and prosocial commitment. However, level of political identity did vary with educational experience. Participation in the EIP (but not participation in service learning or community engagement outside of Ethics Institute Programs) had a significant effect on political activity scores, and there was strong support for the role of political identity as a mediator between EIP participation and a high political activity score.

We did not hypothesize that empathy would mediate the relationship between educational experiences and prosocial commitment and political activity. However, based on the findings of differences in empathy scores across educational experience subgroups, we also tested and found that empathy mediated the relationship between educational experiences and prosocial commitments, but not political activity.

Without random assignment to educational practices or assessment of change over time, causal claims about the influence of educational practices on community and political engagement are not warranted because various student intrapersonal dimensions influenced student choice to participate in

different types of educational practices. (Our findings indicate, however, that these self-selection factors are indeed distinct from moral identity.) However, the types of educational practices provide the context for formative bidirectional transactions. With the unit of analysis being the person-context transaction, the three person/context constellations were associated with different levels of prosocial commitment and political activity and levels of identity and empathy. Providing opportunities for students to participate in service learning and community service creates a context for heightened community and political engagement and levels of empathy and identity. Furthermore, evidence is provided for the added value of embedding these educational opportunities in the context of a program that applies an ethical perspective to community engagement and political activity.

In addition, support is provided for focusing educational practices on fostering identity formation, and moral and political identity, in particular, as the primary developmental task of emerging adulthood salient to the undergraduate educational context and community and political engagement. From an RDS perspective, identity formation embodies the transaction of the person with the educational characteristics of her/his environment and serves an integrative function between self-concerns and moral concerns. Once established, the desire to live consistently with one's moral commitments (that is, for identity integrity) motivates congruence between moral judgments and actions (Hardy & Carlo, 2005). Those who have integrated self and morality, and consequently have developed a strong moral identity, will likely seek out opportunities to put their moral commitments into action, which in turn may further strengthen their moral identity (Krettenauer & Hertz, 2015).

The findings indicating a positive relationship of both moral identity and type of educational experiences with empathy suggests the potential value of providing educational experiences that explicitly afford students role-taking opportunities that involve taking the perspective of others and responding with empathy. Although there were significant mediation effects of empathy on moral identity for participants in both Ethics Institute Programs and General Engagement Programs, the small size of these effects and the instability of the confidence intervals lead us to regard this finding as encouragement for further research.

The findings provide support for undertaking the next steps in the research process that would involve experimental level studies to prospectively and longitudinally examine how individual  $\leftarrow \rightarrow$  context relations emerge and undergo developmental change (Lerner & Schmid Callina, 2014; Mascolo, 2014); examine what fundamental attributes of individuals in relation to what characteristics of the context are likely to be associated with fostering community and political engagement (Lerner & Schmid Callina, 2013); and test the extent to which specific educational programs and practices both attract and enhance students' moral identity, political identity, and empathy and in turn increase their prosocial commitments and political activity.

The limitations of this study include those associated with uncontrolled natural experiments in which there is no random assignment of students to educational experiences. Also, with a low response rate to the survey, it is not clear the control sample is representative of the overall undergraduate population of SIU. Due to the small size of the EIP sample within each of the four class years, analysis of change over time was not possible in this study. Although efforts were made to employ established measures of the multiple dimensions of interest, pilot studies indicated that survey length was a major factor in students not completing the survey. This concern with survey length led to selecting items rather than full scales to include in the survey. Of the key variables we identified, only the measures of political activity, perspective-taking, and empathy are already well-

established in the literature. Although the Cronbach's alphas of measures were moderately high, we consider the findings of this study as provisional but encouraging enough to warrant a more rigorous test with better measures.

In conclusion, this study provides support for the RDS perspective as an integrating conceptual framework and both the feasibility and value of conducting natural experiments to identify meaningful differences in the transaction of students' personal attributes and educational experiences. More specifically, students who were involved in community service and service learning programming had higher levels of civic engagement and political activity than students who did not select these educational experiences. They also had higher empathy scores. The association of Ethics Institute Programs with even higher prosocial commitment and empathy scores, and a positive relationship with political activity, suggests added value when undergraduate service learning and community engagement programs are integrated with a robust and multi-faceted approach to ethics. Furthermore, natural experiments conducted in accordance with the RDS conceptual framework enable analyses of mediational as well as direct effects. Empathy mediated the relationship between educational experiences and prosocial commitments, and political identity mediated the relationship of educational experiences with political activity. The combination of analyses for direct and mediational effects serves to further our understanding of the interrelationships of intrapersonal attributes, educational experiences, and civic/political engagement.

Beyond support for the RDS conceptual framework, this study provides support for moral and political identity as intrapersonal attributes associated with undergraduate programming involving community service and service learning and community and political engagement. Moreover, the findings provide support for the notion that the integration of self and morality motivates students to seek out opportunities to put their moral commitments into action and that providing opportunities for moral action serve to strengthen their sense of moral identity and empathy. Identity formation is the foremost developmental task of emerging adulthood, the period of the life-course that overlaps with the undergraduate years, and therefore is a prime target for intentional educational programming.

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## Appendix

Table A1

### *Results of the Full Generalized Linear Mixed Model<sup>a</sup>*

Variables	$\beta^b$	95% CI <sup>c</sup>	ESS <sup>d</sup>	pMCMC <sup>e</sup>
<b>Intercepts</b>				
Hours of service per week	1.497	[1.416, 1.578]	1000	<0.001 ***
Prosocial commitment	-0.259	[-0.386, -0.139]	1000	<0.001 ***
Political activity	-0.018	[-0.120, 0.063]	1000	0.710
Personal values	-0.155	[-0.272, -0.034]	1105.9	0.012 *
Other-directed values	-0.179	[-0.302, -0.058]	1000	0.008 **
Perspective-taking	-0.156	[-0.289, -0.037]	973.2	0.020 *
Empathy	-0.337	[-0.461, -0.218]	1111.0	<0.001 ***
<b>Educational experience</b>				
<i>Ethics institute programs</i>				
Hours of service per week	0.445	[0.317, 0.565]	1000	<0.001 ***
Prosocial commitment	0.456	[0.245, 0.614]	1000	<0.001 ***
Political activity	0.244	[0.111, 0.376]	1000	<0.001 ***
Personal values	-0.016	[-0.195, 0.152]	1000	0.866
Other-directed values	0.188	[0.015, 0.371]	1000	0.040 *
Perspective-taking	-0.021	[-0.195, 0.169]	1000	0.848
Empathy	0.366	[0.177, 0.544]	1000	<0.001 ***
<i>General engagement programs</i>				
Hours of service per week	0.428	[0.357, 0.505]	875.2	<0.001 ***
Prosocial commitment	0.275	[0.173, 0.391]	1000	<0.001 ***
Political activity	0.007	[-0.079, 0.091]	900.3	0.932
Personal values	0.010	[-0.098, 0.117]	1029.9	0.876
Other-directed values	0.071	[-0.037, 0.178]	842.1	0.236
Perspective-taking	-0.035	[-0.160, 0.079]	1000	0.578
Empathy	0.151	[0.047, 0.281]	994.3	0.014 *
<b>Identity</b>				
<i>Moral identity</i>				

(continued)

Table A1

*(Continued)*

<b>Variables</b>	<b><math>\beta^b</math></b>	<b>95% CI<sup>c</sup></b>	<b>ESS<sup>d</sup></b>	<b>pMCMC<sup>e</sup></b>
Hours of service per week	0.081	[0.047, 0.119]	1327	<0.001 ***
Prosocial commitment	0.333	[0.278, 0.388]	1000	<0.001 ***
Political activity	0.014	[-0.027, 0.059]	1000	0.544
Personal values	0.554	[0.504, 0.612]	1000	<0.001 ***
Other-directed values	0.477	[0.422, 0.530]	1156.7	<0.001 ***
Perspective-taking	0.348	[0.287, 0.409]	903.9	<0.001 ***
Empathy	0.427	[0.368, 0.482]	1000	<0.001 ***
<b><i>Political identity</i></b>				
Hours of service per week	0.051	[0.019, 0.090]	1036	0.010 **
Prosocial commitment	0.036	[-0.017, 0.090]	1117.8	0.198
Political activity	0.738	[0.696, 0.773]	1000	<0.001 ***
Personal values	0.006	[-0.043, 0.055]	1000	0.812
Other-directed values	-0.023	[-0.075, 0.027]	1130.4	0.390
Perspective-taking	-0.044	[-0.095, 0.013]	1000	0.126
Empathy	-0.029	[-0.086, 0.027]	1000	0.328
<b><i>Demographics</i></b>				
<b><i>Gender</i></b>				
Hours of service per week	0.022	[-0.050, 0.092]	1000	0.532
Prosocial commitment	0.213	[0.104, 0.313]	1000	<0.001 ***
Political activity	-0.102	[-0.180, -0.023]	1000	0.016 *
Personal values	0.120	[0.021, 0.224]	1000	0.020 *
Other-directed values	0.268	[0.154, 0.365]	1000	<0.001 ***
Perspective-taking	0.138	[0.030, 0.247]	1000	0.012 *
Empathy	0.364	[0.258, 0.472]	1000	<0.001 ***
<b><i>Race/ethnicity</i></b>				
Hours of service per week	-0.026	[-0.092, 0.039]	1000	0.442
Prosocial commitment	0.085	[-0.023, 0.183]	1000	0.124
Political activity	-0.008	[-0.079, 0.071]	1262.6	0.832
Personal values	0.107	[0.014, 0.211]	1000	0.036 *

*(continued)*

Table A1

*(Continued)*

Variables	$\beta^b$	95% CI <sup>c</sup>	ESS <sup>d</sup>	pMCMC <sup>e</sup>
Other-directed values	-0.011	[-0.108, 0.095]	1000	0.820
Perspective-taking	0.062	[-0.038, 0.169]	1110.9	0.254
Empathy	-0.017	[-0.110, 0.098]	1118.3	0.754
<b><i>Class year</i></b>				
Hours of service per week	0.001	[-0.066, 0.067]	1000	0.972
Prosocial commitment	-0.203	[-0.300, -0.085]	1000	<0.001 ***
Political activity	0.104	[0.023, 0.171]	1000	0.008 **
Personal values	0.031	[-0.060, 0.141]	1000	0.552
Other-directed values	-0.080	[-0.184, 0.028]	1000	0.130
Perspective-taking	0.091	[-0.035, 0.198]	1000	0.122
Empathy	-0.017	[-0.124, 0.091]	1000	0.792

<sup>a</sup> Modeled with MCMCglmm statistical software package for R (Hadfield 2010).  $N = 1130$  due to missing data.

<sup>b</sup> Mean of the posterior distribution.

<sup>c</sup> 95% credible intervals.

<sup>d</sup> Effective sample size.

<sup>e</sup> \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

Table A2

**Empathy as Mediator on Moral Identity for Program Participants vs. Controls**

	Estimate	95% CI	p-value
<b>Controls vs. General Engagement Programs</b>			
<i>ACME</i>	0.0708	[0.0245, 0.1220]	0.01 *
<i>ADE</i>	0.0098	[-0.1060, 0.1160]	0.84
<i>Total effect</i>	0.0806	[-0.0396, 0.1980]	0.20
<i>Proportion mediated</i>	0.8790	[-0.0013, 0.5160]	0.20
<b>Controls vs. Ethics Institute Programs</b>			
<i>ACME</i>	0.1360	[0.0641, 0.2170]	0.00 **
<i>ADE</i>	-0.1420	[-0.3210, 0.0287]	0.11
<i>Total effect</i>	-0.0061	[-0.2140, 0.1770]	0.95
<i>Proportion mediated</i>	22.10	[10.40, 42.0×10 <sup>3</sup> ]	0.95

Notes: Modeled using the mediation package for R (Tingley et al. 2014). ACME = average causal mediation effect; ADE = average direct effect; 95% CI = nonparametric bootstrap confidence intervals with bias-corrected and accelerated intervals (Preacher and Hayes, 2008; Tingley et al., 2014). N = 1130 due to missing data. Simulations: 4000 (higher number of simulations used because of considerable variation in confidence interval estimates, although estimated effect sizes were consistent across multiple runs of the bootstrap procedure). \* p < 0.05, \*\* p < 0.01.

Figure A1. Plot of Sensitivity Analysis of Average Causal Mediation Effect of Empathy on Moral Identity for Participants in General Engagement Programs. The Analysis Is not Robust to Violations of the Sequential Ignorability Assumption Because the Confidence Interval Includes Zero for Most of the Plot (Imai, Keele, and Yamamoto, 2010)

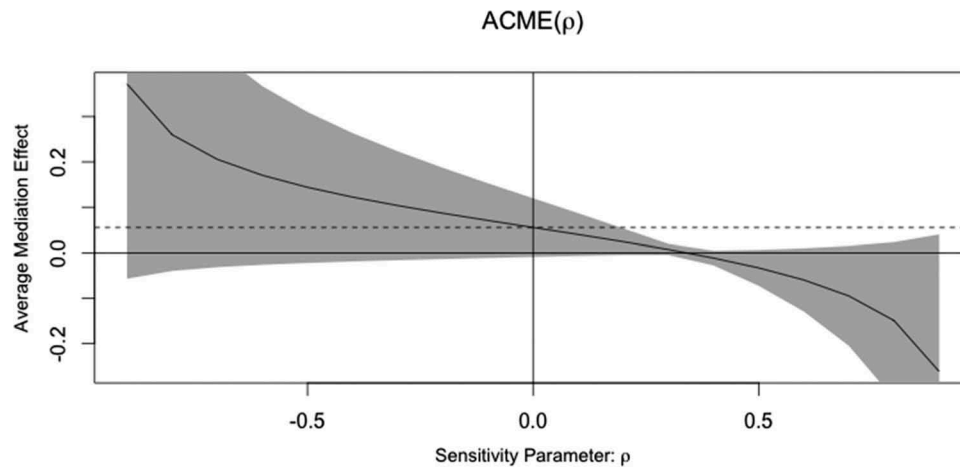
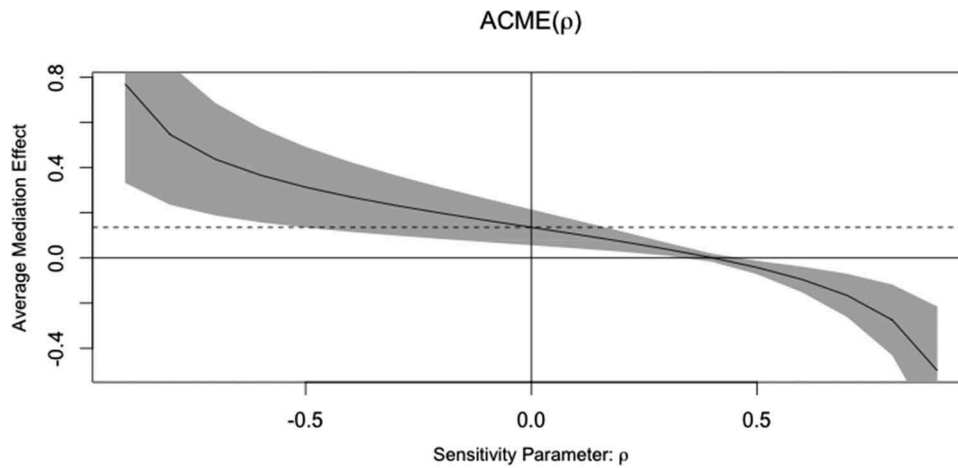




Figure A2. Plot of Sensitivity Analysis of Average Causal Mediation Effect of Empathy on Moral Identity for Ethics Institute Program Participants. The Analysis Is Robust to Violations of the Sequential Ignorability Assumption Because the Confidence Interval Includes Zero only when the Sensitivity Parameter  $\rho = 0.4$  (Imai, Keele, and Yamamoto, 2010)



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