Uncovering Categories of Students Based on their Civic Behaviors in College

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Paper accepted for publication in Review of Higher Education

Acknowledgements: We are grateful to American College Testing (ACT) for encouraging us to pursue this line of research and for sharing its alumni data sets. Special thanks go to Mike Valiga, Krista Soria and Thomas Sanford for preparing the data for analysis. We are also indebted to Katherine Masyn who opened our mind to Latent Class Analysis (LAC) and graciously made time during a grueling workshop on MPlus to comment on our preliminary LAC analyses. Her 2013 chapter on latent class analysis and finite mixture modeling was our constant guide during this study. Of course, she is not responsible for mistaken interpretations and errors on our part. We also recognize the extensive comments and suggestions from two anonymous reviewers.
Abstract

Several reports and commissions have published troubling statistics about declines in civic competencies and action among college students. Such reports have typically painted students with a broad brush, failing to consider how unique groups of students may cluster in relation to civic behaviors. Relying on alumni survey data from American College Testing (ACT), we employ a latent class analysis (LCA) to examine how college students uniquely group by civic and non-civic behaviors. Results reveal a robust portrait of civic engagement in college, challenging past analyses that exclusively examine frequencies of civic behaviors as the salient measure of civic participation.
Over the past two decades, several commissions, reports, and declarations have elevated the national discourse on the civic purposes of higher education (see Boyte & Hollander, 1999; Ehrlich, 2000; Boyer, 2006; AASCU, 2002, Kellogg, 1999; AAC&U, 2012). The renewed focus on civic engagement in higher education has been fueled by a decline in civic action among students that hit its peak during the 1980s (Intercollegiate Studies Institute, 2007). During this period, students were increasingly regarded as customers, and their overall levels of volunteerism and civic involvement was reduced from the activist era of the 1960s and 1970s. An emphasis on earnings—the private benefits of higher education—defined the primary value of going to college during this time (Hartley, 2009). Alongside of these changes, institutions struggled to explain themselves to external audiences as they became bloated and drifted in character and mission (Thelin, 2004). Once regarded as the answer to poverty, racism, and other social ills, higher education had come to be viewed as wasteful, overpriced, and failing to deliver on its promises (St. John & Parsons, 2004). Collectively, these factors called into question the commitment of U.S. colleges and universities in fulfilling their civic obligations.

In an attempt to reverse these trends, networks of practitioners, scholars, and higher education organizations launched dozens of initiatives aimed at promoting the democratic purposes of higher education. This agenda took hold at multiple levels to transform institutions, reshape faculty rewards, and promote civic learning and action among college students (Hartley, 2009). At the institutional level, the primary focus has been on embedding civic engagement in teaching, research, and service on campus (Furco, 2010). At the faculty level, engaged
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scholarship has emerged as priority, and emphasizes high quality community-engaged research that can be rewarded in the tenure process (Fitzgerald, Burak, & Seifer, 2010).

At the student level, “educating for democracy,” focuses on preparing students for participation in a democratic society (Hartley, 2009). This perspective is best illustrated in a recent report entitled, *A Crucible Moment: College Learning and Democracy’s Future* which gives attention to how students are educated in relation to civic competencies, knowledge, values, and collective action. The report, released at the White House in January 2012, calls on U.S. educators to “reclaim and reinvest in the fundamental civic and democratic mission of schools and of all sectors within higher education” (AAC&U, 2012, p. vi).

Reports like *A Crucible Moment* (AAC&U, 2012), provide opportunities for college leaders to engage in dialogues about how their institutions might best develop the next generation of students for work and civic participation. One limitation of such reports is that they often paint civic behavior in college with a broad brush, implying that all college students are equally prone to engage in civic behaviors if given a chance to do so. Such a view fails to acknowledge that students may vary in their preferences for civic participation, and thus, express civic behaviors in different ways. Understanding student preferences for civic engagement is important since it can inform the design of programs aimed to bolster civic learning outcomes. This view is supported by research by Moely, Furco, and Reed (2008) who found that civic learning gains can be diminished if service-learning opportunities and preferences are not aligned. Their work emphasized the
importance of alignment between civic preferences and programs, suggesting that one size fits all programs may not yield results desired by civic educators.

**Purpose of this study**

Understanding differences in civic behaviors among college students is critical to helping institutional leaders design experiences that can improve civic learning, enhance civic competencies, and inspire action. To better understand these behaviors, additional research is needed to uncover ways in which college students may be classified in relation to civic behaviors. This study responds to this gap in the literature by examining ways in which college students may be grouped in terms of their shared patterns of civic behaviors. More specifically, we seek to understand whether various forms of civic action in college may be explained by students belonging to various subgroups or classes, with subgroups consisting of individuals with similar profiles of civic participation. In examining this issue, our study addresses the following research question: In what ways might students be categorized based on their civic behaviors in college?

**Literature review**

In addressing this research question we are informed by past work on citizenship education and students’ preference for civic participation. Several authors have outlined various perspectives on this topic, suggesting that students may gravitate to certain forms of civic activities over others (see Morton, 1995; Moely & Miron, 2005; Kahne, Westheimer, & Rogers; 2000; Moely, Furco & Reed, 2008; Bringle, Hatcher, &
McIntosh, 2006; Westheimer & Kahne; 2004). Much of this literature lies within the field of service-learning which, among other priorities, is concerned with how civic learning programs may impact students.

Morton’s (1995) work is often cited as groundbreaking in articulating three separate paradigms of service. First, the charity paradigm is comprised of short-term volunteer activities largely focusing on how citizens with resources address deficits in society. Students who volunteer from this perspective report wanting to “help someone less fortunate than myself” (p. 25). An example of the charitable paradigm of service is a volunteer day at a homeless shelter.

A second paradigm is the project paradigm, which goes beyond short-term charity to take on a broader project to address a community concern (Morton, 1995). The act of brokering partnerships among entities with resources to address a problem might be best understood through this paradigm. Examples may include creating a community garden, tutoring program, or job skills program. Morton (1995) explains the premise behind the model, “The logic of the project approach assumed that no solutions are ultimate, and that thoughtful, reasoned approaches leading to measureable action—doing something—is the appropriate response to community needs” (p. 27). Both the charitable and project paradigms might be grouped within Westheimer and Kahn’s (2004) conception of the participatory citizen frame. This frame captures a broader range of community improvement efforts such as environmental clean-up or organizing a food drive (Westheimer & Kahne, 2004).

Finally, Morton’s (1995) social change model emphasizes building relationships with disenfranchised groups, and creating power-neutral learning communities to address
root causes to problems. Such behaviors may include serving as a community organizer and advocating for social change in neighborhoods around a set of shared values. This paradigm aligns with the justice-oriented citizen frame which assesses structures that cause injustice, and designs strategies to facilitate systemic change (Westheimer & Kahne, 2004). Importantly, studies suggest that Morton’s (1995) frames are correlated, but also show distinctiveness among student preferences for social change and charity paradigms (Bringle, et al., 2006, Moely et al., 2008).

Students’ preferences for civic action may also be shaped when they are exposed to various disciplinary traditions. Battistoni’s (2002) typology on civic learning illustrates how academic fields express civic themes in their curriculum. For example, civic professionalism emphasizes the civic traditions found in professional fields such as medicine and law. This tradition focuses on civic judgment and public problem solving. Alternatively, religious studies and philosophy programs largely focus on bringing student’s spiritual values to bear on social problems via the social justice frame. This frame falls within paradigms identified by Morton (1995) and Westheimer & Kahne (2004) and emphasizes collective action informed by faith traditions. Another perspective, the public leadership frame, stems largely from management and leadership studies, and focuses on community building, communication, and the art of collaborative leadership. Finally, the ethic of care frame is prevalent in women’s studies, psychology, and nursing, and emphasizes critical thinking, coalition building, and caring for the future of the public world (Battistoni, 2002).

Moely, et al. (2008) articulated ways in which scholars have examined student preferences for civic engagement related to these frames. Summarizing work by Morton
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(1995); Kahne, Westheimer, & Rogers, (2000); and Moely & Miron, (2005), Moely and associates (2008) explain that students typically group in relation to two distinct, but interrelated civic frames. First, the majority of college students prefer the charity paradigm of service which largely focuses on solving immediate problems. A second, smaller group prefers the social change paradigm which involves taking on complex structures that may ameliorate long-term social problems (Bringle, et al, 2006; Moely & Miron, 2005).

Relying on analysis of variance, Moely et al’s (2008) research found four groups of students that varied in their degree of preference for charity and social change. These categories include the Charity Preference Group, Social Change Preference Group, High Value Undifferentiated Preference Group (scored high on charity and social change), and Low Value Undifferentiated Preference Group (scored low on charity and social change). The authors found that women and students aiming for higher terminal degrees were more likely to be in students in the Charity Preference Group or the High Value Undifferentiated group as compared to the other groups. Furthermore, non-white students were more likely to be represented in the High Value Undifferentiated group than in the other groups, reflecting a desire among this group for more immediate and long-term social change (Moely et al, 2008).

A study by Weerts, Cabrera, and Sanford (2010) found similar connections to the charity and social change models as articulated in past studies. Employing confirmatory factor analysis, the authors found two distinct, but interrelated dimensions underscoring civic participation in college: volunteerism and political advocacy. Their study defined volunteerism as acts of charitable service to religious organizations, schools or other
educational institutions, along with other national or local organizations (Wilson & Musick, 1997). Political participation included voting, contacting officials at the federal or local level, giving campaign money, conducting campaign volunteer work, protesting or demonstrating, signing a petition, or persuading family or friends to vote on an issue (Miller 2008; Brady, Verba & Scholzman, 1995). Similar to findings by Morton (1995), Bringle, et al, (2006) and Moely et al (2008), Weerts et al.’s (2010) work suggests that some students express civic action through a charity model whereas others behave via the social change paradigm. Such an interpretation can be made since volunteerism might best be classified as a charitable act, while political advocacy more appropriately fits in the category of facilitating social change.

Past literature has been instructive to understanding college student preferences for civic participation. However, the majority of studies are limited in that they primarily focus on preferences or motivations for civic participation rather than on actual civic behaviors (see Morton, 1995; Moely & Miron, 2005; Bringle, et al, 2006). In addition, past studies have exclusively employed variable-centered approaches to study peoples’ behaviors. These approaches rely on the assumption that relationships among variables are the same across all individuals. As such, variable-centered methods assume that people in a particular sample are drawn from a single homogeneous population (Bauer & Shanahan, 2007; Brown, 2006; Laursen & Hoff, 2006; Wang & Wang, 2012). This premise may be untenable in our study because we surmise that civic engagement underscores grouping of individuals around specific behaviors (Rosato & Baer, 2012).

**Methodology**

Our review of literature suggests that civic engagement in college may be
expressed in unique ways across worldviews and disciplinary traditions. As such, we hypothesize that students are heterogeneous in relation to civic participation and assume that patterns of civic behaviors differ among college students. These patterns or profiles can be explored using a case- or person-centered approach allowing us to identify groups or types of individuals who share certain behaviors (Laursen & Hoff, 2006; Scotto Rosato, & Baer, 2012). Until recently, methods available to classify subjects into groups were non-inferential or non-model-based (e.g., cluster analysis) limiting the ability of the researcher to judge the statistical validity of the results and to compare alternative models due to the lack of goodness-of-fit indices (Andrews, Brusco & Currim, 2010; Laursen & Hoff, 2006; Pastor, 2010). As will be discussed in the next section, recent advances in statistical methods have enabled researchers to implement model-based grouping techniques, providing opportunities for understanding nuances in how students might be classified in relationship to their civic behaviors (Masyn, 2013; Wang & Wang, 2012). Based on past research, this study conceptualizes civic engagement as a categorical variable rather than a continuous variable focusing on levels of engagement. Accordingly, we hypothesize that variability in civic behaviors among students can be explained by a latent categorical variable of dispositions to civic engagement.

Data Source. In addressing our research question, we draw on a database of 17,167 college graduates of 268 colleges and universities from American College Testing (ACT) datasets. For each person in the database, 313 variables representing pre-college, college, and post-college experiences and behaviors were collected
through the ACT Pre-College Assessment and Alumni Outcomes Survey (AOS). The AOS was administered by participating institutions between 1993 and 2006.

**Sample.** We relied on three criteria to guide our sample selection within the larger database. First, because the field of civic engagement is primarily focused on developing civic competencies and dispositions among undergraduate students (Jacoby, 2009; Hartley, 2009; AAC&U, 2012), we limited our sample to include those alumni who attained a bachelor’s degree only. In doing so, we exclude alumni with broader college experiences that include advanced degree programs and span multiple institutions. Second, in order to avoid recall error (Fowler, 2008), we chose to limit our sample to self-reported data from alums that graduated from college within a year of completing the survey. Leaders of a national alumni initiative called, Citizen Alum, refer to these graduates as gap alumni, a term we adopted in this study (Citizen Alum, 2013).

A third consideration was to select cohorts that graduated in a similar time period, to account for changes in civic curriculum over time. Specifically, the ACT AOS survey contains respondents graduated from college between 1988 and 2005, representing a seventeen-year timespan. However, significant curricular changes relative to the civic engagement movement occurred during this period. To illustrate this point; in 1985 three universities launched Campus Compact with the purpose of supporting the civic roles of higher education. By 2008, Campus Compact had grown to over 1,100 members, representing a quarter of all higher education institutions (Hartley, 2009). Recognizing the growth of the civic movement during this span, we bound our sample around a four-year period (1999-
Doing so captures experiences of students in a similar timeframe. Our selection criteria yielded 1,876 subjects who completed the ACT alumni survey one year upon completion of college during the 1999 and 2003 period of time (see table 1). The average gap alum is predominantly female (71.1%) and white (84.5%). She or he was raised in families whose median family income fell in the $50,000-$60,000 range. The average ACT composite score for this group was 22.7. The majority of alumni in the sample graduated from a public four-year institution (76%).

[Table 1 about here.]

**Conceptual Framework and Measures of Civic Behaviors**

The conceptual framework guiding this study stems from our review of literature suggesting that students engage in a wide array pro-social behaviors that fall into charity, social change, and disciplinary-oriented paradigms (see Battistoni, 2002; Westheimer & Kahne, 2004; Morton, 1995; Moely & Miron, 2005; Kahne, Westheimer, & Rogers, 2000; Moely, et al, 2008, Weerts et al, 2010). Based on this work, we suggest that segments of civically active students in our sample may be drawn to organizations that are more volunteer focused (charity paradigm) while others might gravitate to those that have advocacy agendas (social change paradigm). Still, other students may have overlapping involvement in both types of organizations, reflecting Moely et al's (2008) category of the High Value Undifferentiated Preference Group (scored high on charity and social change). On
the other end of the spectrum, we expect that a portion of our sample will report minimal levels of engagement in civically-oriented organizations, reflecting Moely et al’s (2008) classification of the Low Value Undifferentiated Preference Group (scored low on charity and social change).

We relied on 8 items collected in the AOS which asked respondents to report levels of involvement in 8 types of organizations that reflect the charity and social change models articulated in our review of literature. These include involvement in organizations categorized as service (SERV1ST), environmental (ENV1ST), political (POL1ST), social (SOC1ST), cultural (CULT1ST), youth (YUTH1ST), professional (PROF1ST), and community (COMM1ST). Among these 8 types of organizations, we suggest that political and environmental are most likely categorized within the social change model, since such organizations typically have long-term change agendas around changing policies or social structures. Meanwhile, we assert that the other 6 categories would likely be more charitable in their emphasis, focusing on volunteerism and shorter-term change efforts. We acknowledge the limitations of making these assumptions, since each of the 8 organizations may promote both social change and short-term charitable activities (e.g. environmental organizations may promote neighborhood cleanup and political action related to climate change). More robust descriptions of civic behaviors in college would aid the development of categories in relationship to our conceptual framework. Despite these data limitations, we suggest that the 8 categories provide enough variation to explore ways in which students may be grouped into distinctive civic or non-civic behaviors in college.
To gauge their level of involvement in these organizations, respondents were given a four-anchor scale ranging from 1 (no involvement), 2 (low level), 3 (average level) to 4 (high level of involvement). During our exploratory analyses, we discovered that a disproportionally large number of subjects reported no involvement in the corresponding behavior, a condition known as preponderance of zero distribution (Kreuter, 2004; Olsen & Schafer, 2001; Muthén, 2001). This condition prevented us from using the 4 anchors given the lower variance among the remaining 3 anchors. Accordingly, we collapsed the 4 anchors into two: involved (1), or not involved (0) to reflect the bipolar distribution associated to each item, as recommended by K. E. Masyn and K. Nylund-Gibson (Personal communication, August 15-16, 2012).

**Analytical Method.** This study relies on Latent Class Analysis (LCA) to identify classes of college students who share patterns of behavior in relation to participation in 8 civic-related activities. As briefly summarized earlier, we selected LCA over variable-centered approaches and alternative subject-centered approaches as cluster analysis and discriminant analysis for several reasons. Variable-centered approaches such as factor and confirmatory factor analyses seek to explain variation among indicators under the assumption they represent manifestations of an underlying factor. These methods presume homogeneity in the sample in relation to the factor, in that variables are drawn from a homogeneous population (Brown, 2006; Wang & Wang, 2012). However, we hypothesize that participants in the sample are drawn from different unobserved subpopulations,

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1 Bengt Muthén reported a similar situation in a Fall 2012 seminar on Mplus, which lead him to dichotomize proficiency scores for an LCA analysis.
one for each type of individuals (Goodman, 2002; Muthén 2001). In other words, students are heterogeneous in terms of their civic behaviors.

While cluster analysis approach has been traditionally used to discover subpopulations of individuals (Johnson & Wichern, 1982), it has several limitations. Most importantly, cluster analysis is not an inferential technique (Johnson & Wichern, 1982; Pastor, Barron, Miller & Davis, 2007). As such, cluster analyses are not only incapable to judge alternative models of latent classes based on statistical indices of fit, but also to ascertain the degree the model selected would hold when applied to a different sample of students (Wang & Wang, 2012). Cluster analysis does not allow the analyst to account for the possibility of measurement error (Nylund-Gibson & Masyn, 2012). Finally, we preferred LCA over discriminant analysis because the latter is appropriate to classify people when groups are known beforehand (Raykov & Marcoulides, 2008). As such, this method is useless in our study because the number of groups and the criteria for defining group membership are unknown.

LCA is a statistical method for finding subtypes of related cases (latent classes) according to their observed values on a set of categorical or nominal indicators in cross-sectional data (Masyn & Nylund-Gibson, 2012; Rost, 2003; Wang & Wang, 2012). In our case, LCA leads to the identification of classes of civically engaged students based on alumni self-reported participation in certain civic behaviors while in college. As such, we assume participants in the sample to be a heterogeneous population with respect to their dispositions for civic engagement. Moreover, it is assumed that class membership explains all the variance shared by
the measured variables (local independence assumption). That is, all variability in the sample is explained by class membership and there is no residual covariance between indicators (Nylund, Asparouhov & Muthén, 2007; Muthén, 2001; Masyn, 2013; Rost, 2003).

Fitting a latent class model means estimating two types of parameters: (1) item parameters, which indicate the probabilities of individuals to endorse an item; and (2) class probability parameter, which estimates the probability of an individual to belong to a particular class (Masyn, 2013; Nylund, Asparouhov & Muthén, 2007). In a more formal statistical language, in a LCA model context, participants’ answers to survey items ranging from $u_1$ to $u_8$ are indicators of membership to a class $c$, in which each participant $i$ belongs to a class $k$ ($c_i = k$). The probability $\pi_k$ of participants endorsing an item $m$ is given by the proportion of participants $i$ in class $k$, and the conditional probability that an individual would endorse item $m$ given that she or he belongs to a class $k$, $\omega_{m|k}$:

$$\Pr(u_1, \ldots, u_8) = \sum_{k=1}^{K} \pi_k \cdot \prod_{m=1}^{8} \omega_{m|k}$$

The estimated value of these parameters varies depending on the number of classes.

**Model Building.** Before building a latent class model, data should be checked to verify it is appropriate for such type of analysis. Masyn and Nylund-Gibson (2012) note that some necessary conditions are to be met when conducting LCA. Preferably, the number of items should not exceed 10 and the sample should be
large enough. In addition the missing data pattern should be at least one of missing at random (MAR). All our analyses were conducted based on SPSS 19, Stata 12.1 and Mplus 6.1.

Choosing the number of classes representative of the behaviors should follow a step-wise process. It starts by fitting a 1-class model and then incrementing the number of classes by 1 at a time (Masyn, 2013; Pastor, 2010; Wang & Wang, 2012). The chosen model needs to fit the data (e.g., it has to have several good fit indices) and to represent an improvement of fit in relation to a previous class model of k-1 classes. There are three types of fit indices to assist in deciding the number of classes: absolute fit indexes, relative fit indices, and incremental fit. An absolute index used in LCA is the likelihood ratio chi-square goodness of fit test, denoted as $\chi^2_{LR}$ (Lo, Mendell, & Rubin, 2001). When the class model fits the data well the $p$-value associated to this statistics is greater than 0.05 (Masyn, 2013). As for relative fit indices, the BIC, AIC, BF$_{k,k-1}$ and the cmP$_k$ serve to compare alternative models. For the BIC and AIC, the best model is the one associated with smaller values. A BF$_{k,k-1}$ with a value of less than .01 provides strong support for the corresponding model vis-à-vis the previous class model. In the case of the cmP$_k$, values close to one show support for the corresponding model in lieu of the group of models under consideration$^2$. Differences in chi-squares can also be used to judge changes in incremental fit of one model (say 2-class) in relation to an immediate preceding one (say 1-class). Asparouhov and Muthén (2012) caution against relying on simple differences of $\chi^2_{LR}$ to appraise incremental fit in testing a k-1 versus k class model;

$^2$ Masyn (2013) provides an excellent discussion of relative fit indices applicable in LCA. We selected those she recommended the most.
they note such differences are not distributed as chi-square. Instead they recommend using the adjusted $\chi^2_{\text{LRT}}$ obtained by a bootstrapping procedure\(^3\).

**Model Diagnostics.** After the number of classes has been determined, the quality of a model can be assessed by two main criteria (Masyn, 2013; Wang & Wang, 2012). First, the obtained $K$ classes should be homogeneous with respect to the $m$ items that characterize them. This is, each item $m$ should have either a high probability ($\omega_{m/k} > .7$), or a very low probability of belonging to a class $k$ ($\omega_{m/k} < .3$). Second, classes need to be distinct of one another. In other words, there has to be a high degree of class separation of groups $k$ and $j$ with respect to items, which is given by the item endorsement odds ratio ($\text{OR}_{m/kj} > 5$). This odds ratio can be defined as the odds of endorsement of item $m$ in class $j$ to the odds of endorsement of item $m$ in class $k$.

**Limitations.** We note six limitations of the data used for our analysis. First, there is a potential for measurement error due to social desirability since the items were self-reported (Fowler, 2008; Porter, 2011). Respondents may have overestimated their engagement in pro-social behaviors such as volunteerism as is typically the case in questionnaires (Porter, 2011). Moreover, self-reports account only for events in the past. As such, there might be a recall error associated with a respondent’ ability to remember frequency of behaviors (Fowler, 2008). Second, the sets of civic-oriented behaviors asked in the ACT survey were somewhat vague,

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\(^3\) Nylund et al. (2007) argued against the usual likelihood ratio chi-square to test a $k-1$ versus $k$ class model because the difference is not chi-square distributed. Consequently, we relied in the procedures outlined in Mplus TECH11 and TECH14 to conduct the testing of alternative number of latent classes (see Asparouhov & Muthén, 2012). The TECH14 bootstrapped likelihood ratio (BLRT) test is obtained following bootstrapping procedures discussed in Nylund et al. (2007).
leaving room for broad interpretation among respondents. Specifically, the survey
asked respondents to indicate levels of involvement in broad types of organizations
(e.g., environmental, political, community, etc.) rather than breaking behaviors
down into a smaller set of civic-oriented activities (e.g., volunteering at a food
shelter, canvassing for a political campaign, etc.). Thus, the study relies on
extrapolating from these broader categories to make claims about distinct behaviors
among students.

Third, the ACT survey did not provide definitions to assist respondents to
differentiate among low, average and high levels of involvement in each civic
behavior. This may have accounted for the lack of variability across the anchors of
the 8 items. Fourth, as with most alumni surveys, respondents represent a small
sample of the universe of college graduates. With a more representative sample, the
class type configurations presented in this study might be altered. Additionally, we
relied on a sample of institutions that voluntarily participated in the ACT Alumni
survey, which may have yielded a non-nationally representative sample. Replicating
studies using a larger and representative sample may arrive to different
configurations as those presented in this study. Fifth, our study only provides a
snapshot of graduates between 1999 and 2003, and does not account for
generational, political, and curricular changes in high school and college that may
have shaped civic action in more recent years. Within this timeframe, the majority
of respondents in our sample graduated in 1999 (1058/1876 or 56% of the sample).
Finally, we are unable to ascertain the degree our sample is representative of the
target population. Doing so would require the name of the institution, or the IPEDS
code from each of the 268 institutions participating in the ACT alumni survey. To ensure confidentiality of institutions, the researchers did not have access to those codes. We acknowledge that care must be taking in generalizing the results of the study, as respondents were majority white and female.

Results

Our study proposed a single research question: In what ways might students be categorized based on their civic behaviors in college? In addressing this question, we first conducted an analysis examining whether our data met the required conditions suggested by Masyn & Nylund-Gibson (2012) in conducting LCA. Indeed, our data met necessary conditions since our sample is close to 2,000 subjects and explores 8 behaviors. Moreover, the hypothesis of missing completely at random was supported ($\chi^2_{1607} = 852.1, p = 1.0$). In other words, the probability of missing data on each of the 8 behaviors was unrelated to the other measures and unrelated to its own values (Enders, 2010). Therefore, we relied on Mplus 6.1 to automatically handle missing data.

Table 2 reports the results of five alternative models classes of civic engagement. Following Masyn’s (2013) recommendations, we began with a one-class model as the baseline one. This model corresponds to the supposition that there is no heterogeneity with respect to their participation in 8 civic activities while attending college. As we added classes one at a time to the model, we examined whether absolute and relative fit indexes lent support for the corresponding model and whether the corresponding model significantly increased
the fit as evidenced by the adjusted differences in $\chi^2_{\text{LMR-LRT}}$ (see last column in table 2). Judging in terms of $\chi^2_{\text{LR}}$, model 1 poorly fits the data and has BIC and AIC values greater than those associated with the 2-class model; furthermore, the difference in the $\chi^2_{\text{LMR-LRT}}$ favors the 2-class model over the 1-class model. This evidence supports our primary supposition of this study that college students are not equally prone to engage in civic-related activities. We ended our estimation process at the point when the model under consideration degraded in relation a previous well-fitting model.

[Insert Table 2 about here.]

We found support for a latent class model consisting of 4-classes relative to the 8 civic behaviors. The 4-classes model has the best indicators of fit in relation to alternative groupings of individuals (see table 2). As shown in the fourth column in table 2, there are only two models that fit the data: 4-class and 5-classes model. However, compared to the 5-classes model, the 4-class model has the lowest AIC and BIC indices across all five alternative models. As illustrated in the last column of table 2, the 5-class model represents a significant worsening of the model testing.

In addition of meeting the fit criterion, each of the four-latent groups has a high degree of consistency in that it is identifiable by a high probability of engaging in civic behaviors (see tables 3 & 4). Finally, the 4-class model shows that each group significantly discriminates in relation to one another (see table 5).
Collectively, this evidence lends strong support for the 4-class model of civic behaviors in college.

[Insert Tables 3, 4 & 5 about here.]

Figure 1 illustrates how individuals in our sample grouped around the 4-class model of civic behaviors in college. Class 1 represents a category of college students who “did it all” as college students. This group represents 30 percent of the sample that were highly engaged in multiple civic and pro-social behaviors in college (see table 3). We label the first group, Super-Engagers, as students who are on the forefront of leadership, policy-making, and service that has broad impact on and off campus. This is the only class of students in which there is a strong probability to be engaged in political, environmental, and non-political organizations (service, community, youth, and cultural). We suggest that this group of students represent a group of change agents making an impact on their campus and larger community.

[Insert Figure 1 about here.]

Class 2 is defined by students with a high probability of engaging in social activities while avoiding engagement in youth activities. If one is willing to relax the rule that the item must have a conditional probability \( (\omega_{m/k}) \) higher than .7, we can conclude that members of this group are also prone to engage in cultural activities
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with a probability of .68. We refer to this small group as Social-Cultural Engagers, which represents only 6 percent of our sample (see table 3 & figure 1).

Class 3 represents the largest cross-section of the sample (39 percent) and students belonging to this class were most distinctive in their civic involvement. These students were often involved in professional, service, social, and community-oriented organizations. At the same time, they were unlikely to be involved in political or environmentally oriented organizations (see table 3 & figure 1). We call this group, Apolitical Engagers representing students that were likely to be involved with community-based, “boots on the ground” organizations that are non-political in nature.

Finally, Class 4 consists of students being uninvolved with any of the 8 activities or organizations reported in the ACT survey. We term those students as Non-Engagers representing students who were primarily spectators in college. This class of students is likely to avoid participation in political activities and volunteer related organizations the most (see table 3 & figure 1).

Discussion

The extant literature suggests that civically engaged students may fall into various distinct, but interrelated civic paradigms. The charity paradigm is preferred by a larger group of civically active students who largely focus on solving immediate problems, while the social change paradigm is preferred by a small group of
students that seek to change social systems to address long-term problems (Bringle, et al, 2006; Moely & Miron, 2005; Moely et al., 2008). Regarding modes of service, most students prefer serving through involvement in projects (project paradigm) which is the primary way in which colleges and universities engage students via co-curricular and service-learning programs (Bringle, et al, 2006).

Our study contributes to past literature suggesting that civic action among students might be refined through four unique classifications. We suggest that two of these four categories are germane to past literature on preferences for charity and/or social change. Specifically, we identified a group of Super-Engagers who are involved in a robust set of civic and social activities in college, acting in ways that show preference for charity, project, and social change paradigms. Such students were likely to be involved in organizations that typically have long-term change/advocacy agendas (political, environmental) in addition to more charity-based programs (service, community, youth). In addition, this group of students may correspond with Moely et al’s (2008) classification of the High Value Undifferentiated Preference Group, which represents a group of students that scored high on their preferences for both charity and social change models of civic engagement.

Furthermore, we suggest that behaviors among Apolitical Engagers may correspond with Moely et al’s (2008) category of the Charity Preference Group--students that scored high on preferences for charity but low on social change. Apolitical Engagers that emerged in our study focused their efforts exclusively on charity-oriented organizations such as service, community, and youth, and avoided
organizations that often have long-term social change agendas (political, environmental). As such, we posit that Apolitical Engagers may see their civic contributions to be more volunteer-focused (charity preference) as opposed to focusing on changing larger social structures (social change preference). The unique behaviors of Apolitical Engagers support past studies suggesting that service-related work may be viewed by some students as an acceptable way to serve society without engaging in the conflict associated with politics (Newmann & Rutter, 1983). Another interpretation is that attempting to change government policy is time consuming and requires more expertise which is beyond the expectations of most volunteers (Moely & Miron, 2005).

Our study suggests a third group of civically engaged students that adds to this literature in unique ways. Specifically, Social-Cultural Engagers represent a small group of students (6 percent) who were likely to be involved in social and cultural organizations while in college. We posit that this group of students is engaged in unique ways that border on civic-engagement in college, but may or may not be central to it. Broadly speaking, cultural organizations may be comprised of a wide range of activities such as supporting the arts (e.g., Orchestra Club) and preserving or creating awareness about ones heritage (e.g., Native American Student Organization). Such organizations are often civic in nature as they typically sponsor public performances, exhibitions, diversity education, fund drives, and other programs that support cultural enrichment on campus, communities, and society at large (see Imagining America, 2013). Thus, to the extent that cultural and social organizations engage students in these types of activities, they might be
considered pro-social organizations. Pro-social behaviors are actions that benefit an individual or group of individuals (Eisenberg & Mussen, 1989), and past research suggests that student involvement in groups that are linked to service or philanthropy may ultimately increase such behaviors (Drezner, 2010). More research is necessary to understand how Social-Cultural Engagers relate to other categories of civically engaged students on campus.

Overall, our three distinct categories of Super Engagers, Apolitical Engagers and Social-Cultural Engagers lend support to the idea that civic behaviors in college may encompass a wide range of pro-social activities as expressed in the participatory citizen frame (Westheimer & Kahne, 2004). Importantly, our work also dovetails with past research identifying groups of students who lack an appetite for civic engagement. Moely and associates (2008) identified a Low Value Undifferentiated Preference Group which refers to a group of students that scored low on charity and social change preferences. We suggest that this group corresponds with Non-Engagers identified in our study, who were unlikely to be involved in any type of organization. This group represents a quarter of our sample, (25 percent), suggesting that a significant group of students may lack the inclination or capacity to be involved in civically-oriented organizations while in college. Table 6 depicts each of the four classes and corresponding civic and non-civic behaviors relative to these classes. The table also provides examples of organizations and activities that may be representative of these groups.

[Insert Table 6 about here.]
The representation of these four groups illustrate how LCA as an analytic technique can provide nuanced understandings about how students may be differentiated in relation to their patterns of civic engagement in college. In particular, our research shows how examining actual behaviors among students complements, and adds depth of perspective to studies that primarily focus on preferences or motives for civic participation.

Importantly, the groups that emerged in our study also provide insight into the overall preferences for types of engagement in relation to the larger student population. In particular, our study cautiously supports past research suggesting that most civically active students choose to be involved with organizations that are likely more focused on the charity-project models as opposed to social change paradigm (Bringle, et al, 2006; Moely & Miron; 2005). Apolitical Engagers comprised the largest class of civically engaged students in our study (40 percent), suggesting that a larger group of civically active students are less likely to be involved in organizations with advocacy agendas (political/environmental organizations). Alternatively, the Super Engagers in our sample are proportionally smaller (30 percent), and represent a more select group of students that engages with political organizations in addition to other civically-oriented groups. These findings mirror prior research suggesting that students with preferences for social change (politically oriented) are among the smallest group of civically engaged students (Bringle, et al, 2006; Moely & Miron; 2005). We restate our caution in making these interpretation, since our data only groups students around
involvement in various types of organizations rather than breaking behaviors down into a specific actions with the charity, social change, and project models (e.g., volunteering at a food shelter, community organizing, etc.). Future research capturing these behaviors would aid interpretation of our findings among these paradigms.

Finally, our findings point to the value of LCA in providing richer class descriptions that would be lost in relying on descriptive statistics alone. Examining descriptive profiles of students on its own would suggest that college students are primarily involved in activities that are connected to their career and professional development needs, and not to larger civic interests. As illustrated in table 7, nearly 70 percent of respondents reported being involved in social and professional organizations in college, yet less than half of all students were involved in youth and cultural organizations during that time. While 62 percent reported being involved in service and community organizations, only one out of three in the sample reported having participated in political and environmental organizations in college. Absent of the LCA perspective, our study would have erroneously concluded that students are almost exclusively engaged in career and social aspects of college. Instead, LCA unveils a more complex picture of students who are civically active in different ways, suggesting that there are broader classes of civically engaged students who are active in multiple venues.

[Table 7 about here.]
Conclusions and implications for research and practice

This study makes significant conceptual and methodological contributions to the literature on civic learning and engagement. While prior research has exclusively focused on variables representative of civic behavior, this study illustrates how people group in relation to civic behaviors. In sum, our research found that students in our sample fall into four distinct classes related, in part, to civic frames discussed in the literature. The Super Engagers represent a smaller group of students whose behaviors reflect preferences for both the charitable and social change frames articulated in the literature. Meanwhile, Apolitical Engagers are civically active, in non-political ways, likely fitting the charity model. Another category, Social-Cultural Engagers are students whose pro-social behaviors lie on the perimeter of civic engagement via their participation in cultural/social organizations. Finally, Non-Engagers were unlikely to have any involvement in organizations in college. In articulating the nuances of these four classes, our study enhances conceptual and analytic understandings of the civically engaged or disengaged college student.

These findings have broader implications for the development of theory around civic engagement among college students. In particular, the study provides the field with new language to understand how students may group in relation to civic behaviors in college, recognizing that some may participate in a vast range of activities while others confine themselves to specific types of civic action. This adds a new layer to developing theory in this field, suggesting that there are distinct, but complex set of boundaries for which students situate civic action. The four
categories provide more nuanced understandings of the broader charitable and social change models that have guided scholarship in this field in the past.

Related to this contribution, our study has important implications for the civic engagement movement across the country. In particular, the framework for civic learning and action as described in *A Crucible Moment* (AAC&U, 2012) focuses on developing knowledge, skills, values and collective action for civic engagement across diverse types of students. While this work is valuable, our study suggests that a more advanced framework must be developed to address the unique dispositions of Super Engagers, Apolitical Engagers, Social-Cultural Engagers, and Non-Engagers that emerged in our study. Simply put, leaders of the national movement on civic learning might consider how these categories could inform democratic education in college.

Our findings suggest that curricular and co-curricular experiences might be developed by civic educators to help unique groups of students take the next step in gaining civic knowledge and skills. For example, programs might be created for Super Engagers and Apolitical Engagers to meet their full potential in relation to their unique civic identities. While it is beyond the scope of this study to critique whether some types of civic action is preferred over others, educators may provide opportunities for Apolitical Engagers to explore social change activities that reflect their current volunteer interests. Meanwhile, other initiatives might expose Social-Cultural Engagers to opportunities to connect their passions more directly to civic work. For example, cultural programs might help artists see how their talent and passion might be used to advance civic purposes related to youth and community
development. Finally, programs could be designed to help Non-Engagers “test the waters” of civic engagement, and eliminate barriers that might stand in the way of these students being civically active in college. In short, segmentation strategies could help university administrators and faculty design customized strategies to develop knowledge, skills, values, and collective action among diverse groups of students.

We acknowledge that more research is necessary before one can create custom learning strategies for these students. Key questions must be addressed including: What explains why some students emerge as Super Engagers, Apolitical Engagers, Social-Cultural Engagers, and Non-Engagers? What is the impact of socio-economic background, high school experiences, academic preparation, and campus environments in predicting membership in one of these four groups? What barriers might be present that inhibit civic participation by Non-Engagers? Addressing such questions could assist practitioners in creating unique opportunities for civic learning and engagement among diverse sets of students.

This study also has implications for the field of institutional advancement, as alumni relations professionals increasingly seek innovative strategies to remain connected with their graduates after college. With additional research, advancement officers could begin to identify and categorize current students who might eventually play roles as volunteers and advocates for higher education. For example, alumni Super Engagers might be tapped to act as advisory board members, volunteers, and legislative advocates (charity and social change model), while Apolitical Engagers might be asked to lead regional clubs and convene scholarship
drives to support future students (charity model). Such connections are possible since past research suggests that dispositions for certain types of civic engagement hold after college, suggesting that students may follow predictable civic pathways after graduation (see Denson et al., 2005; Weerts, et al, 2010). More research is necessary to understand whether the civic categories identified in the current study hold after graduation.

Finally, we suggest that our study makes an important methodological contribution to the field of civic learning. As stated previously, our use of LCA sheds light on distortions that can emerge when relying solely on variable-centered or frequency analyses in examining civic engagement in college. Had this study relied on examining frequencies of civic activity alone, our analysis would have led us to conclude that professional and social organizations are the primary outlets for student engagement in college. However, in employing LCA, we see a more robust portrait about civic behaviors in college, suggesting that many students with professional and social interests also participate in civic activities. We recommend LCA as an important tool for future studies that examine behavioral patterns among college students.

While this study provides important progress in forwarding the civic agenda, a few limitations of the study are worth restating. As discussed previously, one key challenge is that civic participation related to politics is fluid, and ebbs and flows related to generational changes. We noted research suggested that students during the 1990s and early 2000s were more apathetic and cynical about politics compared to previous generations (Longo & Meyer, 2006). Not long after this report, a surge
of political participation among college students took place during the 2008 presidential campaign for President Barack Obama (Chronicle of Higher Education, 2008). This example illustrates that the size and composition of students classified as Super Engagers, Apolitical Engagers, Social-Cultural Engagers, and Non-Engagers might vary based on changing national and generational contexts. This caution especially true for this study as it represents one cohort students during one snapshot in time (early 2000s). We recommend that our study be replicated with data from recent generations of students.

In conclusion, this study underscores the merit of exploring variations related to civic participation in college, providing empirical evidence about distinctions among students engaged in various civic and pro-social organizations. Our study provides context into national discussions about civic learning in college, providing new evidence about the ways in which students group in relationship to civic outcomes. Furthermore, the study introduces new analytical techniques to better understand how students group in relation to various civic behaviors. In doing so, this study creates a more detailed roadmap for leaders as they strive to advance civic learning in higher education.
References


Civic Behaviors in College


http://pages.gseis.ucla.edu/faculty/muthen/ED231e/Handouts/zeros_bmclass3.pdf


Table 1. Sample

<table>
<thead>
<tr>
<th>Graduation Year</th>
<th>*Cohort 1: Gap Alumni</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>1058</td>
</tr>
<tr>
<td>2000</td>
<td>337</td>
</tr>
<tr>
<td>2001</td>
<td>117</td>
</tr>
<tr>
<td>2002</td>
<td>202</td>
</tr>
<tr>
<td>2003</td>
<td>162</td>
</tr>
<tr>
<td></td>
<td>N = 1,876</td>
</tr>
</tbody>
</table>

*Survey taken 1 year after graduation, bachelor degree holders only
Table 2. Fit and modification fit indices for alternative cluster models of 8 civic engagement behaviors while attending college

<table>
<thead>
<tr>
<th>Model</th>
<th>LL</th>
<th>npar</th>
<th>χ² LR (df) (p-value)</th>
<th>BIC</th>
<th>AIC</th>
<th>BFₖₖ₋₁</th>
<th>cmPₖ</th>
<th>Adj χ² LMR-LRT (df) (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-class</td>
<td>-9461.5</td>
<td>8</td>
<td>1135.7 (246) (p &lt; .001)</td>
<td>18983.1</td>
<td>18938.9</td>
<td>-</td>
<td>0.000</td>
<td>2668.5 (9) (p &lt; .001)</td>
</tr>
<tr>
<td>2-classes</td>
<td>-8127.3</td>
<td>17</td>
<td>640 (233) (p &lt; .001)</td>
<td>16382.3</td>
<td>16288.5</td>
<td>&lt; .01</td>
<td>0.000</td>
<td>399.4 (9) (p &lt; .001)</td>
</tr>
<tr>
<td>3-classes</td>
<td>-7927.5</td>
<td>26</td>
<td>312.4 (225) (p &lt; .001)</td>
<td>16050.6</td>
<td>15907.1</td>
<td>38.5</td>
<td>0.025</td>
<td>74.9 (9) (p &lt; .001)</td>
</tr>
<tr>
<td>4-classes</td>
<td>-7890.1</td>
<td>35</td>
<td>241.6 (217) (p = .121)</td>
<td>16043.3</td>
<td>15850.1</td>
<td>&lt; .01</td>
<td>0.975</td>
<td>74.9 (9) (p &lt; .001)</td>
</tr>
<tr>
<td>5-classes</td>
<td>-7875.2</td>
<td>44</td>
<td>233.2 (208) (p = 110)</td>
<td>16102.8</td>
<td>15859.9</td>
<td>-</td>
<td>0.000</td>
<td>8.1 (9) (p = 1.0)</td>
</tr>
</tbody>
</table>
Table 3. Probabilities of engagement in civic behaviors within classes (homogeneity)

<table>
<thead>
<tr>
<th>Civic Engagement Behavior</th>
<th>Class 1: Super Engagers (30.2%)</th>
<th>Class 2: Social-Cultural Engagers (6.2%)</th>
<th>Class 3: Apolitical Engagers (38.9%)</th>
<th>Class 4: Non-Engagers (24.7%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Professional</td>
<td>0.874</td>
<td>0.408</td>
<td>0.747</td>
<td>0.459</td>
</tr>
<tr>
<td>2. Service</td>
<td>0.943</td>
<td>0.413</td>
<td>0.768</td>
<td>0.146</td>
</tr>
<tr>
<td>3. Environmental</td>
<td>0.820</td>
<td>0.421</td>
<td>0.160</td>
<td>0.022</td>
</tr>
<tr>
<td>4. Political</td>
<td>0.751</td>
<td>0.502</td>
<td>0.208</td>
<td>0.020</td>
</tr>
<tr>
<td>5. Social</td>
<td>0.993</td>
<td>0.896</td>
<td>0.814</td>
<td>0.208</td>
</tr>
<tr>
<td>6. Cultural</td>
<td>0.929</td>
<td>0.683</td>
<td>0.325</td>
<td>0.045</td>
</tr>
<tr>
<td>7. Youth</td>
<td>0.793</td>
<td>0.182</td>
<td>0.485</td>
<td>0.075</td>
</tr>
<tr>
<td>8. Community</td>
<td>0.972</td>
<td>0.324</td>
<td>0.715</td>
<td>0.112</td>
</tr>
</tbody>
</table>

Item probabilities of >.70 or <.3 are bolded to indicate a high degree of class homogeneity. In parenthesis the percentage of GAP alumni within the class is reported.
Table 4. Average Latent Class Probabilities for the Most Likely Latent Class Membership (Row) by Latent Class (Column)

<table>
<thead>
<tr>
<th></th>
<th>Class 1: Super Engagers</th>
<th>Class 2: Social-Cultural Engagers</th>
<th>Class 3: Apolitical Engagers</th>
<th>Class 4: Non-Engagers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1: Super Engagers</td>
<td>0.887</td>
<td>0.027</td>
<td>0.085</td>
<td>0.000</td>
</tr>
<tr>
<td>Class 2: Social-Cultural Engagers</td>
<td>0.035</td>
<td>0.693</td>
<td>0.210</td>
<td>0.062</td>
</tr>
<tr>
<td>Class 3: Apolitical Engagers</td>
<td>0.081</td>
<td>0.073</td>
<td>0.788</td>
<td>0.058</td>
</tr>
<tr>
<td>Class 4: Non-Engagers</td>
<td>0.000</td>
<td>0.021</td>
<td>0.079</td>
<td>0.899</td>
</tr>
</tbody>
</table>
Table 5. Degree of class separation (discrimination)

<table>
<thead>
<tr>
<th>Civic Engagement Behavior</th>
<th>Class 1 vs. 2 Super Engagers vs. Social-Cultural Engagers</th>
<th>Class 1 vs. 3 Super Engagers vs. Apolitical Engagers</th>
<th>Class 1 vs. 4 Super Engagers vs. Non-Engagers</th>
<th>Class 2 vs. 3 Social-Cultural Engagers vs. Apolitical Engagers</th>
<th>Class 2 vs. 4 Social-Cultural Engagers vs. Non-Engagers</th>
<th>Class 3 vs. 4 Apolitical Engagers vs. Non-Engagers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Professional</td>
<td>10.04</td>
<td>2.34</td>
<td>8.17</td>
<td>0.23</td>
<td>0.81</td>
<td>3.50</td>
</tr>
<tr>
<td>2. Service</td>
<td>23.42</td>
<td>4.99</td>
<td>95.93</td>
<td>0.21</td>
<td>4.10</td>
<td>19.23</td>
</tr>
<tr>
<td>3. Environmental</td>
<td>6.27</td>
<td>24.03</td>
<td>202.63</td>
<td>3.83</td>
<td>32.29</td>
<td>8.43</td>
</tr>
<tr>
<td>4. Political</td>
<td>2.99</td>
<td>11.49</td>
<td>150.68</td>
<td>3.84</td>
<td>50.42</td>
<td>13.12</td>
</tr>
<tr>
<td>5. Social</td>
<td>16.67</td>
<td>32.88</td>
<td>545.11</td>
<td>1.97</td>
<td>32.71</td>
<td>16.58</td>
</tr>
<tr>
<td>6. Cultural</td>
<td>6.09</td>
<td>27.28</td>
<td>277.15</td>
<td>4.48</td>
<td>45.50</td>
<td>10.16</td>
</tr>
<tr>
<td>7. Youth</td>
<td>17.22</td>
<td>4.08</td>
<td>47.10</td>
<td>0.24</td>
<td>2.74</td>
<td>11.54</td>
</tr>
<tr>
<td>8. Community</td>
<td>73.23</td>
<td>13.97</td>
<td>277.22</td>
<td>0.91</td>
<td>3.79</td>
<td>19.84</td>
</tr>
</tbody>
</table>

Odds ratios >5 or <.2 are bolded to signify a high degree of class separation
Table 6. Student engagement in college corresponding to civic orientations

<table>
<thead>
<tr>
<th>Class</th>
<th>Behavior</th>
<th>Civic orientations/examples</th>
<th>Relationship to past literature</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Super Engagers</strong></td>
<td>Social Service</td>
<td>Involved in a robust set of civic-oriented activities that demonstrate a high level of involvement in campus/off-campus programs (leadership, policymaking, etc.)</td>
<td>Involvement across charity/project/social change models (Morton, 1995; Bringle et al, 2006). Characteristics of High Value Undifferentiated Preference Group: students that scored high on their preferences for both charity and social change models of civic engagement (Moely et al, 2008).</td>
</tr>
<tr>
<td></td>
<td>Community</td>
<td>Examples: Student Government, Homeless shelter volunteer, Campus Greening Committee, Chemistry Society, Young Democrats/Republicans.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Political</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Professional</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Youth</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cultural Environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social-Cultural Engagers</strong></td>
<td>Social Cultural</td>
<td>Activities are primarily social and cultural, may or may not be connected to civic purposes. Examples: Native American Student Association, Orchestra Club, Dance Society, Sailing Club</td>
<td>Involvement in social-cultural groups may include service or philanthropic components. Activity in such groups increase pro-social behaviors (Drezner, 2010).</td>
</tr>
<tr>
<td><strong>Apolitical Engagers</strong></td>
<td>Professional Service</td>
<td>Activities are primarily professional, social-fraternal, and provide value to the larger community. Behaviors are less political or environmentally cause-related. Example: Business/service-oriented sorority or fraternity (e.g., Lead charitable/service event to benefit local chapter of the Special Olympics)</td>
<td>Involvement across charity/project models (Morton, 1995; Bringle et al, 2006). Characteristics of Charity Preference Group: students that scored high on preferences for charity but low on social change (Moely et al, 2008).</td>
</tr>
<tr>
<td></td>
<td>Social Community</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(non-political or environmental)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>None reported</td>
<td>No behaviors were</td>
<td>Low Value</td>
</tr>
<tr>
<td>Non-Engagers</td>
<td>reported related to the dimensions expressed above. The alumnus was not involved in civic or social organizations in college.</td>
<td>Undifferentiated Preference Group: students that scored low on charity and social change preferences (Moely et al, 2008).</td>
<td></td>
</tr>
</tbody>
</table>
### Civic Behaviors in College

#### Table 7. Frequency in engagement on 8 civic behaviors while attending college

<table>
<thead>
<tr>
<th>Involvement during college with:</th>
<th>Total Sample (n = 1876)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>1. Professional activities/organizations</td>
<td>1237</td>
</tr>
<tr>
<td>2. Service activities/organizations</td>
<td>1146</td>
</tr>
<tr>
<td>3. Environmental activities/organizations</td>
<td>630</td>
</tr>
<tr>
<td>4. Political activities/organizations</td>
<td>636</td>
</tr>
<tr>
<td>5. Social activities/organizations</td>
<td>1314</td>
</tr>
<tr>
<td>6. Cultural activities/organizations</td>
<td>846</td>
</tr>
<tr>
<td>7. Youth activities/organizations</td>
<td>814</td>
</tr>
<tr>
<td>8. Community activities/organizations</td>
<td>1106</td>
</tr>
</tbody>
</table>
Figure 1. Civic Engagement probability plot for 4 classes

- Super-Engagers (30.2%)
- Social-Cultural Engagers (6.2%)
- Apolitical Engagers (38.9%)
- Non-Engagers (24.7%)