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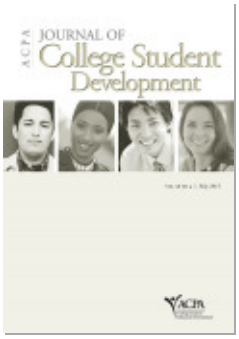

Mark H. Salisbury, Ernest T. Pascarella, Ryan D. Padgett, Charles Blaich

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A substantial proportion of college students have always worked while pursuing their college degree. However, despite decades of research on working college students, very little consensus has emerged about the effect of work on college student development. This study analyzes Wabash National Study (WNS) data from 2,931 first-year students at 19 institutions to examine the effect of work on leadership skill development. Findings show that, after accounting for the effect of pre-college characteristics and college engagement experiences, work can have a substantial positive effect on leadership development. Off-campus employment proved to be particularly influential even though extensive off-campus work simultaneously undercut the effect of peer interaction and cocurricular involvement on leadership.

Not only have working college students always existed at American colleges and universities, but today most college students work part-time or full-time while pursuing a postsecondary education (Horowitz, 1987; Planty et al., 2008; Thelin, 2004). Yet findings on the effects of work on college students remain frustratingly contradictory (Padgett & Grady, 2009; Pascarella & Terenzini, 1991, 2005; Riggert, Boyle, Petrosko, Ash, & Rude-Parkins, 2006) and mirror similarly conflicting findings regarding the impact of work on adolescents and young adults generally (Mortimer, 2003; Schoenhals, Tienda, & Schneider, 1998). At the core of these discrepancies sits two differing conceptualizations of the effects of work—one positive and one negative—that are rarely considered simultaneously. However, a recent strain of qualitative research has begun to reveal an increasingly interwoven range of benefits and challenges associated with student employment that function simultaneously (Cheng & Alcantara, 2007; Ketchum-Ciftci, 2004). These studies suggest that work's effects can be exceedingly complex, negatively impacting the frequency of some college experiences widely perceived as important, while at the same time uniquely contributing to gains on some educational outcomes that higher education institutions aspire to develop. This study expands upon this nuanced conceptualization of student employment while filling a substantial gap in the research on student employment as it relates to student development and growth (see Padgett & Grady). Employing a theoretical framework rooted in college impact research and accounting for both demographic traits and college experiences, it examined the effects of work on the development of leadership capacity among first-year college students

Mark H. Salisbury is Assistant Dean and Director of Institutional Research and Assessment at Augustana College. Ernest T. Pascarella is the Mary Louise Peterson Professor of Higher Education at the University of Iowa. Ryan D. Padgett is the Senior Analyst for Co-Curricular Assessment and Research at Northern Kentucky University. Charles Blaich is the Director of Inquiries the Center of Inquiry in the Liberal Arts at Wabash College. *The research on which this study is based was supported by a generous grant from the Center of Inquiry in the Liberal Arts at Wabash College to the Center for Research on Undergraduate Education at The University of Iowa.*

participating in a national longitudinal study of liberal arts education.

LITERATURE REVIEW

Student Employment and College Students

Efforts to understand the effects of work on college students historically have followed two divergent paths. (For an extensive review of research on work and college students, see Padgett & Grady, 2009; Pascarella & Terenzini, 1991, 2005; or Riggert et al., 2006. For research on work and adolescents, see Mortimer, 2003). The first originates from the supposition that working students may be less likely to succeed in school than students who do not work (King & Bannon, 2002). Many higher education scholars argue that, because students who work are required to balance their time between employment and academic responsibilities, the additional time commitment (operationalized in most empirical research as the number of hours worked per week) often forces students to choose between school and work. At a certain point (various studies place this marker somewhere between 15 and 25 hours per week), the added obligations of work begin to undermine the students' ability to successfully meet the academic expectations of school. Decades of research based on this framework have explored the relationship between hours worked per week and grades, persistence, or degree completion (Anderson, 1930; Augenblick & Van De Water and Associates, 1987; Barr, 1943; Choy, 2002; Curtis & Nummer, 1991; Ehrenberg & Sherman, 1987; Gleason, 1993; Henry, 1967; Kalenkoski & Pabilonia, 2004; Ma & Wooster, 1979; Trueblood, 1957). Findings from this body of work often have produced contradictory results. Some researchers suggest work's effects to be negative (Choy; Ehrenberg & Sherman; Stinebrickner & Stinebrickner, 2003), some find work's effects to be positive (Augenblick & Van De Water and Associates, 1987; Barr; Dundes & Marx, 2007; Hammes & Haller, 1983), and others find work to have no impact at all (Henry; Light, 2001; Kalenkoski & Pabilonia; Trueblood).

College student development scholars have argued that the time students spend at a job takes them away from chances to participate in formal or informal cocurricular opportunities that would integrate them into the college milieu (Astin, 1993; Pascarella & Terenzini, 1991, 2005; Riggert et al., 2006). Applying the involvement frameworks articulated by Astin (1993) and Tinto (1987), this increased detachment from the college experience raises the likelihood of decreased social engagement and place these students at a greater risk of withdrawal. Research from this perspective has looked at the effect of work on student involvement in cocurricular activities, peer interaction, and engagement with faculty (Astin; Furr & Elling, 2000; Lundberg, 2004). However, like other research on work and college students, findings have not consistently linked work's effect on college experiences with lower grades, various measures of learning, or persistence rates (Pascarella & Terenzini, 2005). Although students report that work has negatively affected their academic progress or success (Furr & Elling; King & Bannon, 2002), when the study's research design included standardized tests or controlled for confounding influences, findings continued to be mixed (Pascarella & Terenzini, 1991, 2005).

The second path along which research on work and college students has traveled seems spurred by a more optimistic premise. This body of literature hypothesizes that working during college can foster a sense of direction and overall satisfaction with the college experience, allows students to gain

valuable experiences within their field of study, improves students' ability to obtain higher initial salaries in their first job after graduation, and develops important personal and professional characteristics critical for long-term career success (Kincaid, 1997; Moore & Rago, 2009; Mortimer, 2003; Stern, 1997). Research consistently has indicated that employment can motivate students to increase their investment of time and effort in their educational endeavors as they make connections between the classroom and their work environment (Bonacci, 1988; Butler, 2007; Cheng & Alcantara, 2007; Hay, Evans, & Lindsay, 1970; Ketchum-Ciftci, 2004). Through the opportunity to integrate the experiences of work and school, working students often are more able to align their own interests and abilities with careers that utilize those skills and match their interests (Aper, 1994; Casella & Brougham, 1995). Using data from the National Survey of Student Engagement (NSSE), Moore and Rago found students who work in order to gain experience in their field of study participate in higher levels of engagement across each of the NSSE benchmarks. Scholars also have found that linking student work experience with academic, personal, and career goals can positively influence satisfaction with the overall college experience (Broughton & Otto, 1999; Derous & Ryan, 2008; Pascarella & Terenzini, 1991; Stern). In addition, several studies examining the relationship between employment during college and initial earnings after college have found that, on average, students who work in college earn higher initial salaries from their post-college employment than do students who do not work in college (Ehrenberg & Sherman, 1987; Gleason, 1993; Titus, in press).

One reason students who work in college might be more attractive to employers could be that work experiences help college students develop the capacities necessary to succeed in their careers after graduation. A 1991 survey of 1,200 human resource managers found that most employers believe college students with work experience produce higher quality work, accept supervision and criticism more readily, work more effectively with others, and acclimate more quickly to the professional etiquette and expectations of their post-graduation employer than do college graduates with no work experience (Foreman, 1997). More recently, an American Association of Colleges and University survey (Peter D. Hart Research Associates, 2008) indicated that business leaders considered integrated learning experiences such as internships, work, or other community-based projects to be the best way to prepare students for career success. Surveys of undergraduates have indicated that students who seek employment during college often report similar expectations of and growth through their work experience (Casella & Brougham, 1995; National Employer Leadership Council, 1999). In addition, career services experts assert that student employment can help students develop self-confidence, autonomy, responsibility, and organizational, interpersonal, teamwork, and critical thinking skills (Devaney, 1997; Kincaid, 1997; Stern, 1997). However, little empirical evidence exists to support this claim. Although Pascarella and his colleagues (Pascarella, Bohr, Nora, Desler, & Zusman, 1994; Pascarella Edison, Nora, Hagedorn, & Terenzini, 1998) found that, in most cases, work had no significant negative effect on several measures of cognitive development, they did not find work to be particularly advantageous, either. Moreover, the range of skills that student employment advocates claim to result from job experience extends well beyond intellectual development to incorporate a range of skills embedded in the various educational outcomes commonly associated with a liberal education (American

Association of Colleges and Universities [AAC&U], 2007; Bok, 2006; Pascarella & Terenzini, 1991, 2005).

Leadership Development and Student Employment

Higher education institutions have long recognized the importance of producing graduates who can succeed in their professional careers and as citizens of a participatory democracy (Bok, 2006; Thelin, 2004). College and universities increasingly have committed to instill these skills in undergraduates under the auspices of leadership development (Astin & Astin, 2000; Bok; Council for the Advancement of Standards in Higher Education [CAS], 2006; Dugan, Komives, & Segar, 2008; Komives, Lucas, & McMahon, 2007; Morse, 1989; Roberts, 1981; Thelin, 2003; Wingspread Group on Higher Education, 1993). In recent decades, theories of leadership and leadership development have evolved from individualized characteristics exemplified by assertiveness, persuasiveness, vision, and drive to relationship-oriented models based on principles of collaboration, interpersonal effectiveness, process, ethical reciprocity, and affecting positive societal change (Komives et al.; Rost, 1991). Recognizing the need for a new approach to instill the capacities required of this new conception of leadership, student development scholars have constructed specific models for understanding and teaching transformational leadership to undergraduates that emphasize collaborative participation in a process focused on positive social change rather than individual attributes and formal positional recognition (Higher Education Research Institute [HERI], 1996; Komives et al.). Researchers have found that specific campus-based experiences can affect leadership development in students (Antonio, 2001; Dugan, 2006b; Dugan & Komives, 2007; Zimmerman-Oster & Burkhardt, 1999). However, student development scholars have not examined the effect of other potentially influential experiences that exist simultaneous to, but not necessarily in concert with, the college experience—such as work—on this new conception of leadership.

The intended educational outcomes of leadership development and the professional capacities sociologists have found to emerge from work experience (Light, 2001; Mortimer, 2003) appear highly correlated. Although student employment advocates and experts have asserted that work can develop self-confidence, autonomy, responsibility, organizational, interpersonal, teamwork, and critical thinking skills (Devaney, 1997; Kincaid, 1997), recent conceptions of leadership, especially as they related to developing leadership capacities in college students, advocate nonpositional values that strengthen a sense of purpose, ethical authenticity, commitment, collaboration, establishing shared goals for organizations and communities, respect for others, and civic responsibility (Astin & Astin, 2000; Bok, 2006; Komives et al., 2007; Morse, 1989; Roberts, 1981; Thelin, 2003; Wingspread Group on Higher Education, 1993). One cannot demonstrate interpersonal, organizational, or teamwork skills without placing some value on collaboration, shared goals, and respect for others. Moreover, increases in one's ability to collaborate with others, share a common purpose with others, or engage controversy with civility would not likely result in a decrease of interpersonal, organizational, or teamwork skills. Likewise, one cannot demonstrate autonomy, responsibility, or self-confidence as an effective member of an organization without also exhibiting a sense of purpose, ethical authenticity, or commitment. One cannot embody civic responsibility or a belief in the value of positive social change without an element of critical thinking skills. The substantial overlap between these capacities

developed through work experience and values embedded in leadership development is illustrated most clearly by the range of higher education publications, public documents, and organizational mission statements that use these terms interchangeably to describe the attributes that all college graduates must acquire upon graduation to succeed in their future endeavors (AAC&U, 2007; American College Personnel Association & National Association of Student Personnel Administrators [ACPA & NASPA], 2004; Bok, 2006; CAS, 2008).

Recent qualitative research has begun to situate the possibility of complex effects of work on these leadership capacities within the context of an equally complex college experience. The findings of these studies suggest that employment during college may indeed help students develop many of the capacities associated with leadership despite the limitations their work obligations may place on participating in some college experiences (Cheng & Alcantara, 2007; Ketchum-Ciftci, 2004). These studies also have revealed that work can augment the learning that students experience within the traditional college environment, underscoring the fundamental assertions of integrative, active, and holistic learning models (ACPA & NASPA, 2004; Fink, 2003; Huber & Hutchings, 2004). Furthermore, a 2008 analysis of commuter students and leadership self-efficacy found that employer mentorship significantly affected gains on leadership self-efficacy (Dugan, Garland, Jacoby, & Gasiorski, 2008). Commuter students are often considered to be a subset of students at greater risk because of the additional obligations of the external factors such as work and family (Dugan, Garland, et al., 2008). Yet, for these students, experiences originating from the work environment positively impact the development of leadership skills. This finding reiterates the possibility that work may positively influence development of specific leadership outcomes despite limiting the involvement of students in other college experiences.

Conceptual Framework

The conceptual framework guiding the study is shown in Figure 1. It is a modification of a conceptual framework for understanding the impacts of work during college suggested by Riggert et al. (2006). The framework shown in Figure 1 includes five sets of variables: (a) student background and precollege characteristics (e.g., tested academic preparation, measures of precollege leadership development, demographic characteristics, prior work experiences); (b) type of institution attended (e.g., liberal arts college, research university, regional institution, community college); (c) extent of on- and off-campus work during college; (d) level of engagement during college (e.g., leadership experiences, community service, interactions with peers, cocurricular involvement, diversity experiences, interactions with faculty); and (e) end of first-year leadership development. According to the conceptual framework, net of other influences, extent of work responsibilities during college was expected to have direct (or unmediated) impacts on first-year leadership outcomes as well as indirect (or mediated) impacts through differential levels of engagement. Although it was anticipated that level of engagement during the first year of college would positively influence leadership development, it was hypothesized that extensive levels of off-campus work responsibilities would inhibit engagement. Thus, the indirect or mediated effects of off-campus work on leadership were expected to be negative. Conversely, it was hypothesized that, net of other causes, both on- and off-campus work would have generally positive direct (unmediated) effects on leadership. This general conceptual framework

guided both our selection of variables and the data analysis we conducted. Thus, this study asked the following research question: Does work affect the development of leadership capacities in first- year college students?

METHODS

Samples

Institutional Sample. The sample in the study consisted of incoming first-year students at 19 four-year and two-year colleges and universities located in 11 different states from four general regions of the United States: Northeast, Southeast, Midwest, and Pacific Coast. Institutions were selected from more than 60 colleges and universities responding to a national invitation to participate in the Wabash National Study of Liberal Arts Education (WNSLAE). Funded by the Center of Inquiry in the Liberal Arts at Wabash College, the WNSLAE is a large, longitudinal investigation of the effects of liberal arts colleges and liberal arts experiences on the cognitive and personal outcomes theoretically associated with a liberal arts education. The institutions were selected to represent differences in college and universities nationwide on a variety of characteristics including institutional type and control, size, location, and patterns of student residence. However, because the study was concerned primarily with the impacts of liberal arts colleges and liberal arts experiences, liberal arts colleges were purposefully overrepresented.

Our selection technique produced a sample with a wide range of academic selectivity, from some of the most selective institutions in the country to some that essentially had open admission. There also was substantial variability in undergraduate enrollment, from institutions with entering classes between 3,000 and 6,000 to institutions with entering classes between 250 and 500. According to the 2007 Carnegie Classification of Institutions, 3 of the participating institutions were considered research universities, 3 were regional universities that did not grant the doctorate, 2 were two-year community colleges, and 11 were liberal arts colleges.

Student Sample. The individuals in the sample were first-year, full-time undergraduate students participating in the WNSLAE at each

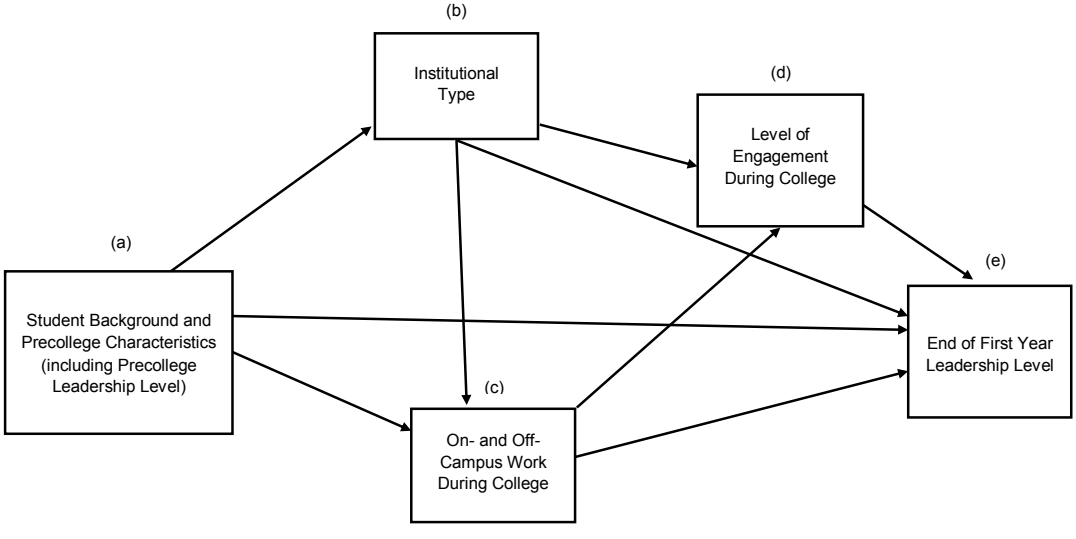

FIGURE 1. Conceptual Framework for Understanding the Effects of Work on Leadership

of the 19 institutions in the study. Nearly all (97%) of the participants were between the ages of 17 and 19. Women comprised 62% of the sample. Although participants were overwhelmingly White (79%), 7% were Asian/Pacific Islanders, 6% were African-American, 6% were Hispanic, 0.5% identified as Native American, 0.5% identified as international students, and the ethnicity of 1% was unknown. The distribution of the initial sample across each of the 19 institutions was determined by ACT (formerly the American College Testing Program) and the Wabash Center of Inquiry to best ensure that the each institution could arrive at statements about proportions with an error (at the 95% confidence level) of approximately +/–.05. For the large institutions, this meant a sample of at least 385 students who were selected randomly from the incoming first-year class at each institution. The only exception to this was at the largest participating institution in the study, where the sample was selected randomly from the incoming class in the College of Arts and Sciences. For the smaller institutions in the study—including all liberal arts colleges—the sample needed to exceed 250 students per institution; therefore, the sample included the entire incoming first-year class. The students in the sample were invited to participate in a national longitudinal study examining how a college education affects students, with the goal of improving the undergraduate experience. They were informed that they would receive a monetary stipend for their participation in each data collection and were also assured in writing that any information they provided would be kept in the strictest confidence and never become part of their institutional records.

Data Collection

Initial Data Collection. The initial data collection was conducted in the early fall of 2006 with 4,501 students from the 19 institutions. This first data collection lasted between 90 and100 minutes, and students were paid a stipend of $50 each for their participation. The data collected included a WNSLAE precollege survey that sought information on student demographic characteristics, family background, high school experiences, political orientation, educational degree plans, and the like. Students also completed a series of standardized instruments that measured dimensions of intellectual and personal development typically thought to be the outcomes of undergraduate education (Pascarella & Terenzini, 2005).

Follow-Up Data Collection. The follow-up data collection was conducted in spring 2007. This data collection took about two hours and participating students were paid an additional stipend of $50 each. Two types of data were collected. The first was based on questionnaire instruments that collected extensive information on students' experience of college. Two complementary instruments were used: the NSSE (Kuh, 2001) and the WNSLAE Student Experiences Survey (WSES). These instruments were designed to capture student involvement in different activities during college (e.g., work, athletics, clubs, types of courses taken, and the like) as well as engagement in, or exposure to, empirically vetted good practices in undergraduate education. These good practices included such dimensions as: diversity experiences, exposure to effective teaching, quality of nonclassroom interactions with faculty, active learning, integrative experiences, influential interactions with other students, high expectations, and the like (Pascarella, Cruce, Wolniak, & Blaich, 2004; Pascarella et al., 2006). The second type of data collected consisted of follow-up (or posttest) measures of the instruments measuring dimensions of intellectual and personal development

TABLE 1.
Descriptive Statistics for the Variables in the Model (N = 2,931)

Variable	*M*	*SD*	min.	max.
Male	0.4510	0.4977	0	1
Caucasian	0.8234	0.3814	0	1
Tested Precollege Academic Ability	–0.3974	1.0938	–3.1006	2.1028
Work Responsibilities During Last Year of High School	0.1117	1.0018	–1.5304	1.3928
Attended Research Institution	0.3482	0.4765	0	1
Attended Regional University	0.2513	0.4339	0	1
Attended Community College	0.1520	0.3591	0	1
First–Year Leadership Experience or Training	0.2465	0.4311	0	1
Participated in Community Service Experience	0.5819	0.4933	0	1
Good Teaching and Interaction With Faculty Scale	–0.1389	1.0090	–3.8546	2.3496
Influential Interaction With Peers and Cocurricular Involvement Scale	–0.1404	1.0081	–4.2006	1.9765
Diversity Experiences Scale	–0.1767	0.9998	–2.2500	3.1604
Did Not Work On Campus	0.7223	0.4479	0	1
Worked On Campus 10 Hours per Week or Less	0.1809	0.3850	0	1
Worked On Campus 11 Hours per Week or More	0.0967	0.2956	0	1
Did Not Work Off Campus	0.7189	0.4496	0	1
Worked Off Campus 10 Hours per Week or Less	0.0924	0.2896	0	1
Worked Off Campus 11–20 Hours per Week	0.0906	0.2871	0	1
Worked Off Campus 21 Hours per Week or More	0.0981	0.2975	0	1
Total Leadership Scale Precollege	–0.0822	1.0022	–3.5062	2.7174
Total Leadership Scale at End of First Year	–0.0485	1.0002	–3.3762	2.4976
Individual Leadership Scale Precollege	–0.0554	1.0019	–4.4390	1.9459
Individual Leadership Scale at End of First Year	–0.0258	0.9995	–4.5078	1.8412
Group Leadership Scale Precollege	–0.0769	1.0048	–4.9061	2.7938
Group Leadership Scale at End of First Year	–0.0319	1.0059	–4.1913	2.6008
Citizenship Leadership Scale Precollege	–0.1462	1.0076	–5.3180	1.7697
Citizenship Leadership Scale at End of First Year	–0.1213	1.0215	–4.6395	1.7895
Change Scale Precollege	0.0029	0.9873	–3.5375	2.4304
Change Scale at End of First Year	–0.0185	0.9761	–3.7530	2.3575

Note. All continuous variables were standardized.

that were first completed in the initial data collection. All students completed the NSSE and WSES prior to completing the follow-up instruments assessing intellectual and personal development. Both the initial and follow-up data collections were administered and conducted by ACT.

Of the original sample of 4,501 students who participated in the fall 2006 testing, 3,081 participated in the spring 2007 follow-up data collection, for a response rate of 68.5%. These 3,081 students represented 16.2% of the total population of incoming first-year students at the 19 participating institutions. To provide at least some adjustment for potential response bias by sex, race, academic ability, and institution in the sample of students, a weighting algorithm was developed. Using information provided by each institution on sex, race, and ACT score (or appropriate SAT equivalent or COMPASS score equivalent for community college students), follow-up participants were weighted up to each institution's first-year undergraduate population by sex (male or female), race (Caucasian, African American/Black, Hispanic/Latino, Asian/Pacific Islander, or other), and ACT (or equivalent score) quartile. Although applying weights in this manner has the effect of making the overall sample more similar to the population from which it was drawn, it cannot adjust for nonresponse bias. The weighted descriptive statistics for each of the variables in our analysis are provided in Table 1.

Dependent Measures

The model of leadership development chosen by WNSLAE and used as the dependent measure for this study is the social change model of leadership portrayed in Figure 2 (Astin & Astin, 2000; Dugan & Komives, 2007; HERI, 1996). This model defines leadership as a "process rather than a position" that "explicitly promotes the values of equity, social justice, self-knowledge, personal empowerment, collaboration, citizenship, and service" (HERI, p. 18) to empower individuals to work together in an effort to bring about positive social change within the community or organization. As represented in Figure 2, the social change model of leadership comprises four domains of leadership capacities: individual, group, society/community, and change. Within the individual and group domains, three separate scales exemplify the construct of each domain, whereas the societal/community and change domains comprise one scale each. The social change model of leadership is operationalized through the 68-item, revised version II of the Socially Responsible Leadership Scale (SRLS2) and has been repeatedly shown to be valid and reliable (Dugan, 2006b; Tyree, 1998). The items in this measure are organized into eight separate scales (Consciousness of Self, Congruence, Commitment, Collaboration, Common Purpose, Controversy with Civility, Citizenship, and Change). The conceptual framework of this model organizes seven of these scales into three domains of leadership capacities (individual, group, and community/society) that, when placed in the context of the Change scale (defined as a belief in the potential of change to improve an institution or a community), set the stage for individuals to engage with others in a process of social transformation (HERI). To appropriately confirm the statistical validity of presenting our findings in a manner consistent with the original representation of the social change model of leadership (Figure 2), we performed principle component analyses on the construction of the individual and group domains. In addition to the alpha reliabilities reported below, the results of this process further supported the conceptual model portrayed in Figure 2 and are available from the first author upon request.

Individual leadership in the social change

model is composed of three capacities deemed critical to an individual's successful involvement in initiative to affect change: consciousness of self, congruence, and commitment (HERI, 1996). Consciousness of self represents an awareness of the "beliefs, values, attitudes, and emotions that motivate one to take action" (HERI, p. 22). This value is operationalized through a 9-item scale with an alpha of .835. Congruence represents the relationship between one's actions and core beliefs. An individual demonstrating congruence behaves with "consistency, genuineness, authenticity, and honesty toward others" (HERI, p. 22). Congruence is measured by a 7-item scale with an alpha of .872. Commitment "is the psychic energy that motivate the individual to serve and that drives the collective effort" (HERI, p. 22). This value is operationalized by a 6-item scale with an alpha of .877. The social change model of leadership posits that these three values are deeply interdependent. One cannot be congruent without a deep consciousness of self, and one cannot demonstrate meaningful commitment by actions that are incongruent with their core beliefs (HERI). When scaled together to represent the individual domain, these three scales produce an alpha of .804.

The second domain of the social change model describes values that individuals must hold in order to function effectively as a group. These attributes of group leadership are collaboration, common purpose, and controversy with civility (HERI, 1996). Collaboration embodies "the cornerstone value of the group leadership effort because it empowers self and others through trust" (HERI, p. 23) and "multiplies group effectiveness by capitalizing on the multiple talents and perspectives of each group member and on the power of that diversity to generate creative solutions and actions" (HERI, p. 23).

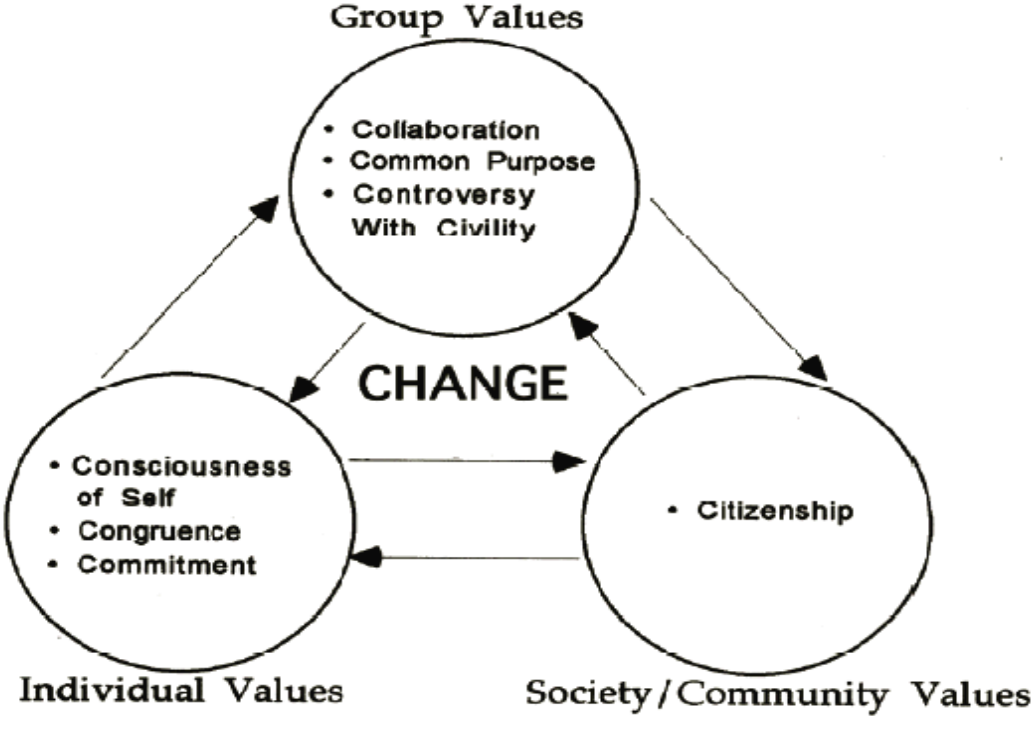

FIGURE 2. The Social Change Model of Leadership Development (HERI, 1996)

The collaboration scale is measured by eight items that produce an alpha of .840. Common purpose represents the importance of a shared vision, philosophy of process, objectives, and markers of success (HERI). This is measured by a 9-item scale with an alpha of .860. Controversy with civility "recognizes two fundamental realities of any creative group effort: that differences in viewpoint are inevitable, and that such differences must be aired openly but with civility" (HERI, p. 23). This scale is made up of 11 items that produce an alpha of .799. As with the values represented by the individual leadership tier, group leadership values also are interdependent. Collaboration, common purpose, and controversy with civility require a strong bond of trust among all of the individuals involved in the efforts of the group (HERI). When scaled together to represent the group domain, the three scales produce an alpha of .807.

The third domain of this model is represented by one value – citizenship (HERI, 1996). Citizenship "implies social or civic responsibility. It is the value that responsibly connects the individual and the leadership group to the larger community or society" (p. 65). This value is represented by an 8-item scale with an alpha of .886. Citizenship is interdependent on the engagement of the individual and the efforts of the group to invest in the actions necessary to bring about positive social change and is fundamental to the notion of a participatory democracy (HERI).

The final construct in the model, change, is described as the "hub" around which all of these values revolve (HERI, 1996, p. 21). Change represents the willingness of individuals—both as individuals and as a collective group—to invest time, effort, and emotion in the process of bringing about change. It recognizes that individuals can share all of the values inherent in the model, but without a commitment to making their organization or community a better place, there will be no social change (HERI). The change scale is made up of 10 items that produce an alpha of .848.

All four leadership domains—individual, group, community/society, and change—combine to represent the full theoretical framework of the social change model of leadership. Collapsed for the purposes of this study into a total leadership score, these four leadership domains together produce a Crombach's alpha of .914.

One of the quantitative strengths of the SRLS2 is its predictive validity. The internal consistency reliabilities for the eight subscales of the SRLS2 within the WNSLAE data ranged from .77 to .88. Prior research has indicated that the various scales of the SRLS2 discriminate between involved and noninvolved undergraduate students in community service, student organizational membership, formal leadership programs, and positional leadership roles (Dugan, 2006a). Furthermore, research has demonstrated that undergraduate students identified as "emerging student leaders" tend to score significantly higher on the congruency, collaboration, common purpose, citizenship, and change subscales compared to their undergraduate peers not identified as "emerging student leaders" (Rubin, 2000).

Work During College

The independent variables in the study were measures of on-campus and off-campus work during the first year of college. These were taken from two items on the NSSE survey that students in the study completed during follow-up data collection in the spring of 2007. The stem for each item was "About how many hours do you spend in a typical 7-day week doing each of the following?" One item referred to "working for pay on campus," and the second item referred to "working for pay

TABLE 2.
Number of Students in Each Work Category

Work Category	*n*
Did Not Work On Campus	2,117
Did Not Work Off Campus	2,107
Worked on Campus 1–10 Hours per Week	530
Worked on Campus More Than 10 Hours per Week	283
Worked Off Campus 1–10 Hours per Week	271
Worked Off Campus 11–20 Hours per Week	266
Worked Off Campus More Than 20 Hours per Week	287

off campus." There were eight response options for each item: 0 hours, 1–5 hours, 6–10 hours, 11–15 hours, 16–20 hours, 21–25 hours, 26–30 hours, and more than 30 hours. Student responses on each item showed substantial positive skewness, with the vast majority of students not working and only a few students working 26 or more hours per week. There was greater skewness in hours of off-campus work per week than in hours of weekly on-campus work. Consequently, instead of treating hours of work per week as a continuous variable, we created categories of work represented by dummy (0, 1) variables. For on-campus work, these were 0 hours per week, which was always coded zero, 1–10 hours per week, and 11 or more hours per week (in almost every case, students working 11 or more hours per week on campus did not report working more than 20 hours. This likely is due to limits that most campuses place on students working in work–study or on-campus positions). For off-campus work, which demonstrated greater skewness, the categories were 0 hours per week, 1–10 hours per week, 11–20 hours per week, and 21 or more hours per week (students categorized as working 21 or more hours per week rarely reported working more than 30 hours per week). The range of sample frequencies in each category of work is shown in Table 2.

The WNSLAE sample had a substantially smaller percentage of students who worked than would be found in the population of American postsecondary students—an undeniable limitation of this study. Balanced against this, however, is the longitudinal nature of the WNSLAE data, which permits one to consider the net effects of work on leadership development while taking into account precollege levels of leadership development as well as other important confounding influences. We know of no other data set that would permit this type of analysis in estimating the effects of work on leadership development.

Engagement Measures

A major part of the WNSLAE design was guided conceptually by a body of literature and evidence that identifies student engagement in undergraduate experiences that are empirically linked to personal and intellectual growth during college (Astin, 1993; Chickering & Reisser, 1993;Kuh, Kinzie, Schuh, Whitt, & Associates, 2005; Kuh, Schuh, Whitt, & Associates, 1991; Pascarella & Terenzini, 1991, 2005). To measure these experiences, or "good practices," WNSLAE selected and adopted empirically vetted scales and items from the National Study of Student Learning (Cruce, Wolniak, Seifert, & Pascarella, 2006; Pascarella, Wolniak, Seifert, Cruce, & Blaich, 2005) and the NSSE (Pascarella et al., 2006). These scales and items were designed to tap into student exposure to a range of student engagement in "good practices" that includes such dimensions as student–faculty interaction, active learning/time on

task, quality of teaching, prompt feedback from faculty, cooperative learning, high academic expectations, diversity experiences, influential interactions with other students, and integrative experiences. Extensive evidence exists to indicate that, even in the presence of statistical controls for important confounding influences, student engagement experiences measured by these scales are significantly linked to student cognitive development during college (see Cruce et al., 2006 and Pascarella et al., 2005, 2006 for reviews of this body of evidence, including specific citations to original studies).

We selected five engagement experiences from the WNSLAE data that we anticipated would influence first-year leadership development, and which, based on the research findings reviewed above, would also be affected to some extent by one's work responsibilities during college. The first two engagement experiences—leadership experiences or training and involvement in community service—have been found previously to predict development of leadership capacities using the social change model of leadership as measured by the SRLS2 (Dugan, 2006b; Zimmerman-Oster & Burkhardt, 1999) and were therefore included in our analysis. The next three engagement dimensions—interactions with peers and cocurricular involvement, diversity experiences, and interactions with faculty and good teaching—were included in the model to account for the effects these engagement dimensions might theoretically produce given the extensive findings regarding college impact on students outlined above. (Detailed description of the five engagement measures, including all specific items and response options, can be found at the Center for Research on Undergraduate Education [n.d.] website.)

Campus leadership experience or training was a dichotomous variable determined by combining two survey questions. The first question asked if the respondent had held a position of leadership in a student club, campus organization, residence hall, or fraternity/sorority during the past year. The second asked if the student had participated in a leadership training program at his or her college. If the response to either question was yes, this was coded as 1.

Participation in community service has been found specifically to influence leadership development as measured by the SRLS2 (Dugan, 2006b). Therefore, participating in community service was included in the model as a dichotomous variable derived from the combination of two survey items. The first item asked how often the respondent had participated in a community-based project as a part of a regular course. The second item asked if the student had done any community service of volunteer work. Any indication of community service participation was coded as 1.

Diversity experiences was a 9-item scale that combined items from two subscales: Diversity experiences (e.g., the extent to which one's institution encourages contact among students from different economic, social, and racial or ethnic backgrounds; how often one had serious conversations with students of a different race or ethnicity than one's own; and how often one participated in a racial or cultural awareness workshop during the academic year) and meaningful discussions with diverse peers (e.g., how often one had meaningful and honest discussions about issues related to social justice with diverse students and how often one had discussions regarding intergroup relations with diverse students). The internal consistency reliability for the 9-item scale was .80.

Interactions with peers and cocurricular involvement was a 9-item scale that combined items from two subscales: Positive peer

interactions (e.g., the student friendships one has developed at the institution have been personally satisfying, interpersonal relationships with other students have had a positive influence on one's intellectual growth and interest in ideas, and interpersonal relationships with other students have had a positive influence on one's personal growth, attitudes, and values) and cocurricular involvement (number of hours per week spent in cocurricular activities). The 9-item scale had an internal consistency reliability of .85.

Interactions with faculty and good teaching was a 23-item scale that combined items from four subscales: faculty interest in teaching and student development (e.g., the extent to which faculty are interested in helping students grow in more than just academic areas, the extent to which faculty are generally interested in teaching, and the extent to which faculty are willing to spend time outside of class to discuss issues of interest and importance to students); prompt feedback (e.g., how often faculty informed students of level of performance in a timely manner and how often faculty checked to see if students had learned the material well before going on to new materials); quality and impact of nonclassroom interactions with faculty (e.g., the extent to which nonclassroom interactions with faculty have had an impact on: intellectual growth and interest in items; personal growth, values, and attitudes; and career goals and aspirations); and overall exposure to clear and organized instruction (e.g., the frequency with which faculty give clear explanations, the frequency with which faculty make good use of examples and illustration to explain difficult points, the frequency with which class time was used effectively, and the frequency with which course goals and requirements were clearly explained). The internal consistency reliability for the 23-item scale was .92.

Control Variables

A particular methodological strength of the WNSLAE is that it is longitudinal in nature. This permitted us to introduce a wide range of statistical controls for student background and precollege traits and experiences as well as for the type of institution attended. Our control variables used for various analyses in the present study included the following:

- A parallel precollege measure for all socially responsible leadership scales.
- Tested precollege academic preparation: the student's ACT score, SAT equivalent score, or COMPASS equivalent score for community college students (provided by each participating institution).
- Sex (coded as 1 = male, 0 = female).
- Race (coded as 1 = White, 0 = other).
- Precollege employment: A single item asked how often the student worked for pay during their last year of high school; response options were "very often," "often," "occasionally," "rarely," or "never."
- Institutional type, operationally defined as three dummy variables representing attendance at a research university, regional university, or community college (each coded 1), or attendance at a liberal arts college (always coded 0).

Data Analyses

Because the WNSLAE data were gathered from students enrolled at 19 postsecondary institutions that differ along many dimensions (e.g., size, selectivity, type), it is subject to the nesting or clustering effect. That is, students within each institution behave more similarly to each other than to students at other institutions. Without proper adjustments in regression procedures, this can lead to

artificially reduced standard errors and, therefore, type I specification errors. To correct for this possibility, we employed the specific regression option (svy) in the STATA software package that adjusts standard errors for the clustering effect in all our analyses. Because we had only 19 sampling units (institutions), this meant that our regression specifications were limited to *N* minus 1 degrees of freedom, or 18 variables.

In the first stage of our main analyses, we estimated the net total effect of work on each end of the first-year socially responsible scale using reduced-form equations (Alwin & Hauser, 1975). Each end-of-first-year leadership domains was regressed on the work measures plus student background, precollege characteristics (including a precollege measure of each leadership scale), and institutional type. This total effect included both the direct, or unmediated, effect of work on each leadership domain plus the estimated effect mediated through differential levels of engagement during the first year of college. In the second stage of the analyses, we estimated the direct, or unmediated, effects of work on each end of the first-year leadership domains by adding the five engagement dimensions to each total effects equation.

All analyses were based on weighted sample estimates adjusted to the actual sample size to obtain correct standard errors. Complete and useable data for all analyses were available for 2,931 students. Because the nature of the data we analyzed was correlational rather than experimental, we relied on statistical controls to identify the presence of potential causal influences of work on leadership development. Throughout this paper we employ accepted causal terms such as "total effect" or "direct effect." These terms, however, should be interpreted or understood in a statistical, rather than an experimental sense. A statistically significant effect or influence uncovered in our analyses means that, given the alternative explanations for which we have controlled statistically, one cannot reject the possibility of a casual relationship between work and first-year leadership development.

Finally, in all analyses of end of first-year leadership scores we had a statistical control for a parallel precollege measure of leadership. This means that, with the exception of the precollege leadership score, the estimated effects of all variables in our regression specifications are identical to what they would be if we were predicting first-year gains in leadership scores. Put another way, in the presence of a control for a pretest, the metric regression coefficients and significance tests for all other predictors in the equation are exactly the same, irrespective of whether the dependent variable is a simple posttest score or a gain/growth score (i.e., pretest minus posttest). This is explained and demonstrated empirically by Pascarella, Wolniak, and Pierson (2003). Consequently, in our analyses the estimated net effects of work on end of first-year leadership scores are exactly the same as what they would be if we were predicting first-year gains in leadership (i.e., end of first-year leadership score minus precollege leadership score). Therefore, despite the fact that we were predicting first-year leadership scores, it is quite reasonable to also interpret the results of our analyses as an estimate of the effects of work on first-year gains or growth in leadership (Pascarella et al. 2003).

RESULTS

The estimated total and direct effects of on-campus and off-campus work on end-of-first-year socially responsible leadership scores are summarized in Table 3. To remain consistent with the theoretical framework of the social change model of leadership, we focus our examination of the effects of work on each of the four domains within the model

(individual, group, societal/community, and change). Because we standardized each of the dependent measures, the coefficients shown in the table are in effect size terms—or that fraction of a standard deviation that students in each work category are advantaged or disadvantaged (depending on the sign) relative to students who do not work. As columns "T" in Table 3 indicate, some level of work during college had a significant, positive total effect on four of the five end of first-year socially responsible leadership scores: total leadership score, individual leadership, group leadership, and leadership for change. These significant total effects (which represent the combined direct and indirect effects of work on leadership) persisted even in the presence of statistical controls for precollege leadership scores, sex, race, ACT (or equivalent) score, work responsibilities in high school, the type of institution attended, and the clustering effect. Except for the significant positive total effect on leadership for change of working on campus more than 10 hours/week, all of the other significant positive total effects involved working off campus for more than 10 hours/week. Overall, the most consistent and largest total effects of work across the various leadership dimensions involved working off campus more than 20 hours/week.

As further shown in Table 3 (columns "D"), when the five engagement measures were added to the total effects equations two things happened. First, net of other predictors, the individual engagement measures tended to positively influence leadership development. Indeed, three engagement measures—campus leadership experience or training, diversity experiences, and interactions with peers and cocurricular involvement—had significant, positive effects on all five end of first-year leadership scores. Second, the direct effects on leadership of off-campus work between 10-20 hours/week and more than 20 hours per week became larger than their respective total effects, while maintaining their statistical significance. These increases in magnitude from the total to the direct effects equations were particularly pronounced for off-campus work exceeding 20 hours per week. For example, the total effects of working more than 20 hours/week on total leadership score and group leadership were 0.185 and 0.211, respectively. These effects increased to 0.310 and 0.366, respectively, when the five engagement measures were introduced to the prediction equations.

Such a trend in the findings suggests that work off campus in excess of 10 hours/week, and particularly off-campus work exceeding 20 hours/week, has a direct (unmediated) positive net impact on first-year leadership development that is independent of the influence of a student's level of campus or community engagement. However, because the total effect of a variable equals the sum of its direct and indirect effects, it also indicates that the indirect effect of such off-campus work commitments is negative, mediated through the inhibiting influence of off-campus work on levels of engagement during college (Alwin & Hauser, 1975). This is generally consistent with the expectations of our conceptual model.

Using a procedure developed by Preacher and Leonardelli (2001) for testing the statistical significance of mediated effects, we sought to determine if any of the specific indirect effects of off-campus work in excess of 20 hours/week were statistically reliable. Only the three largest indirect effects were statistically significant and are summarized in Table 4. Working off campus more than 20 hours/week had significant negative indirect effects on total leadership, group leadership, and leadership for change. Each of these negative indirect effects was mediated through the interactions with peers and cocurricular involvement scale. Not surprisingly, off-campus work commitments in excess of 20 hours per week had an inhibiting

TABLE 3.

Estimated Total (T) and Direct (D) Effects of Work During College on End of First-Year Socially Responsible Leadership (Standard Errors in Parentheses)

Predictor	Overall Leadership Score		Individual Leadership Score		Group Leadership Score		Community Leadership Score		Leadership for Change Score	
	T	*D*	*T*	*D*	*T*	*D*	*T*	*D*	*T*	*D*
Parallel Precollege Leadership Score	.672** (.022)	.568*** (.023)	.653*** (.027)	.582*** (.022)	.628*** (.013)	.529*** (.016)	.654*** (.017)	.566*** (.018)	.650*** (.030)	.582*** (.030)
Male	–.104** (.033)	–.109** (.031)	–.087* (.035)	–.089** (.029)	–.090* (.043)	–.091* (.044)	–.174*** (.050)	–.188** (.048)	–.078 (.048)	–.059 (.046)
Caucasian	.106 (.064)	.076 (.049)	.104* (.043)	.072 (.036)	.097 (.083)	.064 (.070)	.055 (.046)	.048 (.040)	.055 (.074)	.080 (.053)
Tested Precollege Academic Preparation	.024 (.018)	–.001 (.017)	.011 (.017)	–.021 (.018)	.031 (.023)	–.010 (.021)	.028 (.018)	.009 (.014)	.042 (.025)	.007 (.027)
Work Responsibilities During Last Year of High School	.048* (.021)	.042 (.022)	.040* (.018)	.036 (.021)	.049 (.029)	.042 (.028)	.046* (.020)	.036* (.017)	.041 (.023)	.034 (.022)
Attended a Research University	.077 (.041)	.179*** (.036)	.039 (.045)	.147** (.040)	.091* (.042)	.194*** (.040)	.114** (.039)	.178*** (.033)	.033 (.027)	.080* (.035)
Attended a Regional Institution	–.047 (.060)	.036 (.048)	–.079 (.053)	–.001 (.046)	–.018 (.076)	.076 (.058)	.023 (.049)	.078 (.039)	–.094 (.052)	–.039 (.042)
Attended a Community College	–.037 (.151)	.052 (.107)	–.032 (.157)	.016 (.115)	.051 (.136)	.148 (.091)	–.252*** (.054)	–.118* (.050)	–.059 (.152)	.049 (.127)
Campus Leadership Experience or Training		.114*** (.029)		.077** (.023)		.124*** (.029)		.107** (.033)		.106* (.043)
Participated in Community Service		.055 (.065)		.022 (.073)		.037 (.071)		.244*** (.058)		–.051 (.043)
Diversity Experiences		.090*** (.013)		.041** (.014)		.096*** (.014)		.099*** (.021)		.139*** (.013)

table continues

TABLE 3. *continued*

Predictor	Overall Leadership Score		Individual Leadership Score		Group Leadership Score		Community Leadership Score		Leadership for Change Score	
	T	*D*	*T*	*D*	*T*	*D*	*T*	*D*	*T*	*D*
Interactions With Peers and Cocurricular Involvement		.114*** (.022)		.078* (.027)		.129*** (.020)		.068* (.026)		.129*** (.019)
Interactions With Faculty and Good Teaching		.170*** (.027)		.186*** (.023)		.176*** (.027)		.108** (.029)		.059 (.030)
Worked On Campus 1-10 Hours/Week	–.030 (.060)	–.072 (.051)	–.052 (.052)	–.081 (.045)	–.041 (.061)	–.084 (.050)	.012 (.067)	–.025 (.056)	.037 (.037)	–.008 (.032)
Worked On Campus More Than 10 Hours/ Week	.073 (.076)	.057 (.078)	.009 (.067)	.001 (.072)	.081 (.084)	.067 (.088)	.041 (.075)	.017 (.075)	.187* (.070)	.166* (.062)
Worked Off Campus 1-10 Hours/Week	–.028 (.062)	–.007 (.057)	.028 (.068)	.042 (.064)	–.028 (.077)	–.016 (.072)	–.003 (.052)	.004 (.050)	–.103 (.070)	–.095 (.062)
Worked Off Campus 11-20 Hours/Week	.109* (.044)	.146** (.047)	.135*** (.029)	.162*** (.034)	.099 (.065)	.126 (.077)	–.011 (.066)	.031 (.057)	.139 (.080)	.161* (.075)
Worked Off Campus More Than 20 Hours/ Week	.185*** (.034)	.310*** (.046)	.200*** (.049)	.289*** (.058)	.211* (.085)	.336*** (.077)	.110 (.067)	.196** (.056)	.050 (.155)	.181 (.136)
R^2 Total Model	.487***	.556***	.460***	.512***	.417***	.496***	.480**	.532***	.439***	.494***

Note. N = 2,931 for all models. Because the dependent measures were standardized, the coefficients are expressed in effect size terms. For the major independent variable, it is that fraction of a standard deviation that students who work are advantaged or disadvantaged (depending on the sign) relative to students who do not work.

*p < .05. **p < .01. ***p < .001.

TABLE 4.
Significant Negative Indirect Effects on Socially Responsible Leadership of Working More Than 20 Hours per Week

Dependent Variable	Effect Mediated Through	Estimated Effect Size (*SE*)	*t* Ratio
Overall Leadership Score	Interactions With Peers and Cocurricular Involvement	–.058 (.022)	2.62*
Group Leadership Score	Interactions With Peers and Cocurricular Involvement	–.065 (.024)	2.76*
Leadership for Change Score	Interactions With Peers and Cocurricular Involvement	–.071 (.024)	2.95*

*$p < .01$.

effect on first-year interactions with peers and cocurricular involvement, which, in turn, significantly enhanced the development of all three leadership dimensions.

DISCUSSION

This study offers new evidence toward our understanding of the effects of work on college students. As hypothesized, work had overall positive effects on the development of leadership skills. However, the relationship between work and college students is complex. Although working more than 10 hours/week positively affected leadership development, extensive work off campus simultaneously limited peer interaction and cocurricular involvement—activities that also enhance leadership skills. Furthermore, in this study not all forms of work affected leadership development. Working 10 hours or less per week had no impact across any measure of leadership capacities, regardless if the job was located on or off campus.

Our findings suggest that off-campus employment more than 10 hours/week is uniquely beneficial to student leadership development. Students who worked off campus more than 10 hours/week developed leadership capacities in ways that nonworking students did not. Moreover, working off campus more than 20 hours per week produced the broadest and most substantial impact on leadership development, significantly affecting three of four leadership domains, and produced larger effect sizes on individual leadership development than did working off campus 11–20 hours/week. These effects remained even after accounting for a variety of student experiences, including on-campus leadership training or experience.

Conversely, on-campus work had almost no impact on leadership development compared to nonworking students. The only significant effect emerged in the leadership for change score for students who worked on campus more than 10 hours/week. In other words, although working on campus more than 10 hours/week might increase those students' interest and willingness to affect change, on average, it failed to significantly improve any of the leadership skills fundamental to the process of instigating that change. Furthermore, this lone effect was not unique to working on campus, given that working off campus a similar number of hours/week produced a significant and almost

identical effect size, in addition to its effect on overall leadership and individual leadership skills. It appears that, if one were to choose the more efficient work experience in terms of its effect on leadership development, one would opt for a job off campus.

The complexity of these findings is most evident in the effects of working off campus more than 20 hours/week. This category of work produced significant positive direct effects on overall leadership, individual leadership, group leadership, and community leadership, and maintained comparably stronger effects on overall and individual leadership than did those linked to off-campus work of 11–20 hours/week. Simultaneously, working more than 20 hours/week off campus negatively affected peer interaction and cocurricular involvement—a college experience found in both this study and prior research (Dugan, 2006b) to positively affect leadership development. However, the significant positive total effects of working more than 20 hours/week off campus suggests that extensive off-campus work more than compensated for any negative effects it had on peer interaction and cocurricular involvement.

Implications

This study has potentially important implications for postsecondary institutions, public policymakers, and higher education scholars regarding the role of work in achieving intended educational outcomes. In addition, it highlights the clear need for additional research into the nature of this relationship, whether work's effects differ for diverse types of students and, given the preponderance of working students, by what means might institutions more effectively integrate employment experiences into the overall learning process of a college education. Finally, the findings of this study suggest that higher education scholars may need to adapt some aspects of involvement theory when using it as a framework to explain college student gains across intended educational outcomes.

Our findings underscore the value of off-campus work in developing leadership capacities critical to professional success and participatory citizenship. In light of these findings, postsecondary institutions might re-examine the depth of their commitment to supporting student learning for those who work off campus. Many colleges and universities could place greater emphasis on fostering and supporting educationally purposeful student employment positions through the Job Location and Development (JLD) Program, an existing opportunity through the Federal Work–Study Program that supports institutional collaboration with local businesses, community organizations, and nonprofits to create educationally appropriate jobs for students regardless of the student's financial status. The most recent survey data commissioned by the U.S. Department of Education found that in 1997–1998 only 15% of postsecondary institutions took advantage of funding for the JLD Program (U.S. Department of Education, 2000). Institutions also might expand or reconfigure their course offerings to allow more evening, weekend, and online enrollment that would then make it more plausible for students to take advantage of off-campus employment opportunities during the traditional workday. Policymakers and associations of higher education can prioritize the educational benefits of student employment by advocating for increased funding for the JLD program and publicizing its benefits to member institutions.

Yet not all types of work in this study produced similar effects. Although off-campus work was particularly influential in building leadership skills, on-campus work did little to impact leadership development. We are not suggesting, however, that on-campus work

is somehow incompatible with leadership development. Rather, these findings seem to confirm what many student employment scholars have previously asserted regarding the missed educational opportunity of on-campus employment (Chickering, Frank, & Robinson, 1996; Devaney, 1996; Kincaid, 1997). Although an extensive body of research has demonstrated that work can develop a variety of leadership capacities in high school and college students, on-campus employment is rarely constructed with the intent of fostering educational outcomes (Devaney). Instead, on-campus work is often purposely configured to require minimal cognitive or affective engagement (Gardner, 1997). This may be because higher education scholars, policymakers, and administrators often frame work as little more than a means of acquiring the financial capital necessary to pay for higher education (King, 2006; King & Bannon, 2002; Perna, Cooper, & Li, 2006) rather than a resource for student development and personal growth.

As our findings show, this presumption short changes work's potential to contribute to student learning. Dugan & Komives et al.'s (2008) findings regarding the effects of employee mentoring on leadership self-efficacy in commuter students suggest that the employer can play an important role in turning work into an educational experience. Likewise, scholarship examining and applying Bandura's (1986, 1995) notion of self-efficacy suggests that employment experiences can enhance the development of a range of traits such as autonomy, responsibility, and relatedness that closely mirror the leadership capacities central to the social change model of leadership (Hackett, 1995, Stajkovic & Luthans, 1998). Chickering, Frank, & Robinson (1996) proposed a model for student employment that aligns the intellectual complexity of a student job with several increasingly nuanced stages of college student development. In the few examinations of efforts to integrate on-campus work into the broader learning experiences, evidence suggests that these efforts can produce important positive results across a range of educational outcomes (Bushong, 2009; Wolniak & Pascarella, 2007). Institutions can ensure that all working students make the most of their educational experience by ensuring that those who work on campus are benefiting from their work experience just as much as those who work off campus.

At the same time, it would be foolish to suggest that off-campus jobs are influential in leadership development because of any intentional effort on the part of the employer to frame them as an educational experience. Additional research would be particularly important in measuring the extent to which off-campus work impacts development across other educational outcomes and what unique attributes of off-campus work serve to facilitate learning. The gains this study identified may exist because these positions function largely in the context of an economic landscape with real-world consequences. Employers who fail to run a profitable business do not survive, and employees who do not meet the professional expectations of their supervisors are either demoted or cut loose. The numerous positive effects of off-campus work on leadership capacities may reflect the nature of employment within such a context. Alternately, off-campus employment may create conditions where working students are more able to develop the self-efficacy characteristics that would be reflected in the capacities central to the social change model of leadership (Bandura, 1986; Hackett, 1995; Stajkovic & Luthans, 1998).

This study also exposed the critical need for additional research on the role of work in the educational experience and how institutions might better shape college and university curricula to take fuller advantage of the working student's experience. But first

we need to know more about how work affects college student learning. Are these effects the same for all students? Do these effects differ for students within different institutional environments? This study focused on the first-year student experience, thus limiting the study on the influence of work across an entire undergraduate career. Additional research is also critical to identifying ways in which institutions can support supervisory staff to create educationally conducive conditions for on-campus employment.

Finally, the findings of this study seem to suggest that, although involvement theory (Astin, 1993) may be useful in explaining persistence, engagement, or some other educational outcomes, it may not be entirely sufficient to account for the development of leadership skills. Astin argued that increased cocurricular involvement and peer interaction would help students integrate into the cultural fabric of the institution, thereby making them more engaged in their college experience and facilitating a positive and productive postsecondary education. Subsequent research by Astin and others has lent great credence to this theory and its positive affects on measures of engagement and persistence (Astin, 1993; Kuh et al., 1991, 2005; Pascarella & Terenzini, 1991, 2005). However, the findings of the present study suggest that student development may not always be best served by limiting students to on-campus experiences. Off-campus work produced discernable stronger effects on leadership development than did on-campus work—even though extensive hours of off-campus work negatively affected important areas of involvement. Higher education scholars interested in fully explaining college student development should not limit their scope to on-campus experiences. Important areas of student development may not always result from on-campus experiences crafted by faculty or student affairs professionals.

More than ever, this study reminds scholars and institutional administrators that the college experience is situated within a larger sphere of life experiences. With most college students now working while going to college (Planty et al., 2008) and approximately 90% of working students employed off campus (King, 2006), institutions and researchers need to recognize the potential of these experiences to assist students in their development across the intended outcomes of a college education. Instead of merely tolerating or discounting the impact of off-campus work, policymakers, higher education scholars, institutional administrators, and student affairs practitioners alike might better contribute to improving college student development by identifying and implementing ways to coordinate the educational experience with widely occurring off-campus experiences such as work, thereby creating a more deeply integrated educational gestalt accessible to a broader spectrum of college students.

Correspondence concerning this article should be addressed to Mark H. Salisbury, Augustana College, 639 38th St., Rock Island, IL 61201; marksalisbury@augustana.edu

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