Liberal Education and Preparation for a Life of Work

A Teagle Foundation White Paper

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Executive Summary

American liberal education has traditionally manifested a complicated and often inconsistent position on the relationship between the goals of undergraduate education and the obligation to prepare students for a fulfilling life of work. From one point of view, liberal learning reflects a commitment to knowledge for its own sake, conferring value on intellectual activity without concern for the practicality or applicability of the knowledge obtained. A contrasting point of view suggests that, far from being irrelevant to the exigencies of vocation and employment, liberal education constitutes a highly effective preparation for a life of work.

In this paper, we explore these alternative conceptions of liberal education in interaction with two significant factors: 1) shifting demographics and expectations in the college-going population, and 2) changes in the nature of work itself. The issues raised are addressed in the context of continually evolving understandings of "liberal education," of which we review four. We articulate arguments implicit in each of these interpretations that suggest that liberal educators are indeed responsible for establishing a clear and productive connection between undergraduate education and the preparation of our students for a meaningful life of work.

As we reflect on the two apparently incompatible views of the relationship between liberal learning and the preparation for a life of work, we consider paths of reconciliation between them. We discuss case studies that present approaches being developed at our own institutions[1] that seek to integrate liberal learning with the task of preparing students for a life of work. In a variety of ways, these curricular and co-curricular initiatives seek to connect theory and practice; learning and service; knowledge and experience; and intellect and vocation. Each of these case studies presents a distinctive program or course of study that aims to provide students with an excellent liberal education while at the same time addressing the need to prepare them for the pursuit of a successful career.

Our arguments and examples conspire to recast the traditional liberal/professional dichotomy in higher education, according to which, liberal learning and the exigencies of preparation for a life of work are somehow at odds. In contrast, we suggest a conception of liberal education that approaches student learning by amplifying theory through application; by developing knowledge in context; by encouraging a transparent connection between classroom learning and other educational experiences; and by cultivating a capacity for student reflection on the intersection between learning and vocation. These efforts will go a long way toward establishing a more powerful, intentional relationship between undergraduate education and preparation for a fulfilling life of work while at the same time reinforcing the traditional values and strengthening the traditional outcomes of liberal learning.

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[1] Berea College, Cornell College, Hampshire College, Smith College, Warren Wilson College, and Worcester Polytechnic Institute, all participants in a Teagle Foundation funded consortium exploring the relationship between liberal education and preparation for a life of work. The views in this White Paper reflect the consensus of the participants, but not necessarily the official positions of the institutions involved in this project.

I. Introduction: Liberal Education and Preparation for a Life of Work

Virtually from its inception in the early 17th century, American liberal education has manifested a complicated and often inconsistent position on the relationship between the goals of undergraduate education and the obligation to prepare students for the pursuit of a fulfilling career. From one point of view, liberal learning reflects a commitment to knowledge for its own sake, conferring value on intellectual activity without concern for the practicality or applicability of the knowledge obtained. Despite the fact that institutions of liberal learning are inextricably connected to the marketplace in numerous ways, liberal learning itself has been defined independently from the societal need for professional or vocational training throughout its history in American higher education, and for considerably longer in the antecedents of American liberal education going back to the ancient world.[2]

It is argued that what sets liberal education apart from professional studies is the opportunity it provides for students to achieve intellectual breadth, to situate learning in a moral and ethical context, and to understand their place in the larger social, human order. Advocates assert that liberal education provides the most effective learning environment in which to foster the related capacities of moral and ethical reasoning, introspection, character, and citizenship.[3]

On a straightforward interpretation of this view, liberal education does not aim to prepare students for a life of work. Liberal learning outcomes are considered to be independent of the practical skills, sense of vocation, awareness of employment opportunities, or development of suitable personal and collaborative capacities that might serve graduates well in their eventual careers. Furthermore, advocates for this conception of liberal learning decry the growing tendency in America to pursue higher education not for its intrinsic merits, but as a prerequisite to obtaining the instrumental rewards of status, access, and privilege:

> *Colleges and students have conspired over the past thirty years to redefine higher education as professional education. Pragmatism and rationality have gained a firm grip on America's psyche. . . . Driven by sober economic thinking, Americans are applying cost-benefit analysis to all decisions and focusing on the bottom line, examining all expenditures in terms of "What do I get?" or "What's the payoff?"*[4]

A contrasting point of view suggests that, far from being irrelevant to the exigencies of the modern workplace, liberal education constitutes a highly effective

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[2] See Bok, 2006; Brint, *et al*. 2005; Connor, (nd); Lewis, 2005; Roosevelt, 2006; Waks, 2004.
[3] See Axelrod, *et al.*, 2001 (especially cited comments of Jeffrey Nesteruk); Barker, 2000; Fong, 2002, 2004; and Roosevelt, 2006.
[4] Hersch, 1997.

preparation for a life of work. Proponents of this view argue that many career paths, including those for salaried workers and entrepreneurs, benefit from the capacities that are emphasized in liberal learning curricula. They point to an almost complete convergence between the learning goals cultivated by liberal educators (for example, critical thinking, collaborative learning, multi-cultural awareness, and strong communication skills) and the foundational skills that business leaders and government opinion makers hope to find in the workforce. They deepen their argument by asserting that even the acquisition of the abstract knowledge that has traditionally been at the core of liberal learning curricula is strengthened by contemporary pedagogies (such as community-based learning, interdisciplinarity, and global study) that simultaneously respond to the interests of corporations and government in an increasingly interconnected world.

Finally, in developing this vision of liberal education, advocates consistently draw on discourse from the marketplace in order to underscore that what they do *is* relevant beyond the ivory tower. The following statement is exemplary:

> *In these rapidly changing times, we can and must make an ever stronger case for the liberal arts, an education in which students learn how to learn . . . that emphasizes the forming rather than the filling of minds . . . that renders our graduates adaptive to any marketplace, curious about whatever world is around them, and resourceful enough to change with the times. . . . If we agree that the aim of education is to prepare students well for life – for living and for making a living – then we can say, too, that the aim of education is to strengthen our democratic institutions by developing informed citizens who make up their own minds, know how to evaluate information, are not susceptible to propaganda, and ultimately are willing to contribute to the common good.*[5]

Although the two foregoing views of the relationship between liberal education and preparation for a life of work cannot properly be called a "debate" (in that the opposing positions are not often argued out), the contrast between these two interpretations does constitute a tension that contextualizes the development of mission, curriculum, and pedagogy at educational institutions across America. Professional schools are becoming increasingly interested in incorporating aspects of liberal education to strengthen curricula that have become too career-oriented or technical. Although land grant universities have provided practical majors such as business, agriculture, and healthcare alongside concentrations in traditional liberal areas of study for many years, more recently, there is a newer, parallel development taking place in the curricula of some liberal arts colleges. Either in an attempt to redefine or expand their missions, or as an accommodation to the expectations of parents and students, the liberal arts is beginning to incorporate certain areas of

[5] Myers, 2006.

professional study, sometimes in the form of full-fledged majors, and other times through programs that help students explore vocational options with internships, focused advising, workshops, speakers and the like.[6] Moreover, these days it is the relatively rare liberal arts college that does not include a course of study in "practical curricula" such as education, computer science, or journalism—further evidence that the traditional conception of the liberal arts has undergone considerable evolution, notably in the latter half of the twentieth century.

In this paper, we begin by exploring some of the factors that have conditioned this redefinition of liberal learning in an attempt to better understand the position of liberal education in contemporary American higher education. Two of the most powerful dynamics are 1) shifting demographics and expectations in the college-going population, and 2) changes in the nature of work itself. We sketch the histories of these changes below. The issues we raise are addressed in the context of continually evolving understandings of "liberal education," of which we review four. In doing so, we articulate arguments implicit in these interpretations suggesting that liberal educators are indeed responsible for establishing a clear and productive connection between the goals of undergraduate education and the preparation of our students for a meaningful life of work.

As we reflect on this shifting context and on the two apparently incompatible views of the relationship between liberal learning and the preparation for a life of work, we consider paths of reconciliation between them. We discuss several models, developed at our own institutions,[7] that seek to integrate liberal learning with the task of preparing students for a life of work. In a variety of ways, these curricular and co-curricular initiatives seek to connect theory and practice; learning and service; knowledge and experience; and intellect and vocation. Each case study presents a distinctive program or course of study that provides students with an excellent liberal education while at the same time addressing in some way the need to prepare them for the pursuit of a successful career.

Taken collectively, these examples illustrate a range of approaches that readers might consider adapting to their own circumstances. To do so, we argue, is to remain true to the compelling intellectual commitments of liberal education while at the same time striving to graduate students ready to pursue fulfilling lives of work. We hope that students, faculty, and administrators from a wide range of institutions will find useful

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[6] We discuss the engineering program at Smith College and the Dimensions Center at Cornell College below as cases in point.

[7] Berea College, Cornell College, Hampshire College, Smith College, Warren Wilson College, and Worcester Polytechnic Institute, all participants in a Teagle Foundation funded consortium exploring the relationship between liberal education and preparation for a life of work. The views in this White Paper reflect the consensus of the participants, but not necessarily the official positions of the institutions involved in this project.

templates and suggestions to engage in a productive conversation about the relationship between the experiences that constitute a rich, intellectually rewarding undergraduate education and the pursuit of a satisfying career.

II. Look who is going to College: Changing Demographics and Shifting Expectations

Fulfillment Versus Employment: What are Students Expecting from a College Education?

In a recent survey of 1000 adults, 64% indicated that the purpose of a college education is to prepare graduates for their careers.[8] From 1970 to 2006, the percentage of college freshmen who consider "being well-off financially" to be an essential or very important goal has increased from 36.2% to 73.6%, while the percentage of freshmen who consider "acquiring a meaningful philosophy of life" to be essential or very important has decreased from 79% to 39%.[9]

Assumptions about job stability and what constitute necessary career skills are also changing dramatically.[10] A recent survey of Boston College alumni, ten years after graduation, reports that over 70% want to change careers to pursue new interests, almost 52% have changed careers at least once, and over 61% have worked for three or more different employers since graduation.[11]

The title of a recent article, "Preparing students for an uncertain future," [12] exemplifies a recurring theme in deliberations about higher education and the world of work for which educators must prepare their graduates. Roger Herman describes this shifting ground:

> *The idea of learning a specialty and staying in one field for an entire career is passé. . . . People are already changing career fields and will do so with increasing frequency in the years ahead. . . . While we will still have specialists, the demand will be higher for adaptable generalists—agile, nimble workers who can easily move into new roles. . . . These emerging jobs will have new responsibilities, new expectations, new knowledge bases.*[13]

Predictions about career patterns indicate that in the coming years, workers will change jobs at least three times in their lifetime; given how rapidly and comprehensively work

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[8] Center for Survey Research and Analysis, University of Connecticut, Storrs, CT, cited in Semuels, 2005.
[9] Chronicle of Higher Education, 51, February, 2005 and Sax, et al., 2004. Both cited in Bok, 2006.
[10] See Bikson 1996; Bikson and Law 1994; Baldwin, 2000; Barker, 2000; Carnevale and Strohl, 2001; Casner-Lotto and Barrington, 2006; Clausen, 2006; Hechinger Institute on Education and the Media, 2005; National Center on Education and the Economy, 2007; and Waks 2003.
[11] Boston College (nd). See also Bikson and Law 1994; Bok, 2006; and Herman 2006.
[12] Myers, 2001.
[13] Herman, 2006.

environments have changed in recent decades, this means that "a large proportion of people in college today will hold jobs in their lifetimes that don't even exist today."[14]

Just as the emergence of the global marketplace has altered the significance of place and of national borders, so too, the boundaries between disciplines and jobs seem to be blurring. In the words of one contemporary business executive, "We are aiming at the borderless career."[15] These levels of flux and uncertainty are exacerbated by the lack of consensus among educators and the public at large about the basic purposes of a liberal education and its role in preparing its students for a life of work. Referring to the challenges of college assessment, one critic laments that "the fact that evaluating universities is so frustratingly difficult suggests that we have only the vaguest idea of what we want from them."[16]

Recent Economic Factors

Much of the current debate about the need for undergraduate institutions to articulate a clear connection between the outcomes of higher education and a preparation for a life of work is tied to economic and institutional changes that emerged in the 1970s and 1980s and that continue today. Among the most significant conditioning factors, we note a general decline in the American economy; the emergence of a new global economy, the emergence of new technology in science, communications, and education (among other domains); and a profound shift in the demographics of the pool of applicants headed to college.[17]

During this time of marked expansion in European and Asian markets, and despite efforts to compete, American firms continue to lose market share on both domestic and global fronts, prompting a "crisis of competitiveness" with direct implications for American education.[18] A report by the National Center on Education and the Economy (2007) cautions that

> *If we continue on our current course, and the number of nations outpacing us in the education race continues to grow at its current rate, the American standard of living will steadily fall relative to those nations, rich and poor, that are doing a better job. . . . If the gap gets to a certain – but unknowable – point, the world's investors will conclude that they can get a greater return on their funds elsewhere, and it will be almost impossible to reverse course. . . . Although it is possible to construct a scenario for improving our standard of living, the clear and present danger is that it will fall for most Americans.*[19]

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[14] Herman, 2006.
[15] Cited in Bikson and Law, 1994.
[16] Clausen, 2006: 36.
[17] On which, see below.
[18] Waks, 2003.
[19] Report of The National Center on Education and the Economy (2007)

The Changing Value of a College Degree

The importance of clarifying the role of higher education in preparing its graduates for their eventual careers is further heightened by a widening income distribution gap between those who obtain degrees and those who do not, with college graduates earning an average 80% more than high school graduates.[20] Doubtless, those who are best educated will have the most career options; however, the majority of the newest and fastest growing kinds of jobs do not require a college degree.[21] As one pessimistic critic explains,

> *The total undergrad capacity of American higher education today probably exceeds by a wide margin the economic advantages it confers, either on students as individuals or on society as a whole. Most of the jobs now held by college graduates in sales, transportation, services, and even the computer industry could be performed successfully by people with little or no higher education.*[22]

Observing that those who obtain degrees are increasingly not guaranteed employment and referring to the limited expansion of good jobs amid current organizational restructuring,[23] Waks concludes that**:**

> *One can increasingly succeed in the new economy without any diploma, and one can also fail even with plenty of formal education of the wrong kind. . . . Formal education remains a pathway to knowledge work, but only one—and it comes without guarantees.*[24]

Nonetheless, advocates for higher education continue to argue for the value of a college education by pointing to the indisputable successes of many college graduates for whom education continues to provide "a step up." As Carnevale suggests, we are seeing the creation of an "hourglass-shaped society" conditioned by "educational attainment."[25]

The Income and Job Opportunity Gap

Studies on graduate job acquisition frequently include data on income and job satisfaction, but these are not the only types of indicators with relevance to the question of job preparation and income level. Such studies rarely explore what kinds of jobs are actually available, or what the relative differences in skill requirements and income are across the spectrum of jobs available for college graduates. Predictions regarding future work trends indicate widening income disparities and a decrease in job opportunities

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[20] Olson, 2006.
[21] See Clausen, 2006; Lewis, 1997; and Waks, 2003.
[22] Clausen, 2006: 33.
[23] Lewis, 1997.
[24] Waks, 2003: 406. See below for further discussion of "knowledge workers."
[25] Carnevale, as cited by Olson, 2006.

even as the representation of minority and first-generation populations in the pool of college applicants increases.[26]

Waks observes what he calls a "bi-polar structure" in the "overall widening division between high skills and low skills segments in the American manufacturing sector," divided among "elite knowledge workers providing professional services, high skill workers organized in information-rich high performance work places, and providers of routine, low skill products and in-person services."[27] Lewis cautions that the information economy perpetuates a two-tiered system in which neither skilled nor semi-skilled workers tend to hold leadership positions that allow them to control their own destiny in the job market, even if they manage to graduate from college with an appropriate level of skill and preparation.[28]

Those in the unskilled "routine worker category" contain a "high proportion of women, minorities, and recent immigrants (including illegal aliens). Unlike routine industrial workers in the 1950s, today's routine workers work in temporary or part-time 'contingent' work without union protection, job security, or health and pension benefits."[29] Indeed, Lewis argues that "with welfare rolls and transfer payments declining, and permanent jobs for unskilled unionized workers in the manufacturing sector disappearing, more Americans are now grouped together in an expanding 'working poor class.'"[30] The range of educational and job opportunities for this population is not altogether clear, and worse, there are lingering questions regarding whether there are even enough jobs of any kind for the expanding population of college graduates.

Although a full discussion of the educational circumstances of the working poor is beyond the scope of our essay, what is most important here for our inquiry is the extent to which the population of students who are enrolling in liberal arts colleges, universities, and professional schools includes an increasingly larger proportion of students who are first generation, who come from lower-middle class and working class backgrounds, and who are more ethnically diverse than the college-going population of the last century:

> *Generation Y, representing 4.3 million youngsters born between 1982 and 1997, is now beginning to enter the traditional 18- to 24-year old college age and . . . is*

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[26] See Piketty, Thomas, and Emmanuel Saez, (2006: 200-205) for a discussion of increasing income disparities across social classes. See Fleetwood and Shelley (2000) who predict that in the period 1990-2008, approximately 90,000 baccalaureate-level colleges graduates per year will accept jobs requiring no college-level skills.
[27] Waks, 2003: 402.
[28] See Lewis, 2005.
[29] Waks, 2003: 402.
[30] Lewis, 2005.

likely to produce an increase of 1.6 million college students, of which 80% will be minorities, by 2015.[31]

By now, predictions that there will be fewer white, middle-class, non-first-generation, bi-coastally-located, college-going students, and more Latino and other minority students in the sun belt (who come from lower socio-economic strata and who are first-generation) are well known. We expect that the burgeoning interest on the part of students and their parents to see a clearer connection between a college education and one's eventual career will be fueled by a dearth of satisfactory job prospects for college graduates and by these ongoing and increasingly significant changes in the demographics of the college-going population.

As tuition costs continue to rise and the average income of the college-going population continues to fall,[32] institutions must respond to the increasing financial needs of the next generation of students. In part, these needs may be addressed by substantially reforming financial aid policy—something that has just begun to take place at some elite small colleges. However, another important dimension of college access concerns taking account of the career paths of lower and working class students who, in increasing numbers, are headed to college. At the very least, educational institutions of all types—including liberal arts colleges—will need to properly position themselves to recruit from this new pool of applicants by addressing the interests of this population to link their educational pathways to the process of identifying and succeeding in a rewarding career.

Part of the explanation for the general attractiveness of professional study for today's students, we have suggested, is connected to a high level of job uncertainty for many recent college graduates, coupled with the perception that professional degrees lead to good jobs. The actual landscape is more complicated. Some studies do, indeed, show that degrees in the traditional areas of the liberal arts do not consistently lead to high-paying or specialized entry-level jobs. Liberal arts graduates also have a more difficult time getting started in their careers, despite the fact that they enjoy greater long-term rates of employability, income, and job satisfaction.[33]

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[31] Carnevale and Strohl, 2001: 10.

[32] See Baum and Ma 2007 for recent data on the rising costs of attending college. See Ashburn 2008 for a discussion of class-based changes in the college-going population.

[33] Alley, 1985; Axelrod, *et al.,* 2001; Bok, 2006; Carnevale and Strohl, 2001; Green and Salem, 1988; Lattuca and Stark, 2001; Lin, *et al.* 2003; Person and Rosenbaum, 2006. Based upon such findings, Carnevale and Strohl make the case for treating liberal learning as a form of "latent" capital that, following a fallow period, gains value as it matures: "The incongruity between initial hiring patterns of B.A.s and the eventual value of liberal education at work is one example of a general failure of markets to encourage investments in liberal education. This under investment stems primarily from that fact that (in an individualistic culture, participatory polity, and market based economy) the crucial benefits of liberal education are indirect and long term. Investments that support the culture and polity bring few short term or obvious economic returns. We can describe the economic and cultural value of liberal education

Other studies indicate that although "the labor market favours vocational over liberal graduates with regard to labour force status, employment income and status, job permanence, and job satisfaction . . . [there is a] . . . surprising lack of difference between liberal and vocational graduates in their overall possession of employability skills."[34] Bok claims that there are no differences in job attainment among liberal and vocational majors for top management positions.[35] He goes on to note research indicating that

> *. . . vocational majors have an easier time than liberal arts graduates in finding an initial job in business and tend to advance faster and earn more money during their first ten years of work. . . . After ten years, the picture becomes more complicated. As time goes on, the technical and practical skills that vocational majors learn in college become less important to continued success. Such abilities as communication skills, human relations, creativity and big picture thinking matter more. Since liberal arts faculties appear to do a better job than their vocational colleagues in fostering these qualities, graduates with traditional arts and science majors begin to gain ground.*[36]

Nevertheless, despite the advantages that liberal education may confer on its graduates in preparing them for a life of work, it is not clear that the sector is achieving much success in making its case to prospective students: by the year 2000, only 4% of baccalaureate degrees were earned at residential liberal arts colleges.[37] The stakes, then, at least for many liberal arts institutions, are currently quite high.

Liberal Studies Graduates and the Expectations of the Marketplace

Having examined the value of a liberal degree from the point of view of the college graduate, we might also briefly consider what is known about employers' perspectives and hiring practices. Studies linking graduate job acquisition to degree type suggest that employers hire professional graduates more readily than those with liberal degrees for a number of reasons. Unlike liberal arts faculty, professional faculty

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as latent value. It is a seed that needs to be planted as soon as possible after students have demonstrated basic competencies, because it leavens all learning and practical experiences thereafter. Latent value is the educator's version of . . . long-term investment. Its value grows with experience and is the catalyst that turns rote knowledge into true understanding "(2001: 12). See also Green and Salem, 1988 who also argue for the long-term payoffs of liberal learning, which, they claim, are rarely appreciated by undergraduates while in college.

[34] Lin, *et al.*, 2003: 75, 76. This research was conducted in Canada, which is experiencing debates and changes similar to those occurring in United States.

[35] Bok, 2006.

[36] Bok, 2006.

[37] Koblik and Graubard 2000: XV. Ferrall 2008 suggests that the percentage of liberal arts graduates can be expected to decline further as the supply of college students produced by the baby-boomer population comes to an end.

tend to maintain connections to the business community.[38] And though many business executives as well as liberal arts graduates testify to the benefits of liberal education, reports frequently point to the "risk-adverse" hiring practices of employers in the business sector, who hire specialists to meet their need for workers who can "hit the ground running."[39]

Liberal education is valued for developing flexibility, cultivating life-long learning, global awareness, teamwork, collaboration, and the ability to navigate change, but according to Flynn, "economic pressures were cited as a reason why many businesses have become less willing to provide specialized training to broadly educated employees."[40] In this type of market for graduates in the liberal arts, it is small wonder that an ever-larger number of students decide to hedge their bets, either by enrolling in institutions offering professional or vocational degrees or by pursuing career-oriented options available within liberal arts colleges. Given the foregoing discussion, it is not surprising to discover that students attending all types of institutions seek out courses of study that provide a more transparent connection between what they learn and what they do after college. While liberal arts colleges may continue to offer

> *. . . a paucity of professional majors . . . such colleges are a small minority. The majority of baccalaureate colleges, in common with master's and doctoral universities, award more than half of their degrees in professional studies. If we accept the conventional wisdom that liberal education and professional education are antipodes, then the fears of the founders of this Association [(AAC&U)] are justified: Professional education has become predominant.*[41]

The data on degrees granted by field and institution gathered by Brint, *et al.* for 1915-2000 bear out these trends, but also demonstrate that institutional type and status are important variables in predicting the degree of professionalization at a given institution. They show that patterns in professional *vs.* liberal degrees awarded vary by institution relative to selectivity, private/public status, region, the socioeconomic status of student populations, religious affiliation, institutional mission, *etc*. In particular, selective institutions have historically emphasized liberal learning degrees, tending to downplay any preparation for a career or, in some cases, to frame undergraduate work as preparation for post-graduate education.

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[38] Person and Rosenbaum, 2006. In their study of graduate job acquisition, Lin, *et al.*, (2003) speculate that employers need to understand the "signals" conveyed to them regarding college related experience and skill development, and that they are less familiar and thus comfortable when those signals come from liberal arts students and faculty (e.g. in letters of recommendation).

[39] Bok, 2006. On risk averse hiring see: Carnevale and Strohl, 2001; Flynn, 2004.

[40] Flynn, 2004.

[41] Fong 2004: 10.

We find a similar pattern within the disciplines According to Brint, *et al.,* traditional "liberal" areas such as psychology and economics, increasingly emphasize more careerist specialties, such as clinical and business studies. While responsive to student interest, these shifts also have a great deal to do with financial support provided through government, philanthropic, and corporate funding for faculty research, and program initiatives as well. These dynamics are part of a larger trend that promotes a greater emphasis on job-preparatory experiences while stopping short of advocating the wholesale incorporation of practical curricula out of a concern that traditional areas of the curriculum will be compromised.

To a large degree, these enrollment patterns are a consequence of the perception that career opportunities for liberal arts graduates are declining. In part, this perception reflects actual job availability in some sectors, but it is also influenced by the disconnection between the assertion that a liberal education provides a strong preparation for work and the realities of hiring practices "on the ground." At the same time, there are equally important changes in the nature of work itself, which have considerable influence on student behavior. That is, in addition to the *quantitative* dimension of the marketplace that can be understood in terms of supply and demand, there is a *qualitative* dynamic that is equally important in explaining patterns of student enrollment—one which we explore in the next section.

III. The Changing Nature of Work: The Emergence of "Knowledge Work" and the Implications for Liberal Education

In articulating the skills of both managers and employees in twenty-first century "flexible organizations," Obliger and Verville emphasize the need for ". . . people who can adapt to the organization, understand job requirements, and produce work that has a clear return—as quickly as possible" as opposed to the traditional skills required by ". . . yesterday's more rigid, hierarchical organizations."[42] A similar set of assertions is advanced by members of the Business-Higher Education Forum, who compare characteristics of the "new world of work" to the old by claiming that:

> *Today's high-performance workplace operates in markets that are a paradox: increasingly global and at the same time, fragmented and segmented. In this new world, customized products are displacing those that formerly competed on the basis of economics of scale. Meanwhile, downsized corporations are remodeling themselves from large bureaucracies emphasizing order, hierarchy, and standardization into high-performance organizations emphasizing quality, precision, and reliability. These are smaller entities that 'outsource' much of their*

[42] Oblinger and Verville,1998. See also Business-Higher Education Forum 1997; Carnevale and Strohl, 2001; National Center on Education and the Economy, 2007; and Waks 2003.

> *routine work and emphasize flexible production, fast turn around, cooperation, and teamwork in a diverse work force. For individual workers, brains, know-how, broad skills, and the willingness to learn throughout life have become the essential tools for building a career in which work with a single employer will be the exception, not the rule. In short, all of the old verities about work are now under review. It is not simply that the globe is spinning faster, forcing employers and employees to speed up just to remain in place. Rather, it is that earthquakes have occurred, causing the ground underneath to fall away and exposing new skill requirements.*[43]

The perceived shift in skills sets referred to above is typically characterized in terms of a new "knowledge worker," [44] a term that points to a convergence between the domains of work and education. According to Lewis,

> *We have been witnessing in contemporary times the personification of organizations, manifested through a new workplace grammar, predicated upon knowledge and learning. Cognitive metaphors are being employed to describe business activity. To survive in the global economy the prevailing wisdom is that firms must become learning organizations, where information is transacted within individuals and among groups, and embedded within systems. Knowledge thus engendered can be abstracted and stored in organizational memory, to be retrieved when required. As they draw upon this memory, organizations thereby expand their range of capabilities.*[45]

Lewis describes this "convergence of discourses—school-based and work-based" as "a genuine two-way street. . . . Knowledge is something that both schools and workplaces claim to be central to their existence."[46]

The broad consensus is that globalization and technology have caused fundamental changes in the structure of organizations and the organization of work, requiring brand new skill sets. "This is a world," according to one report, "in which a very high level of preparation in reading, writing, speaking, mathematics, science,

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[43] Business-Higher Education Forum, 1997: 14. On the changing nature of work see also Bikson 1996; Bikson and Law, 1994; Bok, 2006; Carnevale, 1996; Carnevale and Strohl 2001; Dutka, 2006; Herman, 2006; Hersch, 1997; Lewis, 1997, 2005; Waks, 2003, 2004.

[44] Originally coined by Peter Drucker in the 1960s to refer to new industrial workers with diplomas from technical institutes and universities, the term "knowledge worker" now connotes a shift in economic emphasis from the construction and sale of products towards the production and circulation of information as a primary unit of economic exchange.

[45] Lewis, 2005: 421.

[46] Lewis, 2005: 421.

literature, history, and the arts will be an indispensable foundation for everything that comes after for most members of the workforce."[47]

As many educators, consultants, researchers, policy makers and other stakeholders put forth descriptions of the competencies they deem most essential to a life of work, it becomes apparent that these outcomes are highly congruent with the goals of liberal education.[48] For example, one company executive explains, "We need people who think with the creative side of their brains [sic], people who have played in a band, who have painted, been involved in the community as volunteers. It enhances symbiotic thinking capabilities, not always thinking in the same paradigm, learning how to kick-start a new idea, or how to get a job done better, less expensively."[49]

To the extent that the workplace of the 21st century requires the skills and capacities that form the core commitments of liberal education, liberal educators have a golden opportunity to promote their sector by emphasizing the relationship between liberal learning and preparation for a life of work. Of course, one must not be so naive as to think that this correspondence of outcomes follows from identical interests on the part of educators and business leaders:

> *Included in the reckoning is not just what the worker can do, but whether he or she has the temperament to fit into the new socio-technical production regimes. While . . . [the required] . . . skill clusters may appear, on the face of it, to be liberal, the purpose for which they are intended in the workplace is decidedly instrumental*. [50]

However, convergence of motives is more than we require. It is enough to point out the following serendipity: at the same time that the interests of our students (and their parents) are pressing educators to articulate a more transparent relationship between liberal education and preparation for a life of work, liberal education finds itself in a position of high relevance to the emerging needs of the modern work environment.

Proponents of this vision of liberal education also assert that a liberal education will confer added value in our increasingly dynamic economy. They argue that while a liberal education may seem irrelevant in a more traditional world of work,

> *. . . [i]n a world of constant change, humans need to make connections between past and future, between their own experience and the world they live in; they need a frame of reference. . . . Higher education has a responsibility to prevent*

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[47] National Center on Education and the Economy, 2007: 6.
[48] See AAC&U, 2007: 20-24 for discussion.
[49] Casner-Lotto and Barrington, 2006: 50
[50] Lewis, 2005: 427.

> *. . . disorientation by providing graduates with the capacity to manage change and shape their own futures and that of human society consistent with enduring and shared values. Today's graduates, over their lifetimes, will experience change at an unprecedented pace. They will have not one career but perhaps many. To cope with this kind of change, they will need self-confidence and a sense of purpose coupled with adaptability and a capacity for continuous learning. A familiarity with the body of knowledge and methods of inquiry and discovery of the arts and sciences and a capacity to integrate knowledge across experience and discipline may have far more lasting value in such a changing world than specialized techniques and training, which can quickly become outmoded.*[51]

In this view, liberal education has "become the essential education for all people living in a global, technology-driven society."[52]

It therefore behooves us to consider more carefully the hesitation in the community of liberal educators to recognize the interests of career-minded students and the exigencies of the contemporary workplace as legitimate considerations in the construction of liberal curricula, pedagogies, and outcomes. In the next section, we explore the ambivalence of some educators for this project by looking briefly at the history of liberal learning in relation to the need to prepare students for a fulfilling life of work.

IV. A Historical Context and Shifting Circumstances: A Brief History of Liberal Education and Preparation for a Life of Work

Although institutional and curricular structures have shifted considerably since the founding of America's earliest schools of higher education, the relationship between liberal education and the goal of preparing students well for a life of work not only builds on but also replicates themes, trends, and tensions that historically have defined the contours of American education. From the Morrill Act of 1862, which established the public land grant colleges focused on agricultural and mechanical arts, to the controversial introduction of electives at Harvard in the 1880s, to the Smith-Hughes Act in 1917 guaranteeing federal backing for vocational education, the late 19th and early 20th century saw increasing diversification of liberal curricula and the emergence and consolidation of professional and vocational studies within the American educational system as a whole.[53]

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[51] Barker: 2000:7. Axelrod *et al.* make similar claims, stating that: "Those who assume that higher education is merely about dealing with 'known problems in known ways,' and who therefore lack the intellectual resilience to learn new skills, cope with uncertainty, or even change fields, are potential casualties in the world of employment" (2001: 54).

[52] Barker, 2000: 8.

[53] See Bok, 2006; Brint, *et al.*, 2005; Roosevelt, 2006; Waks, 2004.

Building on these developments, the integration of undergraduate liberal and practical curricula has accelerated throughout the 20th century. By World War II, many public universities increasingly incorporated "vocational majors," while even private institutions that tended to resist developing such areas of concentration made forays into professional areas such as engineering and business.[54] As early as the 1930s, it seemed that the tide had turned—that purely liberal education was on the decline, "having been gradually made over into service colleges or servile colleges, serving the ends of vocational knacks and professional skills."[55] Nevertheless, despite the introduction of professional curricula within liberal institutions there continued to be an on-going ambivalence among advocates for higher education regarding the responsibilities of liberal colleges for career preparation.

Passage of the G.I. Bill of 1945 made college an option for a much broader spectrum of individuals across classes and races, resulting in an increase in the population of students attending college combined with rising expectations that a college degree would lead to a job after graduation.[56] In many respects the economy was accommodating. The war sparked a period of economic prosperity and generated a sense of optimism and growth in industry, thereby improving the prospects for employment and catalyzing the establishment of new academic institutions and the expansion of existing colleges and universities to serve the growing student population.[57] As faculties grew larger, those in established disciplines were inclined to distinguish themselves according to increasing degrees of specialization, leading to the creation of new departments offering degrees in emerging fields. The war generated increasing focus on the social and economic promise of science and technology, with these fields gaining enhanced legitimacy and growing popularity within academia.[58]

The growth and diversification of the college-going population, combined with widespread economic and academic expansion, produced a greater emphasis on professional studies across undergraduate education. As Bok notes, American higher education became "more practical" in the post-World War II years as "new programs in vocational subjects" emerged.[59] However, the overall student population also grew, so that the 1960s witnessed an increase in the overall number of liberal degrees, as well.[60]

This complication is significant because the 1960s tend to be the period used for comparison to the present day. Authors frequently cite the fact that occupational fields

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[54] Bok, 2006.
[55] Foester, 1938.
[56] See Bok, 2006; Clausen, 2006; Lattuca and Stark, 2001; Lewis 1993, 2005; Roosevelt 2006.
[57] On the on-going fragmentation of academia and academic disciplines see Bok, 2006 and Clausen, 2006.
[58] Schön, 1983.
[59] Bok, 2006. On the post-World War II period in education see
[60] Brint, *et al.*, 2005.

constitute 60% of the BAs granted in recent years, up from 45% in the 1960s.[61] Given that liberal arts degrees were at an all-time high during the 1960s, this statistic belies an even stronger overall trend towards professional degrees throughout the last century.[62]

There was also a parallel and reinforcing change afoot in the curricula of both public and private institutions offering degrees in the arts and sciences that tipped the educational balance in favor of discipline-specific knowledge at the expense of the general education requirements.

> *Over time, the growth of [the importance of] specialized knowledge strengthened the importance of the major, and from the mid-century on, higher education was generally characterized, even at liberal arts colleges, by recurrent adjustments between the proportion of graduation requirements given to general education and that increasingly given to the major.*[63]

As this brief sketch suggests, historically—especially in the last hundred years—American liberal education has increasingly—if not purposefully and intentionally—been concerned with professional education, practical curricula, and other aspects of a preparation for a life of work. As Jencks and Riesman point out, "[The] question has always been how an institution mixed the academic with the vocational, not whether it did so."[64]

We see, then, that the historical record establishes a continuous, rather than a newly emerging relationship, between liberal and professional education in the American context. As historian Laurence Vesey notes, "When one stands back and looks at the entire pattern of the American curriculum from a distance, the changes, (aside from course proliferation) seem usually to mark variations on themes begun long ago."[65] The growing prominence of professional learning within liberal education is properly understood as a part of a complex convergence of trends that build on and exceed past precedents, while remaining consistent with cycles of growth and decline over the past century. "[A] long-term historical view," say Brint, *et al.*,

> suggests an underlying trend toward occupational-professional programs combined with shorter-term cyclical movements. Within these cyclical movements, periods of change coincided with economic declines.

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[61] Among countless others, see Bok, 2006; Barker, 2000; Carnevale and Strohl, 2001.
[62] Brint, *et al.* (2005) make this argument based upon data on degrees granted by American colleges and universities from 1915-2000.
[63] Fong, 2004: 10.
[64] Christopher Jencks and David Riesman, cited by Bok, 2006: 26.
[65] Cited by Bok, 2006; see also Waks, 2003.

> . . . By contrast, periods of prosperity are sometimes (but not always) associated with stronger preferences for the arts and sciences.[66]

Despite the contemporary dynamics of globalization, technology, and rise of consumerist attitudes toward education, the general factors conditioning these trends—class interests, diversification in demographics of the college-going population, and the nature of work itself—have remained consistent factors in the analysis.

Following the analysis of Brint *et al.*,[67] one might dismiss the recent interest (on the part of students *and* some liberal educators) in practical and professional curricula as a mere consequence of the challenging economic environment conditioned largely on the basis of "external factors," such as job acquisition, which are ostensibly outside the domain of liberal education. No doubt, tough economic times *are* partly responsible for the current trends. But this observation ignores the longer-term trajectory away from liberal learning reported above. It also ignores the opportunity afforded liberal educators to capitalize on changes in the nature of work that provide an opening to reassert the efficacy of liberal learning.

In response to these pressures, many contemporary institutions committed to liberal learning are beginning to re-examine their curricula and their marketing. Some have embraced aspects of professional studies in order to compete for students, leading them to an inclusive solution to the liberal/professional divide that results in mixed curricula that are neither purely liberal nor purely professional. Others are extending the standard liberal curriculum by re-drawing the boundary between the curriculum and the co-curriculum:

> *Simultaneously, many arts and sciences departments are placing new emphasis on "practical experience" and "applied learning" through internships, service learning, student projects, and community-based research. Many campuses are also inventing a "vertical" or four-year framework for general education, with the explicit goal of fostering new connections between students' specialized studies and their broader learning about science, cultures, and society.*[68]

Still others have redoubled their efforts to "make the case" for the relevance of the liberal education to a successful life of work.

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[66] Brint, *et al.*, 2005: 156. Research by Brint, *et al*. charts undergraduate degrees trends among colleges and universities from 1915-2000, making it possible to determine the types of degree granted by institution and discipline over time. By rating institutions in terms of region, politics, class, race, disciplines and degree types, their study indicates a powerful set of patterns for predicting probable directions by institution and discipline.

[67] *Op. cit.*

[68] *Ibid.*

While each of these approaches make good sense, as Bok has argued, any conception of liberal education that does not squarely address the students' (and their parents') desire to see a connection between the precepts of liberal education and the demands of a life of work runs the risk of becoming increasingly less appealing. Even the ability of prestigious liberal arts colleges to resist these factors may be complicated by a subtle reorganization of the status hierarchy that attracts students to college:

> *Spheres of life that clearly are to be included among the practical arts (such as engineering, journalism, law, medicine, and agriculture) today enjoy popular prestigious status and occupy the top rungs of the occupational ladder . . .*[69]

It is not surprising, then, that the inclination to defend an "ivory tower" tradition of liberal learning frequently comes into conflict with the strategy of pursuing growth in professional studies as a key to institutional survival.[70]

The foregoing trends notwithstanding, within the sector of liberal education, many liberal arts colleges—and especially the more selective among them—have been slow to articulate a transparent connection between liberal education and preparation for a life of work. Although programs have been developed that encourage students to explore various career options (perhaps through a career development center or through some other co-curricular path) at many liberal arts colleges, that is as far as educators are willing to go.[71] This hesitancy to fully engage the challenge of preparing all college graduates for (what for many will be) a life of work after college—especially in curricular terms—runs the risk of putting the liberal arts increasingly out of step with the needs and desires of its potential students.

Moreover, our preliminary research[72] indicates that many students who attend liberal arts colleges are substantially interested in their eventual careers, and consider outcomes such as being prepared to find a job, and being positioned to be financially well- off, to be an important part of what they hope to accomplish through a college education. With these interests, students negotiate the multiple paths through college—careerist and non-careerist, alike—in a variety of ways. As they have in the past, those

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[69] Lewis, 1993: 197.

[70] Bok, 2006. As Fong puts it, "Those who value liberal education cannot afford to set it at odds with professional preparation" (2001: 15). Bok, 2006: 27 asks: "[Can] one really blame universities for offering more vocational programs? Surely colleges have some responsibility to respond to the desires of students. In a system in which colleges must compete vigorously for enough applicants to fill their classrooms, they could hardly do otherwise and prosper. "

[71] Bok, 2006; Lin, *et al.*, 2003.

[72] Our analysis draws on CIRP data from each institution participating in the Teagle consortium. We focus here on a subset of questions that investigate the expectations freshman have for their college educations, early during the first year. Student responses were analyzed into factors each comprising a set of CIRP questions that contrast the extent to which students are "fulfillment oriented" to the extent that they are "career-oriented." See appendix for more information.

from lower socio-economic backgrounds are likely to continue to pursue vectors that seem to lead to jobs after graduation.

In the five liberal arts colleges in our study,[73] although student interest in their eventual careers was always rated secondary to the desire to receive an intellectually fulfilling education as a motivation for attending college, the percentage of students who considered career-oriented outcomes important ranged from about one-fifth to almost half of the sample population at each institution. At Worcester Polytechnic Institute, which is the only non-liberal arts college in our consortium and which appears to have a more career-oriented student body, we would emphasize the opposite point: approximately half of WPI students rate intellectual fulfillment as an important or very important college goal.[74]

The conclusion we wish to underscore is that student bodies—at liberal arts colleges and at other types of institutions embracing liberal learning, as well—are highly diverse in terms of their reasons for going to college and their expectations for what college should provide. The simplified notion that students with different types of careerist and non-careerist motivations sort themselves out by program of study or by institution type is improbable, and although there may continue to be a rhetorical opposition between "education for the purpose of developing skills" and "education for the purpose of developing the mind," students are redrawing these borders on the ground.

When we consider the interests of our students, it becomes apparent that the prospects of success for liberal education are connected to the ability of liberal educators to make the case that a liberal degree provides a suitable background for entering into life after college and that there is no contradiction between the fundamental goals and values of a liberal learning, however construed, and the desire of students to find a connection between their education and preparation for a life of work. In the next section, we consider more carefully the multiple meanings of "liberal education" in an attempt to make this argument more cogent.

V. Four Conceptions of Liberal Learning and their Implications for Preparation for a Life of Work

Liberal education is a distinctively American[75] form of undergraduate education— an approach to learning that is at once powerful in conception and multiordinal in meaning. Indeed, although it is possible to trace the lineage of liberal learning in its contemporary form through centuries of practice all the way back to the

[73] Berea College, Cornell College, Hampshire College, Smith College, and Warren Wilson College.
[74] See Appendix 2 for the data.
[75] See Koblik and Graubard, 2000.

ancient world,[76] many of today's students, faculty, and administrators at self-identified institutions of liberal learning are variable and sometimes inconsistent in their understanding of what this approach to education is about.

Part of the challenge of explicating liberal learning is a consequence of the fact that it can be understood at several different levels of analysis. Sometimes we think about liberal learning in terms of the *values, habits* and *dispositions* it seeks to inculcate. Alternatively, liberal education may be construed as a learning environment that generates certain kinds of *outcomes* or *abilities*. On a third view, liberal learning is associated with *content*—a specific set of disciplinary areas students must master, or more generally, with the aim of encouraging a broad, properly contextualized education. Finally, in a more recent construal, liberal learning constitutes a *mode of inquiry* applicable to a wide range of curricula and inclusive of a many kinds of pedagogies (even across the traditional liberal/professional divide). In the next few sections, we will consider these alternative formulations of liberal learning in an attempt to better understand the relationship between liberal education and preparation for a life of work. We will suggest that no matter which conception of liberal education one chooses, it is easy to identify a compelling reason for establishing a powerful and transparent connection between these endeavors.

Liberal Education as Values and Dispositions

In one predominant construction, liberal education is devoted to the cultivation of a set of intellectual dispositions and values that concern "the life of the mind." Through engagement in the "pure" pursuit of knowledge carried out through a program of personal development[77] that provides an "intellectual, cultural, and emotional experience . . . ,"[78] "[w]hat matters is that the material should engage the student's intellect and sensibility, that he [sic] should be held to the highest possible standards of thought, and that his [sic] activities be free of the extraneous career consequences of the professional school."[79]

This conception of liberal learning is avowedly anti-instrumental in that knowledge is valued "for its own sake." The interpretation seems to privilege theoretical knowledge over practical knowledge while defending the virtue of ratiocination independent of the possible applications or "relevance" of the knowledge obtained. However, there are other values that are commonly associated with liberal learning that have a more instrumental character—the development of moral judgment and the cultivation of the skills of effective citizenship, for example. In these two cases, it is not enough just to know about moral reasoning or to have studied the history of

[76] See Connor, (nd), for example.
[77] AAC&U, 2007
[78] Wolff, 1992.
[79] Wolff, 1992.

citizenship; these values come with normative aims, suggesting that the liberal dividing line between knowledge and action is perhaps not so cleanly drawn. [80]

Finally, in a related formulation, along with the aforementioned liberal *values*, we can also identify "life-long learning" as a closely associated personal *disposition* that liberal education hopes to develop. Here, the emphasis is less on specific knowledge (which is ephemeral), but rather on cultivating those "habits of mind" that will serve one well in all future inquiries.

From this values/dispositions perspective, a frequently established point of distinction for liberal education is that, unlike "servile education," which aims at preparation for "bodily labor, mechanical employment, and the like in which the mind has little or no part . . . liberal education and liberal pursuits are exercises of mind, of reason, of reflection."[81] This disconnection has been acknowledged—more with concern than with approval—by members of the business community going back more than one hundred years.[82] By grounding its mission in philosophical and epistemological premises that privilege the intrinsic value of intellectual and scholarly work, this conception of liberal education also serves to isolate the goals of liberal learning from the exigencies of career preparation.[83] No wonder that, in this analysis, liberal education has been interpreted as "an option for the fortunate."[84]

Connecting the Values of Liberal Education and Preparation for a Life of Work

Granting that one legitimate conception of liberal education embraces the premise that liberal learning should develop certain values and dispositions, it is important to consider carefully and in their entirety *which* values and dispositions ought to motivate the enterprise. To be sure, if we restrict our attention values such as

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[80] For this reason, not everyone accepts the argument that the purpose of liberal learning is to inculcate values. See for example, Fish (2007), who argues that, "…you have no chance at all (short of a discipleship that is itself suspect and dangerous), of determining what [students'] behavior and values will be in those aspects of their lives that are not, in the strict sense of the word, academic. You might just make them into good researchers. You can't make them into good people, and you shouldn't try."

[81] Newman, 1996. See also Foester, 1938. Foester notes that at least since the renaissance, the exclusive association of liberal education with the needs of *free* men managed to sever any connection between liberal education and work on class grounds. Connor (op. cit.) locates the same opposition—between education for free men and education for slaves—in the positioning of liberal education in ancient Athens.

[82] For example, Andrew Carnegie, writing in 1899, wistfully notes that what is taught in college "seems adapted for life upon another planet. . . . College education as it exists is fatal to success in that [business] domain." Cited in Vesey, 1965. See also Meiners, 1995.

[83] See above for discussion. Also, see Lewis, 1993: 197–"The platonic culture was a slave owning culture. The high ground of philosophy was reserved for the leisured class. The toil of slaves, artistic, or otherwise, could be valid—of epistemological consequence—only in the abstract, never of itself." On Plato, Artistotle, and liberal education see Lewis, 1993, 2005; and Roosevelt, 2006.

[84] AAC&U, 2007

"learning for its own sake," we will come quickly to the conclusion that liberal learning and preparation for the pursuit of a fulfilling career are two independent projects.

However, by expanding this narrow reading of liberal values, we can seize an opportunity for liberal education to address what Lagemann (2003) calls "a disturbing paradox":

> *On the one hand, student course selection indicates that they want their college education to prepare them for careers. On the other hand, by contrast, those students who attend our most selective colleges and universities – all of which, I might add, consider themselves liberal arts colleges and universities – graduate without a clear sense of vocational direction. At a time of extreme social challenge, we seem to have few alternatives between clear, and inevitably, rather narrow vocational preparation and seemingly directionless programs of liberal study.*[85]

Bok notices the same dilemma, which he develops by contrasting the distinct interests of faculty and students:

> *The members of Arts and Science faculties have special values and priorities, like all professionals. Above all, they are pre-occupied with the challenge of discovering and transmitting knowledge and ideas. To them, knowledge is not a means to other ends; it is an end in itself–indeed, the principal end of academic life. Most students, on the other hand, have different reasons for acquiring a college education. They tend to look upon knowledge and ideas less as ends in themselves, and more as a means toward accomplishing other goals, such as becoming better, more mature human beings or achieving success in their careers.*[86]

Research comparing data on the perspectives of campus presidents, administrators and faculty offers a more complicated view of the competing value systems present in the domain of liberal education.[87] Surveys of campus presidents and administrators indicate that the goal of better preparing students for a life of work—a goal to which they are sympathetic—could very likely be addressed through curricular innovations. However, they considered this domain to be largely controlled by the faculty and therefore outside of their immediate purview.

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[85] *Ibid.*

[86] Bok, 2006.

[87] See the Business-Higher Education Forum, 1997. See also Barker, 2000.

For their part, most faculty devoted to liberal education

> *. . . have little contact with business personnel, are inclined to insist that job preparation is not their concern, that the university was created as an independent critic of the larger society, and that the life of the mind need not be sullied by the world of commerce and finance. Many representatives of this group are skeptical about the corporate world, and some were openly hostile to it.*[88]

However, if we include, as Lagemann (2003) does, the development of *a sense of vocation*, as one of the core values of liberal education, we can soften this conflict in values. It becomes a fundamental obligation for liberal education to help students to move beyond the development of appropriate intellectual values by also learning to appreciate the value of an examined life:

> *The word* vocation *implies more than earning a living or having a career. The word* vocation *implies having a calling: knowing who one is, what one believes, what one values, and where one stands in the world. . . . Granting then that a sense of vocation develops over time, it is not unreasonable to suggest that one of the purposes of a college education, and a central purpose of liberal education, should be to nurture an initial sense of vocation.* [89]

Although developing a sense of vocation is not to be narrowly identified with more specific life goals such as choosing a career or becoming equipped with specific job skills, there is no doubt that to the extent that our students develop this reflective ability, they will be better prepared for the pursuit of a fulfilling career. Furthermore, this sense of vocation is consistent with and complementary to the other more intellectual liberal values we have been discussing. Moreover, a case can be made that to truly facilitate the intellectual goals of liberal education presupposes the development of personal identity that is implied by Lagemann's sense of vocation: one cannot learn to appropriately value knowledge and to develop the habits of moral reasoning without reflecting on one's place in the world, on one's personal values, and on one's sense of purpose.

Lagemann (2003) picks up on this theme by emphasizing the ways in which developing a student's sense of vocation is crucial to promoting other traditional values of liberal learning such as cultivating effective participation in a democratic society and educating for social responsibility:

> *By giving renewed emphasis to their vocational purposes, liberal arts colleges and universities can help people live productively, responsibly, and well, amidst*

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[88] Business-Higher Education Forum, 1997.

[89] Lagemann (2003: 8)

> *all the confusions of the present times. By making matters of vocation central to all that they do, liberal arts colleges and universities can play a more direct role in improving the world. This is not to say that detached, seemingly idle speculation and abstract knowledge do not have value – great value – in institutions of liberal learning. They do. My concern is balance and underscoring the educative power of vocational interests. The famed psychologist Kurt Lewin once said, "There is nothing so useful as a good theory," and following his logic, I would like to close by saying: There is nothing more liberal or liberating than education approached with matters of vocation foremost in mind. Our students seem to know that. We should give them the kind of education they want and deserve.*[90]

What the development of a sense of vocation will require in terms of programs, curricula, and pedagogy remains to be fully determined. It seems likely, however, that promoting certain forms of experiential education (such as internships and community-based learning, for example) and developing co-curricular activities such as life success workshops and the activities of a career development center will be part of the strategy. It is also likely that the integration of these activities with curricular initiatives through global study and the pursuit of a more transparent connection between knowledge (or theory) and practice (or application) will be important components of a successful approach.

Liberal Education as Learning Outcomes

A second, alternative conception of liberal education focuses not on values and dispositions, but on *learning goals* such as problem solving, critical thinking, openness to diversity, skill in analytic writing, skill in quantitative analysis, *etc.* From this point of view, liberal education provides a learning environment incorporating pedagogies and curricula that promote the achievement of specific learning objectives. The emphasis here is less on the kinds of specific or technical knowledge that are associated with practical curricula, but rather on the development of fundamental skills that will serve students well, no matter what their future circumstances or life challenges. The attainment of these learning objectives is intended to prepare students for life-long learning, as discussed above.

In the context of the current assessment movement, many colleges and universities are at work defining learning outcomes for every conceivable stage of the curriculum. One frequently encounters first-year programs, general education requirements, departmental major requirements, and capstone requirements for example, that are cashed out in terms of learning objectives (typically, matched with course or other requirements through which students satisfy these requirements).

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[90] Lagemann, 2003: 13.

AAC&U, in particular, has invoked reference to these learning outcomes to identify what is distinctive about liberal education.[91]

Although it is difficult to dispute that many of these learning outcomes are important in liberal education, it is less clear that these goals suffice to distinguish liberal education from professional and vocational education. As one consideration, the argument that liberal education uniquely promotes particular learning outcomes must take account of the movement in professional schools to incorporate many of the goals of liberal learning into their learning objectives:

> *It is in everyone's interest to create new crosswalks and communal spaces that support educational collaboration across the traditional dividing lines between the liberal arts and sciences and the professional fields. But if collaborations are to succeed, they need to be based on shared goals. The essential learning outcomes, which place strong emphasis on teaching students to integrate and apply their learning, provide this larger sense of shared interests.*[92]

Indeed, over the last two or three decades, liberal educators working within institutions providing professional education have responded to arguments that liberal learning outcomes are important aspects of career preparation by acknowledging the need for liberal learning as "a necessary component of vocational education" that offers "insights into the scientific, social, historical, and ethical issues that arise in any particular occupation."[93]

More generally, professional training is becoming increasingly congenial to infusion of new dimensions offered by paradigms of liberal education. As Axelrod, *et al.* explain, "In encouraging students to question received wisdom and to probe such topics as the relationship between technology and social change, liberal education can effectively broaden the perspectives of engineering, computer science, and other technically–minded students."[94]

The same trajectory can be observed in some segments of vocational education in which "more and more advocates of vocational education have been seeking to advance its cause by proposing its integration with academic education," thereby de-emphasizing its typical boundaries limited by utilitarian, skill-specific, job-oriented traditions.[95] Advocates like Lewis are developing formulations of "liberal vocational education" that would entail, for instance, the integration of liberal and vocational

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[91] See AAC&U, 2007, among other references.
[92] AAC&U, 2007: 18.
[93] Whitelaw, 1983.
[94] Axelrod, *et al.*, 2001: 54.
[95] Lewis, 1993: 191. This shift, Lewis argues, is consistent with an overall "downgrading" of practical skill within the knowledge economy (2004). See also Schön, 1983.

approaches to teaching about technology that combine technical competence with civic purpose.[96] In this way, he makes a distinction between learning "about work" and "for jobs."[97]

As a result of the movement in professional and vocational sectors of higher education to incorporate at least some of the outcomes of liberal education, the argument that only institutions devoted to a liberal arts curriculum can substantially advance the goals of liberal education is unpersuasive. In fact, it is possible to make a case that professional schools are in the best position to offer career-oriented college students (i.e., increasingly, *all* college students) an appropriate mix of intellectual and practical experiences, while those institutions pursuing a traditional liberal arts curriculum end up offering a more limited educational experience. As Green and Salem point out, at the same time that there is a liberally-informed interest in moving the central goals of professional training from a focus on "can do" to "why do," liberal education without attention to practical applications runs the risk of being labeled as irrelevant.[98]

A second consideration that complicates the identification of liberal education with a particular set of learning goals derives from recent analyses of student learning that attempt to establish the extent to which colleges and universities are achieving their principal learning objectives. Unfortunately, where most of the learning goals associated with liberal learning are concerned, the available data suggest a conspicuous lack of evidence of success. For example, Bok asserts that there is little direct support for the claim that a liberal education produces intended cognitive outcomes (such as critical thinking) to the degree that we would wish.[99] Where moral dispositions and ethical

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[96] Lewis, 1991,1997, 1998; see also Fong's comments on liberally taught computer science (2001). Lewis describes a similar pattern in recent vocational education legislation, which privileges integrationist frameworks in order to accommodate federal priorities for academic (instead of utilitarian) approaches to career-oriented learning (1997). Bok makes similar claims with regard to pressure to develop competencies associated with liberal education in professional studies (2006). Paralleling the term "liberal vocational education," Hersh cites commentary that professional education is now a "metaphor for 'efficacious liberal arts college learning'" (1997).

[97] Lewis, 1997. Murray (2007) offers another critical vocational perspective on these matters. He argues that four-year residential colleges are inefficient for students seeking practical courses, likening it to "a system that tries to turn out televisions on an assembly line that also makes pottery. It can be done, but it's ridiculously inefficient." Two-year colleges, by contrast offer "faster and more efficient ways for young people to acquire credentials to provide to employers," given that "two years is about right for learning many technical specialties, while four years is unnecessarily long." Murray's arguments indicate that just as liberal educators look down on their vocational counterparts, so too vocational educators hold the greater relevance of what they do up against a privileged and ineffective system of liberal learning that places a "false premium" on a college degree.

[98] Green and Salem, 1988.

[99] Bok, 2006. For example, "The most important step that Arts and Science faculties can take is simply to do a better job of achieving the traditional goals of liberal education. . . ." (Bok 2006: 305). The recent results of the Wabash National Study of Liberal Arts Experiences lead to the same conclusion.

behavior are concerned, there is even less evidence to suggest that liberal educators are successful in inculcating these goals.[100]

Liberal Learning Outcomes and Business Competencies

In the preceding section, we considered an interpretation of liberal learning which is closely identified with a set of learning outcomes, including critical thinking, problem solving, etc. Acknowledging that these goals are indisputably central to the project of liberal learning, we discussed the observations that a) a commitment to these learning objectives may not clearly distinguish liberal education from other types of higher education, and b) that there is a paucity of evidence indicating that liberal education achieves these learning goals to a sufficient degree. Putting these complications aside, in this section we consider the implications of a learning-goal centered interpretation of liberal learning for our investigation of the relationship between liberal learning and preparation for a life of work.

As a point of departure, we observe that the learning goals that are claimed to be essential to liberal education correspond very closely to aspects of competency that the world of work demands and which lead to long-term job success. [101] Contrary to the popular opinion that practical skills (such as those that are claimed to be developed through practical curricula) are best suited to the contemporary workplace, it is "[t]he critical issues unsolvable by technology—such as team interaction, workflow management, and tough persuasion—[that] go begging for the very skills that are developed through a liberal education."[102]

Lewis situates these arguments in a larger context:

> *Anthony Carnevale, Leila Gainer and Ann Meltzer presented what in the United States has become a well-known schema of the skills employers want that is both prototypic for and congruent with new conceptions of the knowledge economy and of the learning organization. Their reasoning is that in a learning organization, where flexibility and quick-change are keys to competitiveness, workers must be intellectually nimble. Thus, they must be equipped with* basic skills *of generic character, such as teamwork, creative thinking and problem solving. These so-called "basic skills" are an admixture of cognitive competences as well as affective capabilities, informed by emerging, more expansive conceptions of intelligence such as can be seen in the formulation of Howard Gardner (1999).*[103]

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[100] See also Pascarella and Terenzini (2005), who suggest that the available evidence supports what Bok characterizes as "weak" gains in moral development during college years.
[101] For example, see comments of Clark Kerr as discussed in Sandeen,1976.
[102] Dutka, 2006: 34.
[103] Lewis, 2005: 427

Bok provides similar arguments that closely mirror those put forth in the corporate sector, this time from within the ranks of liberal education:

> *. . . [W]hen business leaders describe what they most need from the young managers and engineers they employ, they regularly stress not only strong communications skills and an ability to think critically and solve problems, but also a capacity to collaborate with others and work with diverse populations, a sensitivity to ethical problems, a strong self discipline and for increasing numbers of companies, an appreciation of global issues and an ability to understand foreign cultures.*[104]

As a case in point, the list below presents an extended itemization of the capacities that are considered to be desirable workplace skills and useful content areas with which prospective employees should be familiar:[105]

- Critical Thinking/Problem Solving
- Oral Communication
- Written Communication
- Teamwork/Collaboration
- Diversity
- Information Tech. Application
- Leadership
- Creativity/Innovation
- Lifelong Learning/Self Direction
- Professionalism/Work Ethic
- Ethics/Social Responsibility

This list is virtually co-extensive with most standard presentations of the learning goals for liberal education.[106] We conclude that to the extent that liberal education is understood to promote learning goals such as critical thinking, problems solving, *etc.*, these objectives are highly compatible with the skills and capacities identified by business leaders as part of a desirable preparation for a life of work. The implication that the goals of liberal learning are somehow at odds with the goals of the business community is not supported by this analysis, and to the extent that liberal

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[104] Bok, 2006: 305. However, at the same time that some within the sector of higher education make a case for the ever-increasing importance of critical thought for the cultivation of a well-educated workforce, others are pessimistic about the encroachment of economic agendas. "It is precisely now as we enter the 21st century, when market values have encroached on every area of social life, that we most need a robust politics to serve as a counterpoint to commercialization." (Roosevelt, 2006: 1418). These arguments move back and forth between aligning liberal and professional goals and distinguishing liberal learning from that presumed to take place through specialized and professional studies.

[105] Adapted from the 2007 report "Are They Ready to Work?"

[106] Compare to the list of learning goals presented in AAC&U 2007, which, except for terminology (and the absence of reference to content areas) is essentially identical.

education achieves its self-stated objectives, its students would seem to be well prepared for a life of work.

Unfortunately, the relatively weak evidence provided by educational research (which we discussed above) that liberal learning is achieving its central learning goals is paralleled by concerns on the part of some business leaders about level of basic skills college graduates entering the workforce possess. Many, according to Flynn,

> *. . . have complained that the new white-collar employees from all backgrounds arrive with insufficient competence in communication and analytical skills and lack necessary organizational abilities. They also express doubt that colleges and universities are, in fact, preparing individuals for lives of civic responsibility and societal leadership. And the recent wave of corporate scandals has made clear to all that many otherwise well-educated and successful individuals lack the ethical perspective necessary to keep their moral compasses pointed in the right direction.*[107]

As a consequence of these perceived shortcomings, many business leaders feel obligated resist the need to provide what they consider to be foundational training "on the job":

> *. . . L]eaders – particularly those in small and medium-sized firms – emphasized that they rely on colleges and universities to lay the foundation of undergraduate education. . . . Leaders make it clear that though they have neither the inclination nor the expertise to suggest comprehensive curriculum revision, they insisted that the current state of affairs is unacceptable and that many of the skills and abilities they seek can – and should – be taught on campus.* [108]

In general, as Waks notes, "The corporate sector wants a steady supply of knowledge professionals and high skill workers," and "It has not been satisfied with the products of mainstream education."[109] This conclusion accords with that of Bok, cited above, who suggests that liberal education must do a better job of achieving its learning goals for its own sake and for the purpose of better preparing students for a life of work.[110]

Liberal Education as Content

A third characterization of liberal learning emphasizes not values or outcomes, but rather *content*:

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[107] Flynn, 2004: 5
[108] Business-Higher Education Forum, 1997: 22
[109] Waks, 2003: 404
[110] Bok 2006: 305

> *. . . in this viewpoint . . . certain subjects, mainly in the humanities, are central to the liberal arts. The study of literature and languages, philosophy and history were typically cited as core subjects. These were set apart from more practical studies and concerns, even as relentlessly and proudly impractical.*[111]

By restricting the range of liberal learning in this way, a boundary is established between the curricula of liberal education and those of professional and vocational institutions:

> *As a result of the last curricular revolution, liberal or liberal arts education is conventionally defined as study in selected academic fields: the humanities, the social sciences, the sciences, and, by the last quarter of the twentieth century, the arts, as well. The many professional and applied fields – including engineering, business, education, and health – have not traditionally been seen as part of a liberal education.*[112]

This way of dichotomizing liberal education and professional education treats institutions of liberal learning and professional schools as if they operate in different spheres.[113] Embedded in this argument is the notion that liberal education transcends even the broadest interpretation of professional competence, and that the needs of career-oriented students need not be addressed by a liberal curriculum. Distinguishing liberal from professional education in terms of areas of content (rather than in terms of values or outcomes) also sets up a status-marked continuum running from liberal "learning" through professional "studies" to vocational "training." For example, Bok argues that there is a

> *. . . tendency of vocational education to offer training without intellectual depth. However worthy their place in the economic order, hotel management, mortuary science, and public relations do not engage the frontiers of thought in the same way as mathematics, physics, or philosophy. Much of what students need to prepare for these callings takes the form of practical skills rather than the kinds of knowledge that are the intellectual's stock in trade.* [114]

The result of this positioning of liberal learning is significant, since this way of characterizing the space of possibilities for rising college students runs the risk of categorizing liberal education as irrelevant or unavailable for many:

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[111] Paris, 2007: 2.
[112] AAC&U 2007: 18.
[113] See Barker, 2000; Bok, 2006; Business-Higher Education Forum, 1997; Flynn, 2004; and Lin, *et al.*, 2003.
[114] Bok, 2006: 281. In this statement, Bok illustrates Lewis' arguments about a persistent bias against vocational learning (Lewis 1993; 2005).

> *The resulting lines of demarcation guide students' educational choices to this day on thousands of campuses. Because of the inherent dividing lines, millions of college students are routinely compelled to choose either a liberal arts and sciences pathway or a professional pathway just to fill out their college applications.*[115]

Any characterization of liberal education on the basis of its disciplinary content presumes a relatively sharp boundary separating liberal from professional and vocational education. However, as one decade's vocational subjects—computer science and journalism are two examples—have now slid across the semi-permeable membrane of the liberal arts to become part of the next decade's liberal curriculum, the traditional distinction between what is liberal and what is practical is, at the very least, a moving target.

Furthermore, as Fong has observed, "The definition of liberal studies has always been fluid"[116] His analysis recalls debates in the 1890s about whether chemistry should be included as part of the liberal curriculum noting that "of course chemistry and other experimental sciences are now universally accepted as essential parts of the undergraduate curriculum."[117] Moreover, the proper domain of the liberal arts continues to be in dispute. As Fong explains,

> *Many liberal arts colleges offer economics as a major, but not business, because business is too 'applied.' Some universities have concentrations in art history and music history, but they abjure majors in studio art, music performance, or theater because the latter are 'technical' rather than liberal. Meanwhile, many colleges and universities offer majors in education, nursing, and dance as avenues toward a liberal arts degree.*[118]

In short, it is difficult to maintain a historically grounded argument for a conception of modern liberal education that sees its interests as sharply divorced from disciplines concerned with applied and practical knowledge, and hence from the world of work. Not only does such a view fail to explain the vicissitudes in the content areas within the liberal arts, but it also cannot explain the current configuration of liberal curricula—a landscape, we have argued, that has emerged from the dynamic tension between the desire for a fulfilling education and the pursuit of a satisfying career, among many other factors.[119]

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[115] AAC&U, 2007: 18.
[116] Fong, 2001: 14.
[117] *Ibid.*
[118] *Ibid.*
[119] In particular, changes in the demographics of the college-going population over the last sixty years have been also been important to explain this trend. See above for discussion.

Connecting Content-based Conceptions of Liberal Education with Preparation for a Life of Work

Although a strict interpretation of liberal education in terms of particular areas of content seems ahistorical and does not hold up well under critical scrutiny, there are several intuitions underpinning this conception that can and should be salvaged. Although it is problematic to view liberal curricula as forever fixed in time, the weaker notion that *at any given period of time* there are certain areas of inquiry that achieve particular importance is easier to defend.

These areas of inquiry, taken together, constitute the domains of knowledge and learning with which we expect "a well-educated person" to be conversant. This list will be (and should be) controversial, and will be subject to constant revaluing and revision. No doubt there will be competing versions of this "canon," as befits a contested, dynamic construction. Nevertheless, surviving the appropriate level of contestation, certain generalizations emerge: students must be familiar with the history of their nation-state; they must be familiar with science and the arts, with social science and the humanities; they should become familiar with other languages and cultures; and they should become facile with several types of media. About these, and many other curricular requirements, there is substantial agreement across a wide range of institutions of liberal learning.

There are also certain higher-order content expectations for liberal learning that deserve to be maintained. One example that is frequently cited is the expectation of intellectual breadth. More generally, much of the motivation behind conceptualizing liberal education in terms of content can be recaptured in a less dogmatic and more fluid way in the context of a dynamic liberal curriculum. Although we may continuously update the traditional list of liberal disciplines and continue to question the artificial distinction between what is liberal and what is practical, much that is important in content-based conceptions of liberal learning survives these critiques.

Furthermore, on this relativized "content interpretation," liberal learning is transparently related to preparation for a life of work. Consider in this regard the following list of content areas deemed important by one organization of contemporary business leaders:[120]

- *Spoken English*
- *Reading comprehension*
- *Writing*
- *Mathematics*
- *Science*
- *Government/Economics*
- *Humanities/Arts*

[120] Adapted from the 2007 report "Are They Ready to Work?"

- *Languages*
- *History/Geography*

One of the most striking things about this list is the degree to which it corresponds to typical expressions of curricular breadth that are expected by most institutions of liberal learning.[121] We conclude that an appropriate content-based interpretation of liberal education provides for a substantial connection with the project of preparing students for a life of work.

Liberal Education as Mode of Inquiry

We turn now to one final way of understanding liberal education in which it is construed as a generalized *mode of inquiry*. From this point of view, there is nothing about an area of investigation *per se* that makes it "liberal" or "practical," and many areas of investigation can be taught in ways that promote the central learning outcomes associated with liberal learning.[122] Rather, what is essential to this conception of liberal learning is the generalized intellectual lens that is brought to bear on an object of inquiry—one which places the subject matter in a socio-historical context; which pursues appropriate multiple cultural perspectives; which seeks to integrate multiple sources of knowledge, information, and expertise; and which cultivates an appropriate critical perspective.

Such an approach to liberal learning will necessarily draw from a range of curricula and pedagogies from both sides of the traditional liberal/practical divide. Indeed, we have commented above that faculty in professional disciplines are already finding ways to incorporate the practices of liberal learning into their approaches to undergraduate education.

> *Movement toward this needed remapping has already begun. The long-standing boundaries between the professional fields and the arts and sciences have started to blur. Engineering and technology fields have forged the way. The Accrediting Board for Engineering and Technology now looks to evidence that programs are teaching students to integrate their liberal arts competencies with their technical studies [reference omitted]. Similar developments are emerging across many professional fields, and on many campuses.*[123]

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[121] There is a wide range of curricular mechanisms that different institutions employ to achieve this breadth. Note, in particular, that even so-called "open curricula" aim to cultivate a conception of breadth that is similar to that which is enforced by distribution requirements at other institutions—they just rely on advising, among other normative devices, to produce the desired results. See Bok, 2006.

[122] Thinking back to Bok's example of mortuary science, is it really so hard to accept the possibility of teaching this discipline in a way that incorporates an introduction to basic science, quantitative skills, history, religion, etc.?

[123] AAC&U 2007: 19.

Because it blurs the distinction between pure and applied work, this final construction provides for a different type of linkage between the goals of liberal education and the goal of preparing students for a meaningful life of work. By breaking down the boundaries between liberal and professional education, it becomes possible to conceive of an integrated approach to education that combines elements of both approaches in a way that reinforces the aims of each. In this view, both the curricula of professional schools and the curricula of liberal arts colleges can be pursued with the benefit of the mode of liberal learning. Some of the programs at Smith College *(i.e.*, its Engineering Program) and Worcester Polytechnic Institute (*i.e.*, its Interactive Qualifying Project), described below, provide examples of this approach.

We conclude this survey of the dominant contemporary conceptions of liberal learning by emphasizing that the preceding interpretations work collectively to justify the claim that liberal education must be concerned not only with the cultivation of the intellect, but also with nurturing the dispositions, values, abilities, and habits of mind that are pre-requisite to pursuing a fulfilling life of work. The institutions involved in the present project have each embraced this challenge, and are all concerned with the development of creative and effective programs to help students make a connection between their education and their eventual careers. As we shall see in the next section, each has developed approaches intended to address this central problem in their own way. In every case, the programs we describe are powerfully in accord with the principles of liberal education while at the same time providing an important element of preparation for a life of work.

VI. Case Studies

Although each institution involved in the current project is engaged with the central inquiry of this White Paper concerning the relationship between liberal education and the preparation for a fulfilling life of work, this common interest is instantiated on our campuses through a distinctive set of practices and in the context of highly individualistic campus cultures. Indeed, it is the variety of programs and the range of conceptions of what constitutes adequate preparation for a life of work that give dimension to our inquiry and that augur well for the usefulness of at least some of our approaches for other institutions interested in these questions. Whereas the previous sections of this paper have presented an argument in favor of a purposeful connection between liberal education and the process of preparing students for their lives and careers after college, the present section amplifies our position by briefly presenting some examples drawn from innovative institutions that have addressed themselves to this challenge. For readers wishing to learn more about our campuses, we repeat this information in the context of a richer set of institutional profiles in an appendix at the end of the document. Some of the interview data presented here and in these campus profiles derives from interviews and focus sessions carried out as a part of the current project.

Berea College[124]

At Berea College all students receive a full tuition scholarship and must work at least 10 hours per week in a campus job. Berea's Labor Program is an integral part of the educational program with regular performance evaluation tied to learning outcomes including skill development, work ethic, leadership, and social responsibility. Students work in all areas of the College such as on grounds and facilities crews, in offices, in the computer center and library, as teaching assistants, and in community service programs. Work assignments may, but do not necessarily, relate to students' academic and professional interests. The work program contributes to college operations and is part of its mission to cultivate a strong work ethic and to blend academic and experiential learning. The College's mission explicitly states its commitment "to provide for all students through the Labor Program experiences for learning and serving in community, and to demonstrate that labor, mental and manual, has dignity as well as utility."

Half of Berea's students major in career-oriented subjects such as nursing, education, business, technology, and other professional studies. Half major in liberal arts disciplines. Berea offers a comprehensive liberal core curriculum required of all students and extending across all four years of enrollment.

A Berea education is also characterized by leadership and service opportunities, a racially and culturally diverse student body, a focus on environmental sustainability, and applied learning through the work program and within the curriculum. Approximately 50 percent of Berea's students participate in international study programs, typically during the January and summer terms. Ten percent participate in academic internships in addition to their work program participation. Berea also has extensive service-learning programs in which over 50% have participated by the time they graduate.

Berea's investment in integrating the liberal arts with work relates directly to its mission to provide equal access to education for the underserved. Given their economic marginalization, most Berea students arrive with a limited sense of the types of work options that exist in society. The College's premise is that a liberal arts education makes it possible for them to explore and enter into a much broader world of work than they would have considered possible for themselves. The provision of experience, knowledge, and training for future work is not optional but is an imperative for the student population served by the college.

Over the years, the College has used national surveys to gather feedback from graduates. For this study, 10 graduates were surveyed and interviewed in depth regarding their educational and work experiences. Overall, Berea graduates report

[124] See Institutional Profiles in Appendix I for more information about the institutions discussed here.

significantly higher levels of career preparation compared to national cohorts. In the more detailed survey/interview, graduates emphasized their comprehensive, well-rounded education, and strong background in writing in particular, as contributing to their success. Most of these graduates described themselves as doing significant amounts of on-the-job learning because of a lack of field-specific preparation for their current work. They did not view this as a problem because graduates felt they learned "how to learn" at Berea where emphasis is placed on continuous learning.

Cornell College

Cornell College is a selective residential liberal arts college with a unique academic calendar, known as the block plan or One-Course-At-A-Time (OCAAT), whereby students take, and faculty teach, one course at a time in three-and-a-half-week units (or blocks). The OCAAT calendar is well suited for a number of programs and opportunities, offered by the college, to help students make connections between a traditional liberal arts education and a life of work. These efforts are grounded in the college's commitment to a liberal arts education as an end in itself as well as in recognition of the liberal arts as providing an excellent means to helping students develop a sense of vocation. The programs below outline some of the ways in which Cornell College is responding to the current situation pertaining to liberal arts education and the world of work.

At Cornell, students have the opportunity, through internships, to gain intensive experience in fields of interest to them. Students can do credit-bearing internships through their departments on a pass/fail basis. Internships usually involve full-time work over the course of one 3½-week term and can also extend over 2 or even 3 terms, with credit received for the equivalent of one course per term of the internship. Internships are planned with the student's faculty sponsor to ensure adequate course preparation and appropriate relationship to the student's field of interest. Organizations are responsible for developing specific projects for students to complete in the course of their internship.

In recent years the college founded two interdisciplinary centers, which offer programs with significant linkages between a liberal arts education and professional life in the arenas of health care and economics and public policy. *Dimensions: The Center for Science and Culture for Health Care*; and the *Berry Center for Economics, Business and Public Policy,* sponsor courses located within associated academic departments, offer internships and seminars, host alumni and other guest speakers, and fund curriculum development in related topic areas.

Work has also begun on a Project for Civic Engagement and Social Responsibility. Consistent with Cornell's mission, the Project seeks to combine academic and co-curricular components to motivate students for a lifetime of responsible public citizenship. Among the Project's components are a lecture series,

internships at nonprofit and community organizations, service opportunities, and coursework in a number of departments.

Recently, Cornell has capitalized on the unique strength of its academic calendar by establishing the Cornell Fellows Program. This program seeks to develop a set of signature internships around the country. Funded by an alumnus who did an internship that he felt led directly to his future professional success, the program has established internships that build upon close connections between faculty sponsors and institutional mentors, allowing students to be placed in internships that are tailored to their academic and career interests. These internships require application and carry funding to offset expenses for housing and transportation. Interns engage in extensive reflection and complete a major project designed in cooperation with their institutional mentors.

Cornell offers professional majors in education and kinesiology and has a strong record of using a liberal arts approach to prepare students for careers in these fields. For each major the college takes the position (1) that a liberal arts institution is an ideal educational setting to pursue this study because it places the field in a larger context provided by breadth of study, and (2) these majors can also serve the goals of liberal education—such as writing, research, and problem solving.

Approximately one-third of Cornell's graduates pursue graduate work immediately upon graduation and approximately one half pursue graduate or professional study within five years. Approximately half of Cornell graduates expect to go directly to work after graduation. Individual interviews with a small group of alumni (5 from the class of 1990 and 5 from the class of 2005) revealed an overall sense among these individuals that a liberal arts education provided excellent preparation both for graduate school and future work.

Hampshire College

Founded in 1970, Hampshire College operates through a unique program in which students are asked to design their own course of study in close consultation with faculty advisors and committees. Students progress through a series of "Divisional" levels that compose Hampshire's graduation requirements. They fulfill an initial round of course requirements across disciplines in Division I. In Division II, they craft their own concentration, consisting of a sequence of courses taken over 3+ semesters in an area of interest that they have defined in collaboration with a faculty committee of their choosing. All students complete a final capstone project (Division III) in order to graduate. They also fulfill the Multiple Cultural Perspectives and Community Engagement and Learning requirements.

The model of individualized learning is replicated throughout Hampshire's academic program and shapes the work of both students and faculty. Students have

primary responsibility for defining their own areas of study, connecting with and designing their studies in consultation with members of the faculty, and—particularly in Division III—working intensively and usually independently on a major project.

Although Hampshire is not systematically oriented towards the cultivation of careers and vocation, its emphasis on the design of individualized fields of study fosters a sense of innovation and entrepreneurial exploration that many graduates take with them in their future work. Hampshire expects its students to be self-motivated learners who take responsibility for constructing their own education, and many of its students liken their Hampshire experience to graduate school or work. Through courses and divisional projects, faculty educate their students to develop the real-world skills required to work within their fields of interest whether in filmmaking, education, scholarship, theatrical performance, or scientific research. This goal is central to the college's recently established Lemelson program, which trains students in real-world technological design and construction.

Hampshire graduates tend to emphasize independent learning, life-long learning, critical and analytical thinking, creativity, and passion for their work as important parts of the preparation Hampshire had given them for the world of work.

Smith College

Founded in 1871, Smith College is a highly selective residential liberal arts college for women. It is firmly rooted in a conception of the liberal arts as affording students both breadth and depth of study and also the opportunity to acquire the crucial skills of writing, public speaking and quantitative reasoning. Smith's founder, Sophia Smith, dictated in her will that women students should receive the same education as the best afforded to men. She also recognized that the curriculum would change to meet the demands of changing times.

While training for a particular profession has not been part of the Smith curriculum until the recent addition of the Engineering Program, Smith has long recognized the need to prepare women for careers. To a large extent, this activity has been pursued outside the classroom in a well-staffed Career Development Office. In the past fifteen years, students have been given increasing opportunities to pursue learning outside of the classroom and to integrate their academics with career preparation. The Praxis program, established in 1998, gives every student the opportunity to apply for a $2,000 grant to support an unpaid summer internship. Each student must have the support of her academic adviser and articulate the relationship between the internship and her studies before she is approved for the stipend. Praxis facilitates 400 summer internships per year for juniors and seniors.

Smith's relatively new and recently accredited Engineering Program—the only such program at a women's college—was founded explicitly to embed the engineering

curriculum within a liberal arts education. Courses incorporate the consideration of real world problems throughout the four-year sequence. Teams of seniors are required to complete a capstone field study project in which they develop solutions to engineering challenges in business, the environment and other applied areas.

Currently, Smith is implementing three new academic centers, each of which will link coursework to field work and internships in local, national and international settings. These include a Center for the Environment, Ecological Design and Sustainability, The Center for Community Collaboration, and Center for International and Intercultural Studies. In addition, the college is planning a Center for Work and Life (CWL), which will link programming on wellness, leadership development and career planning as well as provide students opportunities to reflect about the nature of a rewarding life. A signature program of the CWL is The Women's Narratives of Success Project, which offers Smith women an opportunity to consider their own definitions of success. One of the initiatives of this project is the "Get a Life Workshop," a not-for-credit five-day January term course in which juniors and seniors begin to develop a habit of reflection about their own ambitions, values and goals.

Although not all of these recent initiatives are reflected in the alumnae interviews conducted for this Teagle study, graduates speak consistently about the excellent writing, analytic and critical skills they gained at Smith. English and government majors, for example, report being pleased with the extent to which the basic skills they learned in college have allowed them to progress professionally. Smith graduates report being successful in drawing on their liberal arts background to obtain satisfying careers.

Graduates speak about the importance of experience in internships as they shape their career plans. For many, the internship reinforced a possible career choice; others discovered they were not suited to that line of work. Students returning from internships used their experience to choose coursework and co-curricular activities with greater clarity and focus. Students appreciate the opportunity to make professional connections while still undergraduates, and also the opportunity to gain practical work experience and job-related skills. Students also relish meeting Smith alumnae who give them career advice and offer mentoring.

Warren Wilson College

In addition to participating in a rigorous liberal arts curriculum, all Warren Wilson students work 15 hours per week for minimum wage with their "salaries" deducted directly from their tuition. Performing the chores needed to support the

community, students do all of the work necessary to make the institution operational, from cleaning, to plumbing and electrical work, to website design. The work program includes learning goals, apprenticeship with and evaluation by supervisors, and student reflection in writing on the experience of work and the Triad—a three-dimensional integration of academic, work, and service.

In addition to their expectation of work, Warren Wilson students are required to perform 100 hours of service learning off campus, with 40 of those hours taking place with one agency. These activities are built into some of the classes and require regular reflection and self-evaluation by students. Students are guaranteed a paid cross-cultural experience, which most typically takes place through international travel, work, and study.

While most college students work, typically this work is not perceived and tapped as a learning experience. By contrast, Warren Wilson's philosophical and practical focus with regard to work and the liberal arts relates to the cultivation of a work ethic, civic responsibility and the importance of building and contributing to community. Within the Triad, the work program is seen as an integral part of the overall learning experience that has direct implications not only for where students want to work and what they want to do, but how they view their place and responsibility within society.

Warren Wilson alumni from the mid-70s, mid-80s, and mid-90s participated in the 2000 Appalachian College Association Alumni Survey, with 45% of alumni surveyed returning questionnaires. This research indicates that work program participation directly influences and benefits the future careers of a large number of alumni. When asked which aspects of their college experience were most valuable, work was mentioned 22% of the time, second only to academics (32%). Similarly, while 56% of alumni say that their career is most closely related to their undergraduate academic experience, work experience is the most closely related for the majority of others (26%).

Worcester Polytechnic Institute

Founded as the first technical school in the U.S. with a focus on both theory and practice, WPI is committed to training its students to put their knowledge to work in useful ways. This goal gained increased emphasis in 1970 when the university shifted from traditional requirements to an emphasis on real-world projects. The academic calendar involves 4 terms per year with a required load of three courses per term equivalent to 9 credit hours. In order to graduate, students complete two major projects—one in the junior year and one in the senior year—each worth 9 credit hours.

The junior project relates technology and science to society or human needs. This interdisciplinary "Interactive Qualifying Project" challenges students to relate social

needs or concerns to specific issues raised by technological developments. It typically involves a team of students from across various fields working together on a broadly defined project to address a specific technological and social problem. The senior project in the major field of study, or "Major Qualifying Project," focuses on the synthesis of previous study to solve problems or perform research in the major field. Students work individually or in small teams with an emphasis on problem solving, formal writing and oral presentation, and the provision of a final product for use by the sponsoring institution.

The aim of the projects is for students to solve real-world problems and thus gain experience invaluable for professional practice or further study. Project opportunities often originate through off-campus sponsors (public, private, non-profit, or NGOs) who pitch a problem to WPI faculty members. Students are also encouraged to develop their own projects, to solicit support for their ideas from potentially interested faculty, and to form teams to pool resources and share points of view. Projects are developed in consultation with both sponsoring organizations and faculty advisors and culminate in the presentation of recommendations and/or products that are ready to be used.

Over half of WPI's students complete at least one of these projects through WPI's Global Perspective Program (GPP), which annually places 500 students in off-campus WPI Project Centers in 16 countries on 5 continents. About 30% of the WPI faculty are involved in GPP projects as advisors, and also work closely with students and host organizations. Students apply one year in advance to participate off-campus in projects (over 90% of qualified students are placed) and pay expenses on top of tuition (with many qualifying for financial aid). They take a required 4.5 credit hour preparation course to study the location, culture, and language while preparing a detailed research proposal for their work. A typical offering at a WPI Project Center involves 24 students working on 6 different projects with 2 faculty members during the course of a single term.

At WPI, academic learning and preparation for future work are already strongly integrated, modeled, and structured within the institution, its courses, and the projects themselves. Alumni agree that a key skill developed at WPI is "learning how to learn," allowing them to get up to speed in new areas quickly and effectively. This flexibility also makes it easier for students to move between jobs and fields.

VII. Integrating Liberal Education and Preparation for a Life of Work

Each of these brief programmatic examples have been designed to intersect liberal education with the goal of preparing students for a satisfying life of work, and each is calculated to preserve core values of liberal learning at the same time that it acknowledges the quickly evolving landscape of liberal education. In this regard, we have argued that the changing demographics of the college-going population, the

escalating desires of college students and their parents to grasp the connection between education and work, and some important changes in the nature of work itself, provide a potent set of external considerations that provide serious challenges for liberal education in the 21st Century. These pressures are emerging in a broader national and global context in which the superiority of American higher education is being questioned, and the prospects for employment for many college graduates are less bright than we would wish at the same time that employers are clamoring for a better trained, more highly skilled workforce.

To be sure, many of the stakeholders in this circumstance are operating out of special interests, and the agenda for higher education is influenced by powerful external forces. But this does not rule out the possibility that civic and national interests—and those of employers and the future employees who are our students—may be fruitfully carefully integrated with the structures of liberal learning. This is precisely the case we want to make.

From a business perspective, certainly, a convergence between economic and educational interests would be an encouraging sign of the times. And to an increasing degree the legitimate interests of business, colleges, and students may be moving closer together. According to Carnevale and Strohl,

> *[T]he liberal educator's broad societal mission and the employer's more narrow economic interest are converging. Happily, the new knowledge-based economy needs the kinds of graduates that liberal education provides—workers who have general skills, who can think outside the box, participate in team efforts, and flourish in interdisciplinary settings. Of course, there is more to liberal education than dollars and cents, and we should hesitate to justify it on purely economic grounds. Liberal education also husbands the enduring knowledge that can anchor an American society undergoing changes at blurring speeds. Moreover, it leads to the development of a healthy skepticism necessary to our individualistic culture and our participatory politic. However, those who cannot get and keep good jobs are unlikely to become autonomous individuals and good citizens. If liberal education fails to pay sufficient attention to its role in preparing students for employment, then it cannot achieve its cultural and political missions. Educators must face up to the economic realities that shape their work.*[129]

These authors acknowledge the benefits of liberal learning at the same time that they advocate the importance of career success and career preparation in the context of liberal learning.

One advantage of establishing this compatibility of interests is the opportunity to develop curricula that do not automatically reproduce and reinforce an educational

[129] Carnevale and Strohl, 2001.

system that creates separate paths for those seeking to develop the life of the mind and those seeking a job. Since this dichotomy tends to reflect differentials in privilege and opportunity, devising educational structures that work against this tendency will open up the widest range of educational pathways for all American students. The movement to integrate liberal learning into professional and vocational studies is a step in the right direction. An effort to better integrate professional, practical, vocational, and applied curricula in institutions of liberal learning is a complementary endeavor worth careful consideration.

Another way to motivate our conclusion is to explore the question of whether there is, in fact, a proper *liberal* justification for initiatives that seek to incorporate experiential, applied, vocationally oriented, and practical curricula into liberal learning. The assumption that "utilitarian aims" are *ipso facto* inimical to the interests of liberal learning may be contested by considering the ways in which liberal learning is strengthened *on its own terms* by practically motivated enrichments to the curriculum.

In this same spirit, Fong has argued that a twenty-first century conception of liberal education must reestablish its commitment to a broad range of values and outcomes that develop "character, citizenship, service, and leadership."[130] The innovative programmatic examples described in the previous section are cases in point. In Fong's judgment, "[l]iberal education will persist and even flourish… particularly at residentially-based institutions marked by intentional coherence within the curriculum and beyond, encompassing co-curricular life and experiential learning."[131]This coherence requires a more seamless connection between knowledge and action, theory and application, and intellect and vocation, not only because of the benefit for identifying and succeeding in a fulfilling career, but also because these types of learning experiences can potentiate the effects of liberal, classroom-based learning, leading to higher achievement across a range of liberal learning outcomes.

We have argued that the values of liberal education only appear to be disjointed from those associated with vocation, profession, and life success if we construe the range of liberal values too narrowly. To the extent that liberal learning places value on teaching students to develop a calling, to positively impact their world, and to develop an integrative, reflective stance on their education and their purpose in life, we will find a more seamless connection between the values of liberal learning and many of the values associated with professional studies, vocation, and career.

If the *values* implicated in the project of preparing students for a satisfying life of work can be reconciled with those of liberal learning, what about the respective *outcomes*? We have challenged the conjecture that the learning outcomes that prepare

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[130] Fong, 2004: 13.
[131] *Ibid.*

students well for a life of work are somehow at odds with the outcomes of liberal learning. To the contrary, the list of educational goals propounded by liberal and professional educators—not to mention those propounded by business leaders—often look remarkably similar, placing strong emphasis on critical thinking, problem solving, quantitative reasoning, communication skills, writing competence, and openness to diversity, among other outcomes.[132]

We have also maintained that liberal learning can be construed as a mode of inquiry that is applicable and beneficial to a broad range of educational projects—professional, vocational, and liberal alike. We have also suggested that some of the most powerful curricula for student learning involve integrating aspects of liberal, professional, and vocational curricula and pedagogies.

These arguments conspire to recast the traditional liberal/professional dichotomy in higher education, according to which, liberal learning and the exigencies of preparation for a life of work are somehow at odds. We will only strengthen American higher education by developing more highly integrated educational practices that combine the best of liberal education with appropriate elements of practical, professional, and vocational studies.

For liberal arts colleges and universities, this will entail developing approaches to student learning that combine theory with practice, that develop knowledge in context, that encourage a transparent connection between classroom learning and other educational experiences, and that cultivate a capacity for student reflection on the intersection between learning and vocation. This effort will go a long way toward establishing a more powerful, intentional relationship between undergraduate education and preparation for a fulfilling life of work while at the same time reinforcing the traditional values and strengthening the traditional outcomes of liberal learning. Institutions will develop different approaches depending on history and circumstance. However, by bridging the liberal/professional dichotomy, liberal arts colleges and universities will meet the challenges of the twenty-first century and maintain the promise of liberal education.

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[132] Although these goals are some times described in different terms by different stakeholders. It is also possible to argue that there are differences in relative emphasis, or that common goal statements sometimes obscure important differences in outcomes—writing for business is not the same thing as analytical writing, for example. To the extent that these differences are important, they will have to be reconciled, preferably with what Paris (2007) calls a "both/and" solution, in which there is room to serve both kinds of outcomes within the liberal curriculum. See AAC&U 2007 for discussion.

VIII. Appendix I: Institutional Profiles and Data

Berea College Berea, KY

Founding Year: 1855
Students: 1,500 undergraduates
Tuition: FREE

Berea was founded to provide unprecedented access to a liberal arts education for blacks and whites who were, at the College's founding and still are, economically disadvantaged. Median annual family income for Berea students is just over $27,000 and 64% are first generation college students. Seventy-three percent of Berea students come from the Appalachian region and Kentucky, 10% are international, and 17% are African-American. Every student receives a full tuition scholarship.

All students work on campus in a formal Labor Program that understands work as student and learning-centered, as service to the College and the community, and as providing necessary work being done well. Berea's Labor Program is an integral part of the educational program with regular performance evaluation and learning outcomes including skills, work ethic, leadership, and social responsibility. Students work in all aspects of the College program such as on grounds and facilities crews, in offices, in the computer center and library, as teaching assistants, and in community service programs. Work assignments may, but do not necessarily, relate to students' academic and professional interests. The work program contributes to college operations and is part of its mission to cultivate a strong work ethic and to blend academic and experiential learning. The College's mission explicitly states its commitment "to provide for all students through the Labor Program experiences for learning and serving in community, and to demonstrate that labor, mental and manual, has dignity as well as utility." Another relevant commitment is "To maintain a residential campus and to encourage in all members of the community a way of life characterized by plain living, pride in labor well done, zest for learning, high personal standards, and concerns for the welfare of others."

Half of Berea students major in career-oriented subjects such as nursing, education, business, technology, and other professional studies. The other half major in liberal arts disciplines. Berea offers a comprehensive liberal core curriculum required of all students and extending across all four years of enrollment. Faculty teach both in their academic disciplines and in the general Studies curriculum. Weekly Convocations bring to campus notable speakers, scholars, performers, and programs on a variety of subjects to expand the general education program and enhance campus life.

A Berea education is characterized by a common core program (General Studies) of multi-disciplinary courses that emphasize writing, social and cultural diversity,

globalization, scientific inquiry, and the role of Religion in World History. Other central aspects of a Berea education are leadership and service opportunities, a racially and culturally diverse student body, a focus on environmental sustainability, applied learning through the work program and within the curriculum, and the opportunity for international study. Approximately 50% of Berea's students participate in international study programs, typically during the January and summer terms. Ten percent participate in academic internships in addition to their work program participation. Berea also has extensive service-learning programs in which over 50% have participated by the time they graduate.

Berea's investment in integrating the liberal arts with work relates directly to its mission to provide equal access to education for the underserved. Given their economic marginalization, most Berea students arrive with a limited sense of the types of work options that exist in society. The college's premise is that a liberal arts education makes it possible for them to explore and enter into a much broader world of work than they would have considered possible for themselves. The provision of experience, knowledge, and training for future work is not optional but is an imperative for the student population served by the college.

Entering Students

Incoming students report strong interest in both the liberal arts aspect of a Berea education and also in the ways that this education will improve their employment prospects. Of the first-year students who took the CIRP survey in fall 2006, "learn[ing] more about things that interest me" was identified by 81% as a very important or essential reason for attending college; similarly, "gain[ing] a general education and appreciation of ideas" was a very important or essential reason for 72% of students. Entering students see learning as a process that will continue long after their time at Berea ends. Eighty-nine percent believe that it is extremely or somewhat important to develop a desire for life-long learning.

Berea students are also quite vocationally-oriented and see college as an important step towards their future careers. Seventy-two percent of the students say that "be[ing] able to get a better job" is a very important or essential reason for attending college; 91% of entering students report that "finding work that is challenging and stimulates personal growth" is extremely or somewhat important. First-year students tend to want quite a bit of help identifying careers of interest and finding work in these fields. In a 2001 survey of entering students, 42% reported that they could use a lot or a moderate amount of help identifying a good career, compared with only 20% needing similar help in identifying an area of study. Between 60 and 70 percent of students also reported desire for a lot or a moderate amount of help finding job opportunities in their area of interest, identifying the educational requirements or training necessary for these jobs, obtaining relevant work experience, and generally developing good job-seeking skills.

Faculty Attitudes

Among a focus group of ten Berea College faculty from a variety of disciplines, there was general agreement with the basic institutional philosophy that the liberal arts curriculum and Labor Program together provide students with strong preparation to enter future careers. Faculty agreed that Berea has a special responsibility to prepare students for a life of work because enrolled students are low-income and typically first-generation college students, and tend to be more vocationally-oriented than students at many other liberal arts colleges. Many therefore believe Berea to have a special responsibility for career preparation of its students.

Many of the work-related skills and habits of mind emphasized by the faculty are those which typically emerge from a liberal arts education: critical thinking, adaptability, responsibility to others, understanding of complexity, and communication skills. These are taught in nearly all courses. Faculty also agree that more explicit conversations with individual students about preparing for work arise from and occur within the close relationships between students and faculty that characteristically develop at Berea. Additionally, faculty view the ethnic and cultural diversity of the student body as an important contributor to understanding various perspectives and working with others. Faculty opinion is divided as to whether it is their responsibility to integrate more applied opportunities (*i.e.* internships, service learning, and career development) into students' educational programs. Some faculty see this as an integral aspect of teaching, while others see limitations of time or training as impeding their ability to do this effectively. Faculty also challenged the sometimes perceived distinction between "liberal" and "applied" learning, proposing instead that "education *is* work; thinking *is* doing." There is widespread agreement that Berea's mission-based emphasis on service and valuing of difference and equality develops a sense of "calling."

College Experiences

According to responses on the 2007 National Survey of Student Engagement (NSSE), 79% of seniors at Berea College felt they had acquired job- or work-related knowledge and skills "quite a bit" or "very much." Seventy percent of seniors reported solving complex real-world problems "quite a bit" or "very much" during their time at Berea.

The seven Work Colleges (two of which are included in our study—Berea and Warren Wilson) compared results on the 2007 NSSE with all institutions participating in this national survey. For Work College students, among the high performing areas, relative to mean ratings given by participating senior students nationally, were: "Did community service or volunteer work" (74%), "Did an independent study or self-designed major" (33%), "Worked with faculty on activities other than coursework" (39%), and "Talked about career plans with a faculty member or advisor" (55%).

The NSSE, administered in 2003 and 2007, included additional work-college-specific questions. More than 70% of Berea students agreed or strongly agreed that the work program had: "helped them develop a strong work ethic," "helped them to learn from many different types of people," "affected their overall academic experience in a positive way," and helped them "apply what I learned in academic courses to my work." More than 70% also believed that their participation in the work program "will increase my value in the job market," and that their "work is valuable." Seventy-two percent said that they learned "there is dignity in all work" and 84% said their work "positively affects their overall college experience."

Alumni Outcomes

In interviews of ten graduates, five from 1990 and five from 2005, seven reported working full-time, two are in graduate school full-time, and the remaining graduate combines part-time work and a self-owned business. Seven graduates report a direct connection between their academic studies and current careers; three report no connection of this type. With respect to higher education, two hold a master's degree, two are currently enrolled in a graduate program, and two plan to obtain a master's degree within the next five years. All but one graduate have held two or more positions since graduation.

All ten interviewees describe themselves as mostly or extremely well prepared, emphasizing their comprehensive, well-rounded education, and strong background in writing in particular, as contributing to their success. Most described doing significant amounts of on-the-job learning because of a lack of field-specific preparation for their current work. This was generally not seen as a problem since graduates felt they learned "how to learn" at Berea where emphasis is placed on continuous learning. The value of practical experience gained through internships was, however, emphasized by the 2005 graduates as influential. None of the 1990 graduates had participated in internships. They felt that such opportunities were not available but would have been extremely valuable. The 2005 graduates specifically value having had these and other similar opportunities (for example, through service-learning and international travel) to apply knowledge outside the classroom, and wish that even more such experiences had been available.

While job satisfaction for 1990 graduates is mostly related to benefits, a sense of security, and being able to place family/life interests above work, job satisfaction for 2005 graduates is more closely related to making a difference in the world and helping others. Graduates credit Berea with preparing them to seek and achieve both of these goals. There was virtually unanimous agreement that the multiple aspects of a Berea education made time-management skills and the ability to balance work and life a necessity, and promoted a strong work ethic that prepared them extremely well for life after college. Several interviewees agreed that Berea cultivates a sense of idealism in its students, and encourages them to be socially responsible through service and

volunteerism. All interviewees cited the importance of the diversity emphasis at Berea as enabling them to become more open-minded and develop a global perspective.

A final key point of agreement among all ten interviewees concerns the need for more and better career counseling for students during their time at Berea, especially in the practical areas of networking, writing resumes, applying and interviewing for jobs, and identifying career paths which are good matches for their individual sets of skills, interests, and values. While individual professors were seen as having helped some graduates find job opportunities, more explicit training and accessible resources in this area would be an important change.

Cornell College Mount Vernon, IA

Founding Year: 1853
Students: 1,100 undergraduates
Tuition: $24,000 (w/o room and board and fees)

Cornell College is a selective residential liberal arts college with a unique academic calendar, known as the block plan or One-Course-At-A-Time (OCAAT), whereby students take, and faculty teach, one course at a time in three-and-a-half-week units (or blocks). Located in the historic town of Mount Vernon, Iowa, Cornell was founded in 1853 and is today a diverse residential community of nearly 1,200 students. Approximately a quarter of the student body comes from Iowa; the majority of students come from adjacent states in the upper Midwest and Colorado; approximately 9% of Cornell's students self-identify as students of color. Cornell offers majors in over twenty disciplines and is one of the relatively few liberal arts colleges in the country to offer courses in classical languages. The college also offers opportunities for interdisciplinary study in a number of areas, such as environmental studies, ethnic studies, women's studies, public policy and health sciences.

The heart of the block plan is the intense short course which provides latitude to teachers and students to explore together the most effective way to engage in the subject at hand. The block plan enables students to concentrate on one course subject at a time; it immerses them in a particular discipline or nexus of disciplines. Each course becomes a learning community dedicated to a common object of inquiry.

Through its mission statement, the college "endorses liberal education as an end in itself and as a means of empowering students for leadership through productive careers and humane service in the global community." Opportunities through the college are provided with the intention of allowing students to "explore . . . the range of human experience"; "investigate . . . the work of a chosen discipline"; "analyze problems and synthesize solutions"; "integrate theory and practice"; and, develop and

practice the skills of critical reading, effective reasoning, fair evaluation, clear communication, responsible actions, and creative and imaginative engagement.

Cornell College Students

Cornell's students tend to be motivated, academically well-prepared for college-level work, intense and curious about the world. Cornell students are interested in international travel, student-faculty research, off-campus courses, and interdisciplinary subjects. Students express strong interest in, for example, environmental studies, creative writing, neuroscience, theatre and art. Cornell's largest majors include biochemistry-molecular biology, psychology, economics, English and education. Cornell's fastest growing majors are art and theatre, with Spanish language and literature a close third.

Entering Students

Entering Cornell students express a strong interest in college as a means of intellectual fulfillment. Asked to identify reasons for attending college on the CIRP Freshman Survey, 85% of responding Fall 2006 Cornell first-year students reported that "learning more about things that interest me" was an essential or very important reason for attending college; 71% indicated the opportunity to "gain a broad general education" was essential or very important.

However, these same students also articulated an interest in preparation for the world beyond college. Of responding Fall 2006 first-year Cornell students, 65% noted "get a better job," 58% noted "prepare for graduate or professional school," and 51% identified "get training for a specific career" as essential or very important reasons for attending college. Although these results might suggest an entering student population focused on jobs, the top three life goals (in terms of percentages) deemed as essential or very important by responding students included: (1) raising a family (70.9%), (2) helping others who are in difficulty (70.6%), and (3) improving my understanding of other countries and cultures (58.8%). Indeed, three-quarters of these students said they believed the college should emphasize "very much" providing special study opportunities (e.g., international study, collaborative research, internships) for students; two-thirds "very much" believed the college should emphasize preparing students to interact in a diverse world; and less than half expressed the same belief for emphasis in training students for a specific career/vocation.

College Experiences

About two-thirds of Cornell's seniors complete some sort of internship during their college career. Of those seniors participating (62%) in the 2006 National Survey of Student Engagement (NSSE), 71% reported having completed a "practicum, internship, field experience, co-op experience, or clinical assignment"; an additional 14% reported they were still planning to complete such an experience. (Note: because of the nature of the block plan, it is feasible that seniors in their last academic semester could be

scheduled to complete an internship during Terms 8 or 9, after the NSSE is administered.) Just under half of responding seniors indicated they had studied abroad and one-third reported having completed a research project with a faculty member. Two-thirds of these seniors reported "often" or "very often" talking with a faculty member or advisor about their career plans.

A cross-section of all four years of Cornell students completed the Cornell College Student Experiences and Outcomes Survey in 2007. Of those students participating (~80% response rate), over two-thirds said Cornell's contribution to their acquisition of a broad general education was "great" or "very great." Over half said the college made a "great" or "very great" contribution to their development of "job or work-related knowledge and skills."

These results mirror those of the 2006 NSSE, in which 96% of participating seniors said their experiences at Cornell College contributed "quite a bit" or "very much" to their acquisition of a broad general education; 55% said the same for their acquisition of job or work-related knowledge and skills. When asked about the development of specific skills—many of which have been identified as important in employment—seniors said their Cornell experiences contributed "quite a bit" or "very much" to their skills in thinking critically (88%), writing (86%), working with others (82%), learning effectively on their own (82%), and speaking (74%). Over half indicated their college experiences contributed to their knowledge and skills in solving complex, real-world problems.

The perspectives of entering students and the experiences of seniors, taken collectively, suggest a Cornell student population whose values align with the development of a sense of vocation. That is, the development of a sense of being in the world in which the notion of career or job exists *within the context of* a broader sense of one's life goals that extend beyond mere preparation for such a career or job.

Faculty Attitudes

Faculty at Cornell tend to articulate and exhibit a "fierce commitment" to liberal education as an end in itself, a commitment reflected in the college's mission statement. Two small focus group conversations were held with faculty to explore the relationship between liberal arts education and preparation for one's life's work. Faculty participants were selected to represent all divisions of the college and to represent all faculty ranks, assistant through full professor. Themes drawn from the first faculty focus group – with 10 participants – were considered by, and in the end reinforced by, the second faculty focus group – with 11 participants. The perspectives articulated were deemed to be broadly representative of the Cornell faculty as a whole.

Across these two focus groups, participating faculty, in general, articulated a belief that the traditional goals of liberal arts education, in themselves, are excellent

preparation for the work place. Participants noted, however, that a liberal arts education should be more broadly conceptualized as preparation for a meaningful, satisfying, and engaged life. For these Cornell faculty, those aspects of a liberal arts education that do serve to prepare students for the world of work exist in the context of, or perhaps as a part of, this broader purpose, and should continue to do so. This perspective, captured in one individual's statement that "we educate students for life not for the world of work," functioned as the foundation on which the discussion at Cornell of the liberal arts as preparation for the world of work rested.

Faculty asserted that, while not preparation for a specific job, the liberal arts offered excellent preparation for the world of work, particularly in the context of the changing nature of work. Several participants recognized the likelihood that graduates will change jobs multiple times during their careers and that a liberal arts education could provide graduates with the critical skill of "learning to learn." There was recognition, albeit varied in magnitude, among participants that, although a Cornell liberal arts education is a valuable product, students and their parents might not readily grasp that value, and that it is incumbent upon the institution to educate them about the value of such an education.

Juxtaposed with this sentiment was the assertion by some participants that the college, while good at theory, is less good at praxis, failing to provide students with sufficient opportunities to see/experience the applicability of their classroom learning in the workplace or other relevant settings. Indeed, faculty from the first focus group suggested, and those from the second group agreed, that the college likely needs to be more intentional in helping students draw the connections between their Cornell education and the world of work. Programs such as "Pathways," an effort to help students be more intentional in planning their educations with a vision of their future activities, and opportunities such as internships, were cited by the faculty as potential avenues for helping students make these connections.

Alumni Outcomes

Approximately one third of Cornell's graduates pursue graduate work immediately upon graduation and approximately one half pursue graduate or professional study within five years. Approximately half of Cornell graduates expect to go directly to work after graduation. Participants of the faculty focus group interviews noted that a tension exists between preparing students for graduate school and for more immediate entry into the world of work after graduation; there was some speculation that the college better meets the needs of those individuals expecting to enter graduate school immediately upon graduation than the needs of those expecting to enter the world of work.

Individual interviews with a small group of alumni (5 from the class of 1990 and 5 from the class of 2005) revealed an overall sense among these individuals that a liberal

arts education provided excellent preparation both for graduate school and future work. Most of the graduates interviewed held full-time positions, though not necessarily in the fields they pursued as undergraduates, and most either held or were pursuing advanced degrees.

Although graduates, in general, reported feeling well prepared with regard to a number of critical skills (e.g., writing, thinking, research, public speaking, diverse perspectives, creativity, and multi-disciplinarity), there were some alumni who commented on the need for greater attention in classes—and college overall—to career planning and career-oriented approaches to learning. Several people, in fact, noted having experienced an initial period of struggle after graduation, having been uncertain about how to translate college experience into a job, determine a career path, and build a career. Suggestions for the college included expanded career orientation across the college, a focus on practical skills and group work within classes, internships, career fairs, and expanded alumni networking opportunities and resources. Despite the initial challenges they encountered, many of the graduates expressed a high valuation for doing work that makes a difference in the world and that entails responsibility, challenge, and variety.

Signature Programs

Cornell offers a number of programs and opportunities to help make the connections between a traditional liberal arts education and a life of work. These efforts are grounded in the college's commitment to a liberal arts education as an end in itself as well as in recognition of the liberal arts as providing an excellent means to helping students develop a sense of vocation. The programs below outline some of the ways in which Cornell College is responding to the current situation pertaining to liberal arts education and the world of work.

Interdisciplinary Centers

In recent years the college founded two interdisciplinary centers which offer programs with significant linkages between a liberal arts education and professional life in the arenas of health care and economics and public policy. *Dimensions: The Center for Science and Culture for Health Care*; and the *Berry Center for Economics, Business and Public Policy,* sponsor courses located within associated academic departments, offer internships and seminars, sponsor student-faculty research, fund conference attendance, host alumni and other guest speakers, and fund curriculum development in related topic areas.

Work has also begun on a Project for Civic Engagement and Social Responsibility. Consistent with Cornell's mission, the Project combines academic and co-curricular components to motivate students for a lifetime of responsible public citizenship. Among the Project's components are a lecture series, internships at nonprofit and community organizations, community-based research, service

opportunities, and coursework in a number of departments. Similar initiatives are being explored in environmental studies and the fine arts.

Internships

The OCAAT calendar is well-suited for internships that provide students intensive experience in potential careers. Students can do credit-bearing internships through their departments on a pass/fail basis. Internships involve full-time work over the course of one 3½ week term and can also extend over 2 or even 3 terms, with credit received for the equivalent of one course per term of the internship. Internships are planned with the student's advisor and/or faculty sponsor to ensure adequate course preparation and coherence with the student's course of study. Organizations are responsible for developing specific projects for students to complete in the course of their internship.

Recently, Cornell has capitalized on the unique strength of its academic calendar by establishing the Cornell Fellows Program. This program seeks to develop a set of signature internships around the country. Funded by an alumnus who did an internship that he felt led directly to his future professional success, the program has established internships that build upon close connections between faculty sponsors and institutional mentors, allowing students to be placed in internships that are tailored to their academic and career interests. These internships require application and carry funding to offset expenses for housing and transportation. Interns engage in extensive reflection and complete a major project designed in cooperation with their institutional mentors.

Professional Majors

Cornell offers majors in education and kinesiology and has a strong record of using a liberal arts approach to prepare students for careers in these fields. For each major the college takes the position (1) that a liberal arts institution is an ideal educational setting to pursue this study because it places the field in a larger context provided by breadth of study, and (2) these majors can also serve the goals of liberal education—such as writing, research, and problem solving.

Other Programs of Note

In addition to these programs, Cornell offers programs through the Office of Career Services on a variety of topics, including spring break externships allowing students to shadow alumni in various careers; has a Civic Engagement Office that offers opportunities for service work, leadership, and reflection; and provides preparation for graduate school examinations.

These programs, in many ways, address the concerns of those alumni and faculty who suggested that the college perhaps needs to place greater emphasis on praxis and appear to match the interests of incoming students. For instance, of those Fall 2006 first-

year students completing the CIRP, over one half responded that there was a "very good chance" they would participate in an internship during their Cornell College career. Nearly half said there was a "very good chance" they would participate in international off-campus study. While the programs outlined here have been successful ventures that have enhanced opportunities to make connections between the liberal arts and a life of work, the college wishes to explore and assess more fully the connections and transitions it can create between academic studies, co-curricular experiences, and students' future work in the world.

Conclusion

Cornell faculty, alumni, and students expressed an understanding of education that aligns closely with the notion of vocation as noted by Lagemann (2003):

The word vocation *implies more than earning a living or having a career. The word* vocation *implies having a calling: knowing who one is, what one believes, what one values, and where one stands in the world.*

There is a cognizance, even among entering students, that one's job or career sits within a context of the broader purposes and meanings of one's life. Those values typically associated with liberal arts education (e.g., learning to learn, acquiring a broad general education, understanding other cultural perspectives, etc.) dwell alongside an increased understanding of the complex need to help students draw connections between these values and the world of work.

Hampshire College Amherst, MA

Founding Year: 1970
Students: 1,400 undergraduates
Tuition: $33,000 (w/o room and board and fees)

About two thirds of Hampshire's 1450 students come from the northeastern part of the U.S. Fifty-five percent receive some level of need-based financial aid. The student body is about 58% female, 15% U.S. students of color, and 3% international. Thirty-five percent of graduates currently concentrate in the creative or performing arts, with 25% in humanities and cultural studies and another 20% in social studies.

Founded in 1970, Hampshire College operates through a unique program in which students are asked to design their own course of study in close consultation with faculty advisors and committees. Students make their way through three "Divisions" as they progress toward graduation. They fulfill an initial round of course requirements across disciplines in Division I. Moving on to Division II they then craft their own major concentration consisting of a collection of courses taken over 3+ semesters in an area of

interest that they have defined in collaboration with a faculty committee of their choosing. All students complete a final capstone project (Division III) in order to graduate as well as the Multiple Cultural Perspectives and Community Engagement and Learning requirements.

The model of individualized learning is replicated throughout Hampshire's academic program and shapes the work of both students and faculty. Students have primary responsibility for defining their own areas of study, connecting with and designing their studies in consultation with members of the faculty, and—particularly in Division III—working intensively and usually independently on a major project. The college operates through five interdisciplinary schools rather than departments and there is a strong emphasis among the faculty and in student work on the expansion of traditional intellectual boundaries through cross-disciplinary work. In their courses and each of the Divisions, students receive written evaluations rather than grades, and are asked as well to reflect upon their own work and learning experiences.

Since Hampshire expects its students to be self-motivated learners who take responsibility for constructing their own education, many of its students liken their experience there to graduate school or actual work. To an extent, through their courses and Divisional projects, faculty educate their students to develop the real-world skills required to work within their fields of interest whether in filmmaking, education, scholarship, theatrical performance, or scientific research. This goal is central to the college's recently established Lemelson program, which trains students in real-world technological design and construction.

Although Hampshire is not systematically oriented towards the cultivation of careers and vocation, its emphasis on the design of individualized fields of study fosters a sense of innovation and entrepreneurial exploration that many graduates take with them in their future work. Close to half of Hampshire's graduates receive a graduate or professional higher degree. The college has the impression that a significant number of them pursue entrepreneurial endeavors that draw directly upon their experiences progressing through the college's self-designed learning process, but has only anecdotal support for this claim. The college has yet to systematically trace the connections between its liberal arts education, the self-designed curriculum (and the process that goes with it), and the careers of its graduates.

Entering Students

Hampshire's web site and other marketing materials focus on the idea of individualized intellectual and personal fulfillment, stressing that Hampshire is a place where you can "learn what you love" and design your own course of study. Information about alumni outcomes takes two forms: the highlighting of individuals who are doing unusual things with their lives after college, and information about

graduate school completion. The latter is specifically targeted at the parents of prospective students rather than at the students themselves.

Entering students report an overwhelming interest in the intellectual fulfillment side of college. In Fall 2005, 95% of first-years taking the CIRP said that "learning more about things that interest me" was an essential or very important reason for attending college. Eighty-eight percent expressed a similar desire to gain a broad general education, and 72% said that developing a meaningful philosophy of life was a very important or essential life goal. Between Spring 2003 and Spring 2005, about 70% of both first-years and seniors taking the CSEQ reported that in their experience, Hampshire placed a strong emphasis on scholarship.

These numbers contrast sharply with students' expressed interest in college as preparation for a life of work. On the CSEQ, about 50% of both first-years and seniors described Hampshire as placing a strong emphasis on practical courses, while only 10% thought it placed a strong emphasis on vocational preparation. About 40% of entering students say that preparing for graduate/professional school, or getting a better job, were important reasons for them to attend college. Only 30% say they came to college partly to get training for a specific career, while fewer than 20% say they chose Hampshire partly because they believe its graduates get good jobs or attend top graduate or professional schools.

Clearly the student body is, as a group, heavily focused on intellectual fulfillment and not much interested in college as preparation for the future. At the same time, 30% is a fairly large minority. It is not yet known how many of those students who want college to provide them with career training are those who want to become artists. The answer to that question would add much to the institution's understanding of how these attitudes toward the purpose of college are distributed across the student body.

Faculty Attitudes

A small focus group of faculty members from different disciplines expressed attitudes typically of things often heard informally at Hampshire. While faculty indicated that they keep track of their more successful students, there was an overall sense that they don't know a great deal about the kinds of jobs their students hold after graduating. Many comments contained the assumption that things work out all right. One faculty member acknowledged that he didn't know how well-prepared students were because he doesn't actively track his graduates. Several said their graduates seemed to go on to graduate school right away. One said some of his students had jobs with NGOs; they seemed to be doing well and at the very least had a job. Another felt that his most successful students were doing quite well in fields related to the interests they held when they arrived at Hampshire. While one said he didn't know of many of his students working for corporations, another said he is intrigued by the number of art

students working for corporations like Microsoft; he assumes that they are introducing innovative ideas in these settings.

When asked to what extent they thought Hampshire should be ensuring that its students graduate prepared for work, participants expressed several attitudes familiar from the earlier discussion in this paper. One such position was that students need to have fundamental skills in writing, thinking critically, and increasingly quantitative skills: "If students don't have basic command of these skills then we've failed." Another tendency was to argue that given the changing nature of the world of work, faculty are unclear about the skills and the content students need to be prepared. Again, there was a rarely-articulated assumption that education and preparation for work "all fit together." This attitude exists side by side with a belief that preparing students for work is not the job of the faculty, but of the career center, and most of all the responsibility of each individual student.

The dominant theme among these faculty members, however, was based on a specific view of Hampshire students as different from students elsewhere. It was argued that since they don't follow conventional career paths, the best thing the college can do is show them that it's possible to find one's own way and make one's own decisions. As one person said, "I'm not sure I want to collude with the assumption " that there is a certain kind of work out there and that our obligation is to prepare students for it. Hampshire students and faculty are, it was claimed, outside of this norm; with different expectations, values, and conceptualization of the world, and the goal of encouraging a different kind of behavior. Therefore, Hampshire's educational program is specifically relevant and the ideal preparation for work. Students learn how to land on their feet and how to push for and create a space for themselves. This, they said, appropriately prepares them, not for a pre-existing world of work, but for their own world of work.

College Experiences

About half of Hampshire's graduates complete an internship of some kind during their college years. A cross-section of all four years of students took the Cycles survey in Spring 2006, and of those, 47% reported that while at Hampshire, they felt they had "gained quite a bit or very much in career preparation and applicable knowledge and skills." Taking the NSSE in Spring 2007, 35% of first-years and 44% of seniors reported having gained quite a bit or very much in acquiring job- or work-related knowledge and skills. Again, it would be illuminating to know how these students are distributed around the college in terms of their disciplinary foci. It is not yet known how many students *want* to gain these things, or to what extent, whether or not they feel they have done so.

Alumni Outcomes

One-year-out surveys of graduates show that 90% get a job after graduating from Hampshire. Two thirds of those students search for that job after graduation, not during their final year of college. Perhaps half of these students later pursue a higher degree, but their initial challenge is to find work.

Looking at all Hampshire alumni as of 2003, about 20% held jobs in business or industry. Fifteen percent each work in (a) creative and performing arts, (b) health care, and (c) education. Smaller numbers work in communications, law, the sciences, or other areas.

Ten graduates were interviewed by telephone. Some had graduated two years before, and the rest 17 years previous. In addition to the interview, each also completed a brief survey about the nature and extent of their preparation for work after college.

The group gave very high ratings to the preparation they had received at Hampshire in certain areas, specifically writing, critical thinking, creativity, the ability to work independently and to extend their skills to new areas of endeavor, a sense of commitment, and a sense of themselves as life-long learners. Few felt they had gained much in the way of technical skills in their fields of interest. In general, they did not feel they had been well-prepared to know what jobs were out there in the world or how to find them.

Most were employed full-time, and the group was about equally divided on whether their current job was directly, somewhat, or not at all related to their studies at Hampshire. Most said that their income was sufficient to support their desired standard of living, but these incomes appeared to be relatively modest. For many, there was a continuing lack of emphasis on, and overall skepticism about, career, making money, and participation in the corporate world—consistent with attitudes that dominate student culture on the Hampshire campus.

Although not all those interviewed followed this pattern, the majority worked outside the corporate world and combined various types of full- and part-time paid employment with self-employed or entrepreneurial pursuits. Several members of this sample identified themselves with a passionate interest that was not their primary source of income (though some wished it were). A sample of ten individuals is unlikely to be representative of the whole, but this pattern is suggestive given Hampshire's institutional image and self-image. These graduates tended to emphasize independent learning, life-long learning, critical and analytical thinking, creativity, and passion for their work as important parts of the preparation Hampshire had given them for the world of work.

At the same time, there was a tendency to emphasize that entrepreneurial skills do not in and of themselves teach a student how to make a living doing the thing they love. The lack of specialized training through content knowledge and skills was emphasized in a number of the interviews. Many commented on a perceived need for enhanced career counseling, including contact with alumni regarding their career paths. 2005 graduates tended to comment on the difficulty they experienced finding jobs in their areas of interest, while 1990 graduates were more likely to emphasize the overall absence of career guidance during college.

Smith College Northampton, MA

Founding Year: 1871
Students: 2,800
Tuition: $32,000 (w/o room and board and fees)

Founded in 1871, Smith College is a highly selective residential liberal arts college for women. It is firmly rooted in a conception of the liberal arts as affording students both breadth and depth of study, and also the opportunity to acquire the crucial skills of writing, public speaking and quantitative reasoning. Smith's founder, Sophia Smith, dictated in her will that women students should receive the same education as the best afforded to men. She also recognized that the curriculum would change to meet the demands of changing times.

As the largest liberal arts college for women in the United States, Smith offers a traditional education through an open curriculum. Known for its rigorous academics, Smith students are invited to explore their individual interests in an environment that offers comfortable and homey residential living and considerable academic and social resources. They are encouraged to study across the curriculum and explore unfamiliar subjects.

Smith has become very diverse in the past two decades. Currently, sixty percent of Smith students receive need-based financial aid, 20% come from families where neither parent is a graduate of a four-year college, 30% are students of color, and 8% are international. Twenty-three percent are recipients of federal Pell Grants, the largest percentage of such students at a liberal arts college in the United States. Students come to Smith from 48 states and 62 other countries.

Entering Students

Each year about 640 first-year students enter Smith from over 500 different secondary schools from the United States and throughout the world. The diverse socio-economic background of these students means that although they are all bright and accomplished, they arrive with widely different levels of preparation and experience.

The geographic, racial, religious and socioeconomic diversity of the student body presents both opportunities and challenges for first-year Smith students. The first-year orientation program, residence life program, and the Offices of Student Affairs and Class Deans, have developed excellent programs to facilitate the transition to the rigorous academic program. Less attention has been paid to how the diverse backgrounds of the student body may have contributed to attitudes about work after college, although anecdotal evidence suggests that first-generation students are more career-oriented than others.

In addition to traditional aged students, about 7% of the student body is of non-traditional age. These students, Ada Comstock Scholars, almost always have work experience which they bring into classroom discussions. Faculty value their real-world experience and consistently report that they add an important dimension to the student discourse.

Smith students have a reputation for being engaged in political and cultural issues, and report a strong interest in wanting to make a difference in the world after graduation.

Faculty Attitudes

A small focus group of faculty from departments in various disciplines reported a number of Smith's strengths in preparing students for future work, and also noted areas in which there is room for improvement. A common theme is the idea of a liberal arts education as solid preparation for a wide range of professional opportunities, and indeed for moving between careers in a fluid job market.

There was a general observation that departments on campus vary a great deal in the extent to which they explicitly focus on preparing students for future employment. For example, Humanities faculty may feel they don't know much about the world of work, and so have relatively little advice to give; on the other hand, some departments tend to attract groups of students with shared professional goals (such as pre-law), making career advice easier to provide. Though there is variation by department, faculty seem to consistently refer students to the Career Development Office for specific advice at all stages of their academic careers. The internship program, Praxis, along with off-campus study programs, are seen as valuable experiences through which students can explore possible careers and gain valuable skills; these also serve as triggers for a number of conversations with faculty about careers.

When asked what Smith does best in terms of preparing its graduates for work, faculty agreed that regularly inviting alumnae back to campus to talk about their careers is an important way for students to learn about the range of possibilities; there is also general agreement that students' "powerful communication skills," particularly in reading and writing, serve them well in any professional field. A number of faculty also

observed, however, that students could be more successful both in attaining and advancing in jobs if Smith more strongly emphasized oral presentation and debate. Some faculty also have the impression that students may be out of touch with real-world issues, in terms of both current events as well as connections between academic material and real-world issues and applications.

College Experiences

While training for a particular profession has not been part of the Smith curriculum until the recent addition of the Engineering Program, Smith has long recognized the need to prepare women for careers. To a large extent, this activity has been pursued outside the classroom in a well-staffed Career Development Office. In the past fifteen years, students have been given increasing opportunities to engage in learning outside of the classroom and to integrate their academics with career preparation.

Now in its 10th year, Smith's universal internship program, Praxis, guarantees each student the opportunity for a one-time stipend of $2,000 for an unpaid summer internship. Over 4,000 students have taken advantage of this opportunity and, on average, 65% of a graduating class has participated in a Praxis internship before leaving the college. Past surveys of Praxis participants reveal that students felt better prepared for the workplace as a result of their internships. In addition, these surveys reveal that students felt more confident about their choice of a major as a result of participating in the Praxis internship, and led them to take certain courses upon their return to campus. A survey of Praxis interns from the class of 2002, for example, revealed that 90% of respondents felt that their internship helped them to decide on a career field or area of graduate study (the survey was distributed randomly to 100 Praxis interns; 43 people responded, or 43%). Moreover, 95% of respondents felt that the skills gained in the internships proved helpful in other jobs, internships, or graduate programs, and 95% indicated that they were more marketable when applying to jobs or graduate schools as a result of the Praxis internship. Nearly identical findings resulted from similar surveys in 2000 and 2001.

In addition to the Praxis program, the college has an established tradition of international study. Fifty percent of the junior class studies abroad, half of them for a full year. Many combine their academic program abroad with an international internship.

Smith's relatively new and recently accredited Engineering Program—the only such program at a women's college—was founded explicitly to embed the engineering curriculum within a liberal arts education. Courses incorporate the consideration of real world problems throughout the four-year sequence. Teams of seniors are required to complete a capstone field study project in which they develop solutions to engineering challenges in business, the environment and other applied areas.

Currently, Smith is implementing three new academic centers, each of which will link coursework to field work and internships in local, national and international settings. These include a Center for the Environment, Ecological Design and Sustainability; The Center for Community Collaboration; and Center for International and Intercultural Studies. In addition, the college is planning a Center for Work and Life (CWL), which will link programming on wellness, leadership development and career planning as well as provide students opportunities to reflect about the nature of a rewarding life. A signature program of the CWL is The Women's Narratives of Success Project, which offers Smith women an opportunity to consider their own definitions of success. One of the initiatives of this project is the "Get a Life Workshop," a not-for-credit five-day January term course in which juniors and seniors begin to develop a habit of reflection about their own ambitions, values and goals.

Alumnae Outcomes

According to 2005 COHFE data, 84.1% of Smith alumnae at 10 years out reported their primary activity in the first year following graduation was employment for pay (66.2%) or being a student in a degree program (17.9%).

Ten graduates were interviewed for this study: one each from the classes of '92, '93, '98, '99, '00, and '01, and two each from the classes of '96 and '04. All have pursued professional (rather than academic) careers. Nine work full-time; 1 works part-time while pursuing graduate study. Six have pursued additional degrees since graduating. With the exception of one graduate who does freelance work in addition to, and in the same field as, her full-time job, none of the graduates are self-employed or engaged in their own entrepreneurial activities. One of the 10 works directly in her field of study at Smith; 5 others say their work is somewhat related to their fields of study, and the remaining 4 say their work is not at all related. Nine of 10 indicate that their experiences at Smith prepared them for their current work, whether or not it is directly related to their major.

Most graduates, from both recent and earlier years, expect to continue in work closely related to what they do at present. When a graduate changes careers, this is typically a return to an earlier goal or a move to a new area of the same field. Most careers reflect a steady increase in responsibility, with professional advancement as a primary goal. Some graduates, however, choose to take pay cuts, reductions in work hours, or shifts to less stressful or demanding positions in order to obtain greater logistical flexibility, exercise more creativity, or pursue other interests (inside or outside work).

Graduates speak consistently about the excellent writing, analytic and critical skills they gained at Smith. Graduates working in technical fields often wish there had been more opportunity to gain basic practical skills while at Smith; others, including English and government majors, are pleased with the extent to which the basic skills

they learned in college have allowed them to progress professionally. Their career success indicates that Smith graduates are able to draw on their liberal arts background to obtain satisfying careers.

Graduates speak about the importance of experience in internships as they shape their career plans. For many, the internship reinforced a possible career choice; others discovered they were not suited to that line of work. Students returning from internships used their experience to choose coursework and co-curricular activities with greater clarity and focus. Students appreciate the opportunity to make professional connections while still undergraduates, and also the opportunity to gain practical work experience and job-related skills. Students also relish meeting Smith alumnae who give them career advice and offer mentoring.

Warren Wilson College Asheville, NC

Founding Year: 1894 (4-year undergraduate since 1967)
Students: 800 undergraduates
Tuition: 23,000 (w/o room and board and fees)

Extending from its early history as a high school for boys with a focus on farming skills, Warren Wilson has evolved into a four-year college that operates through a Triad combining academics, work, and service. The majority of Warren Wilson's students come from the middle and upper class, 30% are on financial aid, and the majority go on to attend graduate school and/or work in the non-profit sector. The college attracts students with an activist bent who are interested in an alternative approach to education that focuses on service and experiential learning.

In addition to its traditional liberal arts curriculum, all students work 15 hours per week for minimum wage with their "salaries" deducted directly from their tuition. Performing the chores needed to support the community, students do all of the work necessary to make the institution operational, from cleaning, to plumbing and electrical work, to website design. The work program includes learning goals, apprenticeship with and evaluation by supervisors, and student reflection in writing on the experience of work and the Triad.

In addition, students are required to perform 100 hours of community service off campus, with 40 of those hours taking place with one agency. These activities are built into some of the classes and require regular reflection and self-evaluation by students. Students are guaranteed a paid cross-cultural experience, which most typically takes place through international travel, work, and/or study.

While most students work while in college, typically this work is not perceived and tapped as a learning experience. By contrast, Warren Wilson's philosophical and practical focus with regard to work and the liberal arts relates to the cultivation of a work ethic, civic responsibility and the importance of building and contributing to community. Within the Triad, the work program is seen as an integral part of the overall learning experience that has direct implications not only for where students want to work and what they want to do, but how they view their place and responsibility within society.

The development and integration of the Triad is a perpetual topic of deliberation among the faculty and staff at Warren Wilson. A tension exists between the practical necessity of getting all of the work done while at the same time ensuring an educational component that is articulated, implemented, and measured. For instance, while a supervisor can evaluate a student on their ability to perform their job, he/she may not be ideally positioned to identify and draw out the student's experience of personal and professional growth and learning. An academic advisor is typically positioned to address this type of learning, but often at a distance from the immediacy of the learning moment. In other words, the active integration of teaching and learning within the Triad is an on-going project for members of the college.

Eighteen percent of Warren Wilson's students come from North Carolina; many other students come from the midatlantic and southern regions of the U.S., including Virginia, Pennsylvania, Florida, and Georgia. The majority of students come from the middle and upper class, with 46% receiving some sort of financial aid. The most common majors are Environmental Science, English, and Outdoor Leadership.

Entering Students

Surveys of entering students show that as a group, Warren Wilson students are far more interested in college as an intellectual experience than as preparation for a life of work. Recent CIRP data shows that 86% of entering first-years say it is very important to them to gain a broad general education and 79% place a similar value on developing a meaningful philosophy of life. At the same time, only 18% say they chose Warren Wilson because its graduates get good jobs, and only 12% chose it because its graduates attend top graduate or professional schools.

Faculty Attitudes

In a focus group consisting of four Warren Wilson College faculty and four staff/administrators, there was a tendency to see many graduates taking 2-5 years following graduation before returning to graduate school or settling into a career, often in service-oriented fields like teaching, nursing, and social work. This fits with the general observation that many students find themselves unsure how to think about career plans in their senior years, and may be facilitated by a tendency for recent

graduates to stay in Asheville or in the broader Appalachian Region for the first few years following graduation.

Overall, there is agreement among faculty and staff that the school should not try to direct students straight into clearly-defined career paths but rather should aim to give students the tools, through work and service as well as academics, to figure out what they care about and to explore their interests further through jobs and careers. There was a great deal of discussion of the often indirect connection between a student's major and their eventual career, citing a typical example of an English major who is now a doctor in Kenya. While of course students wanting to enter particular fields need background in particular academic areas, the flexibility and highly transferable nature of most skills acquired in a liberal arts education generally, and in the Triad system in particular, are seen as much more central to students' futures. In keeping with this, faculty and staff have the impression that many students find the word "career" limiting; in response to this, the Dean of Work uses language like "finding your next adventure" in discussing students' futures.

College Experiences

According to student responses to the NSSE in 2007, 79% of Warren Wilson seniors reported having completed some sort of internship or field experience; 95% of seniors had done community service (as part of Triad), and 56% had studied abroad. All of these participation rates are much higher than those for work colleges generally or other peer institutions. Through these and other experiences, 79% of Warren Wilson seniors felt they had acquired job- or work-related knowledge and skills "quite a bit" or "very much." While this is similar to student reports at other work colleges, Warren Wilson students also feel strongly that they have contributed to their communities: 86% of WWC students say that they have done this "quite a bit" or "very much," compared to 63% at other work colleges and 57% at other peer schools.

Alumni Outcomes

Warren Wilson's web site indicates that of all its alumni, 17% have careers in teaching, 14% in social work, 10% in science, and 12% work as artists. Warren Wilson alumni from the mid-70s, mid-80s, and mid-90s participated in the 2000 Appalachian College Association Alumni Survey, with 45% of alumni surveyed returning questionnaires.

Work program participation directly influences and benefits the future careers of a large number of alumni. When asked which aspects of their college experience were most valuable, work was mentioned 22% of the time, second only to academics (32%). Similarly, while 56% of alumni say that their career is most closely related to their undergraduate academic experience, work experience is the most closely related for the majority of others (26%).

Aspects of their work program participation have proven useful for most graduates in their future careers. Seventy-one percent of alumni report that they often use aspects of their Warren Wilson work experiences in their current work. Further, 77% agree or strongly agree that they are better prepared for their work by their Warren Wilson education (including work and service) than their other college-educated colleagues. From these work experiences, alumni indicated that they learned particularly valuable skills, including leadership, self-confidence, communication, self-discipline, teamwork, taking on challenges, setting goals, managing time, learning to work with others and with a boss, and learning to be thorough and exact. Alumni also mentioned the value of their required 15 hours of weekly work in helping them learn to manage and balance their time and energy, and in the development of self-confidence and a good work ethic.

The lasting influence of the Triad system of integrating work, service, and education is seen in the a variety of connections between these elements in various stages of graduates' lives. Service is reported to have a positive influence on the later work of 76% of alumni. The reverse is also true: 66% of graduates report that their undergraduate work experience has helped them understand the importance of providing community service after college, and participation in the work program increased the ability of 51% of graduates to participate in community service after graduation. Finally, 55% of graduates also report that their participation in the work program has increased their ability to continue their educations after graduation.

Worcester Polytechnic Institute Worcester, MA

Founding Year: 1865
Students: 2,800 undergraduates; 1,100 graduates
Tuition: $33,000 (w/o room and board and fees)

The student body at Worcester Polytechnic Institute is one quarter female; approximately 15% of the 3,000 undergraduates are U.S. students of color, and another 7% are international. About half of the students are from Massachusetts, and another 30% are from the New England region. Two thirds of 2007 graduates majored in engineering subjects (especially mechanical and electrical/computer engineering); a quarter majored in science subjects (particularly computer science and biology/biotechnology), and most of the remaining students majored in management or occasionally liberal arts subjects. Eighty percent of undergraduates receive some form of financial aid.

Founded as the first technical school in the U.S. with a focus on both theory and practice, WPI is committed to training its students to put their knowledge to work in useful ways. This goal gained increased emphasis in 1970 when the university shifted

from traditional requirements to an emphasis on real-world projects. The academic calendar involves 4 terms per year with a required load of three courses per term equivalent to 9 credit hours. In order to graduate students complete two major projects, each worth 9 credit hours:

• **A junior project that relates technology and science to society or human needs.** The interdisciplinary "Interactive Qualifying Project" challenges students to relate social needs or concerns to specific issues raised by technological developments. It typically involves a team of students from across various fields working together on a broadly defined project to address a specific technological and social problem.

• **A senior project in the major field of study.** The "Major Qualifying Project" focuses on the synthesis of previous study to solve problems or perform research in the major field. Students work individually or in small teams with an emphasis on problem solving, formal writing and oral presentation, and the provision of a final product for use by the sponsoring institution.

The aim of the projects is for students to solve real-world problems and thus gain experience invaluable for professional practice or further study. Project opportunities often originate through off-campus sponsors (public, private, non-profit, or NGOs) who pitch a problem to WPI faculty members. Students are also encouraged to develop their own projects, to solicit support for their ideas from potentially interested faculty, and to form teams to pool resources and share points of view. Projects are developed in consultation with both sponsoring organizations and faculty advisors and culminate in the presentation of recommendations and/or products that are ready to be used.

Over half of WPI's students complete at least one of these projects through WPI's Global Perspective Program (GPP), which annually places 500 students in off-campus WPI Project Centers in 16 countries on 5 continents. About 30% of the WPI faculty are involved in GPP projects as advisors, and also work closely with students and host organizations. Students apply one year in advance to participate off-campus in projects (over 90% of qualified students are placed) and pay expenses on top of tuition (with many qualifying for financial aid). They take a required 4.5 credit hour preparation course to study the location, culture, and language while preparing a detailed research proposal for their work. A typical offering at a WPI Project Center involves 24 students working on 6 different projects with 2 faculty members during the course of a single term.

At WPI academic learning and preparation for future work are already strongly integrated, modeled, and structured within the institution, its courses, and the projects themselves. WPI has yet to conduct a systematic longitudinal assessment of its project programs with regard to their outcomes for students as well as host organizations.

Entering Students

WPI students generally arrive on campus with a strong orientation toward career preparation in engineering, the sciences, or a related field. 72% of entering first-year students say they chose WPI because its graduates get good jobs; 69% say they are attending college to get a better job. About 55% say they came to get training for a specific career, and that it is very important or essential that they become authorities in their fields and obtain recognition from colleagues. At the same time, 62% say it's very important that college provide them with a broad general education, so a significant number of WPI students appear to value a combination of these various purposes.

Faculty Attitudes

In a focus group consisting of 10 faculty members from a wide range of disciplinary backgrounds, perspectives, and career stages, there was general agreement that WPI graduates are extremely well prepared to move into the world of work. Particular abilities developed at WPI contributing to this success include extremely strong technical skills, a strong work ethic, and flexible, team-based approaches to problem-solving; generally, students excel at knowing how to get things done. Confirmation for this general impression of preparedness is found in studies indicating that employers rate WPI students more highly than engineering students from other schools. There is a strong consensus that all faculty share responsibility for preparing students to be both good workers and also good citizens.

There is a concern, voiced most strongly by humanities faculty, that students would be better prepared, especially in the long term, if the curriculum placed more emphasis on reflective and critical thinking about their technical studies. As WPI graduates' career paths typically include growth into management and leadership roles, it is important that they are experienced in exercising leadership, and that they are in the habit of considering moral and ethical aspects of technologies, ways of contributing to communities, etc. There is also a concern that while essentially all students succeed in getting "good" jobs, students may benefit from additional reflection on identifying their true passions, and from thinking more creatively about careers which meaningfully connect with these. While schools that combine engineering degrees with a traditional liberal arts education may do better on these broader issues, there is a general concern that such a curriculum would not leave enough time for students to learn the breadth of technical knowledge that leads to the success they achieve at present.

Overall, faculty are remarkably candid in acknowledging the dimensions along which WPI graduates may be imperfectly prepared for a life of work. Despite these potential weaknesses of the curriculum, however, faculty observe that career preparation at WPI seems much stronger than at many other schools. Quite simply, students tend to come to WPI knowing what they want to do, and so are already at a career advantage over students at many other schools; they then successfully acquire

the necessary skills and background and go on to obtain good jobs leading to good careers.

College Experiences

All WPI graduates have completed the two required projects, one of which is intended to represent an entry-level professional or research experience in the major field. Typically, at least one of these projects is completed for an external sponsoring organization. In addition, most WPI students have completed at least one summer internship before graduation. Eighty-seven percent of the WPI seniors taking the 2006 NSSE survey say that they have "acquired job or work-related knowledge and skills" quite a bit or very much.

Alumni Outcomes

Ten graduates were interviewed; of these, 5 graduated in 1990 and 5 graduated in 2005. All 10 hold full-time positions in professional fields; 8 work for employers, while 2 are self-employed business owners. Three graduates say they are working in their undergraduate field of study, 6 in somewhat related fields, and 1 in an unrelated field. One 2005 graduate attends graduate school full-time while also working full-time. Most of the recent graduates are still in the process of figuring out what they want to do; many express interest in moving towards managerial positions, and most don't expect to stay in their current jobs for long. The 1990 graduates have consistently followed rising career trajectories, moving from hands-on or technical positions to managerial positions with greater oversight, seniority, and income. These graduates generally plan to continue working in their present capacity, with potential moves into more senior positions, until retirement.

All 10 interviewees agree that they were extremely well prepared to obtain jobs and progress in careers within their chosen fields. A number of aspects of a WPI education were mentioned as contributing to graduates' success. The WPI curriculum is difficult and extremely fast-paced; students who learn to handle this well are also able to handle the pressures of the professional world. The project-based WPI curriculum is cited as a realistic representation of the work world, and students value this experience collaborating with (and often leading) teams dealing with rapidly changing topics and projects. Most interviewees agree that the content of their projects was realistic as well, and note that employers are often interested in hearing about students' project experience.

Graduates report that as undergraduates they were trained, by both design and necessity, as generalists who must then teach themselves the skills and information necessary to become specialists in their particular fields of work. This is a difficult transition, and some interviewees wish they had received more specific, practical training at WPI. In general, however, alumni agree that a key skill developed at WPI is "learning how to learn", allowing them to get up to speed in new areas quickly and

effectively. This flexibility also makes it easier for students to move between jobs and fields. One area in which graduates consistently feel unprepared is writing. While they were often evaluated on the content of their writing as students, there was relatively little evaluation of or instruction in quality of writing. Alumni report that writing is crucial in aspects of their work ranging from technical documents to academic and professional publications to grant applications and fundraising materials.

Finally, all graduates agreed that the career development office was extremely helpful in acquiring jobs, noting the availability of help with resume preparation and general job application procedures and the frequent visits of recruiters to campus. As many of students follow similar career paths, peers are also a valuable resource in thinking about and applying for jobs. The network of relationships that students develop at WPI, including professors, peers, and contacts from internships and coops, is also noted as extremely valuable both in obtaining their first jobs and also in developing their careers in the longer term.

IX. Appendix II: CIRP Data

CIRP data - FY students 2005/6	Theme	Instit. 1	Instit. 2	Instit. 3	Instit. 4	Instit. 5	Instit. 6
Very important reasons for attending college							
Learn more about things that interest me.	fulfillment	95%	81%	85%	94%	94%	85%
Gain a broad general education.	fulfillment	88%	72%	71%	88%	86%	62%
Become a more cultured person.	fulfillment	62%	56%	49%	77%	68%	27%
Prepare for graduate or professional school.	preparation	38%	60%	58%	71%	38%	53%
Get a better job.	preparation	41%	72%	65%	65%	49%	69%
Get training for a specific career.	preparation	30%	68%	51%	38%	40%	56%
Very important reasons for choosing this college							
Graduates get good jobs.	preparation	20%	61%	49%	64%	18%	72%
Graduates go to top graduate and professional schools.	preparation	18%	49%	36%	51%	12%	41%
Very important or essential life goals							
Develop a meaningful philosophy of life	fulfillment	72%	62%	54%	64%	79%	35%
Become an authority in my field	achievement	50%	56%	54%	63%	36%	55%
Obtain recognition from colleagues	achievement	45%	45%	47%	59%	31%	54%
Be successful in my own business	achievement	25%	35%	27%	34%	25%	28%
Be very well-off financially	money	30%	66%	58%	55%	17%	67%
Have administrative responsibility for the work of others	achievement	12%	31%	26%	28%	12%	29%

X. References

Alley, Patricia M. 1985. The Real World and the Liberal Arts Degree--Can You Get There from Here? *Journal of College Placement*, 45; 2 (Winter): 50-54.

Ashburn, Elyse 2008. Student Pool Is Expected to Dip and Diversify. *Chronicle of Higher Education* 3/28/2008.

Association of American Colleges and Universities. 2007. *College Learning for the New Global Century.* Washington, DC.

---- 2006a. *Shared Futures: Global Learning and Liberal Education.* Washington, DC.

---- 2006b. *Assessing Global Learning: Matching Good Intentions with Good Practice.* Washington, DC.

---- 2006c. *Making the Case for Liberal Education: Responding to Challenges*. 2006.

---- 2005. *Liberal Education Outcomes: A Preliminary Report on Student Achievement in College.* Washington, DC.

Axelrod, Paul, Paul Anisef and Zeng Lin. 2001. Against All Odds? The Enduring Value of Liberal Education in Universities, Professions, and the Labour Market. *Canadian Journal of Higher Education*, 31; 2: 47-77.

Ayres-Williams, Roz. 1998. The changing face of nonprofits. *Black Enterprise* 28; 10

Baldwin, Joyce. 2000. Liberal Arts for a New Millenium. *Carnegie Reporter.* 1; 1 (Summer).

Barker, Carol M. 2000. *Liberal Arts Education for a Global Society*. New York: Carnegie Corporation of New York.

Baum, Sandy and J. Ma 2007. Trends in College Pricing 2007. *The College Board,* Washington, DC.

Belcher, Jacquelin. 1999. The Liberal Arts: A Necessary Foundation. *Community College Journal,* 69; 6 (June/July).

Berberet, Jerry and Frank F. Wong. 1995. The New American College. *Liberal Education* 81; 1 (Winter): 48-52.

Bikson, Tora A. 1996. Educating a Globally Prepared Workforce: New Research on College and Corporate Perspectives. *Liberal Education*, 82; 2 (Spring): 12-19.

Bikson, T. K. and S. A. Law. 1994. *Global Preparedness and Human Resources: College and Corporate Perspectives*. Santa Monica, CA: RAND Institute on Education and Training.

Bok, Derek. 2006. *Our Underachieving Colleges: A Candid Look at How Much Students Learn and Why They Should be Learning More.* Princeton, NJ: Princeton University Press.

---- 2003. *Universities in the Marketplace: The Commercialization of Higher Education*. Princeton, NJ: Princeton University Press.

Boston College. Nd. Postgraduate Career Survey Report. Boston College, Boston, MA

Brint, Steven, Mark Riddle, Lori Turk-Bicalei, and Charles S. Levy. 2005. From the Liberal Arts to the Practical Arts in American colleges and Universities. *Journal of Higher Education* 76: 151-180.

Business-Higher Education Forum. 1997. *Spanning the Chasm: Corporate and Academic Cooperation to Improve Work-Force Preparation.* Task Force on High-Performance Work and Workers: The Academic Connection, Washington, DC.

Carnevale, Anthony P. 1996. Liberal Education & the New Economy. *Liberal Education* 82; 2 (Spring): 4-11.

Carnevale, Anthony P. and Jeff Strohl. 2001. The Demographic Window of Opportunity: Liberal Education in the New Century. *Peer Review*, 3; 2 (Winter): 10-13.

Carnochan, W. B. 1993. The battleground of the curriculum : liberal education and American experience. Stanford, Calif. : Stanford University Press, 1993.

Casner-Lotto, Jill and Linda Barrington. 2006. *Are They Really Ready to Work? Employers' Perspectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century U.S. Workforce.* The Conference Board, Inc., the Partnership for 21st Century Skills, Corporate Voices for Working Families, and the Society for Human Resource Management.

Chronicle of Higher Education, 51, February, 2005.

Clausen, Christopher. 2006. The New Ivory Tower. *Wilson Quarterly* (August): 31-36.

Connor, W.R. (nd). Liberal Arts Education in the Twenty-First Century. AALE Occasional Paper in Liberal Education #2, American Academy for Liberal Education.

Dutka, Lee. 2006. Liberal Education and the Specialist-Rich Workplace. *Liberal Education* (Winter): 34-39.

Elliot, Gerri. 2005. Education and Workforce Development. Washington, DC: Commission on the Future of Higher Education.

Ferrall, Victor, E. Can Liberal Arts Colleges be Saved? *Inside Higher Education*. February 11, 2008.

Fish, Stanley. 2003. Aim Low. *Chronicle of Higher Education*, May 16, 2003. 49(36): C5.

Fleetwood, Chad and Shelley, K. 2000. The Outlook for College Graduates, 1998-2008: A Balancing Act. *Occupational Outlook Quarterly. Fall, 2000: 3-9.*

Flynn, Thomas F., ed. 2004. *Report of a Symposium on the Liberal Arts and Business.* Council of Independent Colleges.

Foester, Norman. 1938. *The Future of the Liberal College*. New York: New Appleton-Century.

Fong, Bobby. 2004. Liberal Education in the 21st Century. *Liberal Education,* 90; 1 (Winter): 8-13.

---- 2002. Of Character and Citizenship. *Peer Review* 4; 4 (Summer): 8-9.

---- 2001. Teaching Professions Liberally. *Peer Review*, 3; 2 (Winter): 14-16.

Green, Charles S., III and Richard G. Salem. 1988. Assessing the Prospects for Liberal Learning and Careers. *New Directions for Teaching and Learning College Teaching and Learning: Preparing for New Commitments* 33 (Spring): 5-19.

Hamermesh, Daniel. 2005. Four Questions on the Labor Economics of Higher Education. Unpublished paper.

Handy, Charles. 1998. A Proper Education. *Change,* 30; 5 (September-October): 12-19.

Hechinger Institute on Education and the Media. 2005. *Beyond the Rankings: Measuring Learning in Higher Education – An Overview for Journalists and Educators.* Hechinger Institute, Teachers College, Columbia University.

Hecht, Jason. 2001. Classical Labor-displacing Technological Change: The Case of the U.S. Insurance Industry. *Cambridge Journal of Economics* 25: 517-537.

Herman, Roger E. 2006. The Case for Liberal Arts. *The Futurist* 34.4 (July): 16.

Hersh, Richard H. 1997. The Liberal Arts College: The Most Practical and Professional Education for the Twenty-First Century. *Liberal Education*, 83; 3 (Summer): 26-33.

---- 1997a. Intentions and Perceptions: A National Study of Public Attituds Toward Liberal Arts Education. *Change* 29; 2: 16-23.

Higdon, Leo J., Jr. 2005. Liberal Education and the Entrepreneurial Mindset A Twenty-First-Century Approach. *Liberal Education*, 90; 1 (Winter): 2-5.

Hillstrom, J. K. 1984. The Liberal Arts Employment Dilemma. *Journal of College Placement*, 44; 3 (Spring): 24-29.

Hines Jr., Samuel M. 2005. The Practical Side of Liberal Education: An Overview of Liberal Education and Entrepreneurship. *Peer Review* 7; 3 (Spring) 4-7.

Kimball, Bruce A. 1995. *The Condition of American Liberal Education: Pragmatism and a Changing Tradition.* New York: College Entrance Examination Board.

Koblik, Steven and Stephen R. Graubard. 2000. *Distinctively American: The Residential Liberal Arts Colleges.* New Brunswick and London: Transaction Publishers.

Kysor, Darwin V. and Margaret Anne Pierce. 2000. Does Intern/Co-Op Experience Translate into Career Progress and Satisfaction? *Journal of Career Planning and Employment,* 60(2) (Winter): 25-31.

Lagemann, Ellen Condliffe. 2003. The Challenge of Liberal Education: Past, Present, and Future. *Liberal Education*, 89; 2 (Spring): 6-13.

Lancaster, Hal. 1998. Learn all the rules before you enter the nonprofit game. *Wall Street Journal*, March 17, 1998. B1.

Lattuca, Lisa R. and Joan S. Stark. 2001. Liberal Studies and Professional Specialization: An Historical Review. *Peer Review,* 3; 2 (Winter): 4-8.

Lewis, Theodore. 2005. At the Interface of School and Work. *Journal of Philosophy of Education*, 39; 3 (August): 421-441.

---- 1998. Vocational education as general education. *Curriculum Inquiry* 28; 3: 283-289.

---- 1997. Towards a liberal vocational education. *Journal of Philosophy of Education* 31; 3: 477-489.

---- 1993. Valid knowledge and the problem of practical arts curricula. *Curriculum Inquiry* 23; 2: 175-202.

---- 1991. Technology as general education. *The Journal of General Education* 40: 34-48.

Lin, Zeng, Robert Sweet, and Paul Anisef. 2003. Consequences and Policy Implications for University Students Who Have Chosen Liberal or Vocational Education in Canada: Labour Market Outcomes and Employability Skills. *Higher Education Policy*, 16; 1 (March): 55-85.

Lynton, Ernest A. 1991. New Concepts of Professional Expertise: Liberal Learning as Part of Career-Oriented Education. *Journal of General Education*, 40: 11-23.

McAdam, Terry W. 1986. *Doing Well by Doing Good: The First Complete Guide to Careers in the Nonprofit Sector*. Rockville, MD: Fund Raising Institute, a division of the Taft Group.

Meiners, Roger E. 1995. The Evolution of American Higher Education, in John Sommer ed., *The*

Academy in Crisis: The Political Economy of Higher Education. New Brunswick, NJ and London: Transaction Publishers.

Menard, Louis. 2001. College: The End of the Golden Age. *The New York Review of Books*, October 18, 2001. 48(16): 44-47.

---- 1997. Re-Imagining Liberal Education. *Education and Democracy: Re-Imagining Liberal Learning in America*, Robert Orrill, ed. New York : College Entrance Examination Board.

Moore, Cassie. 2004. College Career Offices Provide Little Information on Nonprofit Jobs, Study Finds. *Chronicle of Philanthropy* 16; 11: 49-49.

Moore, Dennis D. 2006. Engaging Today's Faculty in the Liberal Arts. *Liberal Education* (Summer): 46-51.

Murray, Charles. 2007. On Education: What's Wrong with Vocational School? *The Wall Street Journal*, January 17, 2007. A19.

Myers, Michele Tolela. 2001. Preparing students for an uncertain future. *Liberal Education,* 87; 3 (Summer): 22-5.

National Center on Education and the Economy. 2007. *Executive Summary -- Tough Choices, Tough Times: The Report of the* New *Commission on the Skills of the American Workforce* Washington, DC: Commission on the Skills of the American Workforce.

Newman, John Henry. 1996 (originally published 1899). *The Idea of a University*. Frank M. Turner, ed. New Haven: Yale University Press..

Nussbaum, Martha C. 1997. *Cultivating Humanity: A Classical Defense of Reform in Liberal Education*. Cambridge, Mass.: Harvard University Press.

Oblinger, Diana and Anne-Lee Verville. 1998. *What Business Wants from Higher Education.* Phoenix, Az: American Council on Education, Ornyx Press.

Orrill, Robert, ed. 1997. *Education and democracy: re-imagining liberal learning in America*. New York: College Entrance Examination Board.

Paris, David C. 2007. The Academics' Lament and the Traditional Liberal Arts. *LiberalArtsOnline,* 7; 3. [http://liberalarts.wabash.edu/cila/home.cfm?news_id=4679]

Pascarella, Ernest and Patrick Terenzini. 2005. *How College Affects Students, Vol. 2: A Third Decade of Research.* San Franscico: Jossey-Bass.

Person, Ann E. and James E. Rosenbaum. 2006. Educational Outcomes of Labor-Market Linking and Job Placement for Students at Public and Private Two-Year Colleges. *Economics of Education Review*, 25; 4 (August): 412-429.

Piketty, Thomas, and E. Saez, The Evolution of Top Incomes: A Historical and International Perspective. *American Economic Review* 96 N. 2: 200-205.

Rogers, James T. and John E. Sites. 1985. The Value of a Liberal Arts Education. *USA Today,* 113: 2476 (January): 83-84.

Roosevelt, Grace. 2006. The Triumph of the Market and the Decline of Liberal Education: Implications for Civic Life. *Teachers College Record* 108; 7 (July): 1404-1423.

Roth, Gene L. 1992. A Dialogue with the Original Curriculum Basher about Tech Prep and a Liberal Education. *Journal of Industrial Teacher Education*, 30; 1 (Fall): 31-45.

Rudolph, Frederick. 1977. *Curriculum: A History of the American Course of Study since 1636*. San Francisco : Jossey-Bass Publisher

Sandeen, Arthur. 1976. *Undergraduate Education: Conflict and Change*. Toronto: Lexington Books.

Sax, Linda J., Alexander W. Astin, Jennifer A. Lindholm, William S. Korn, Victor B. Saenz, and Katheryn M. Mahoney. 2003. *The American Freshman: National Norms for Fall 2003*. Los Angeles, CA: Higher Education Research Institute, UCLA.

Schön, Donald A. 1983. *The Reflective Practitioner: How Professionals Think in Action*. New York: Basic Books.

Schneider, Carol G. 2005. Liberal Education: Slip-Sliding Away. In Richard Hersh and John Merrow, eds., *Declining by Degrees: Higher Education at Risk*. New York: Palgrave Press.

Semuels, Alana. 2005. Great Beginnings/ New College Graduates Still Wondering What to Do With Degrees in Liberal Arts. *Pittsburgh Post-Gazette*, September 4, 2005.

Sessions, Robert and Jack Wortman, eds. 1992. *Working in America: A Humanities Reader.* Notre Dame, IN: University of Notre Dame Press.

Slaughter, Sheila. 2001. Professional Values and the Allure of the Market. *Academe* (Sept/October): 22-26.

Slaughter, Sheila. 1998. Federal Policy and Supply-Side Institutional Resource Allocation at Public Research Universities. *The Review of Higher Education* 21; 3 (Spring): 209-244.

Sheila Slaughter and Larry Leslie. 1997. *Academic Capitalism: Politics, Policies and the Entrepreneurial University.* Baltimore, MD: The Johns Hopkins University Press.

Sheila Slaughter and Gary Rhoades. 2004. *Academic Capitalism and the New Economy*: *Markets, State, and Higher Education*. Baltimore, MD: The Johns Hopkins University Press.

Simon, Herbert A. 1991. Bounded Rationality and Organizational Learning. *Organization Science*

2(1): 125-134

Spring, Joel H. 1995. In Service to the State: The Political Context of Higher Education in the United States. in John Sommer ed., *The Academy in Crisis: The Political Economy of Higher Education*. New Brunswick, NJ and London: Transaction Publishers.

Toms, Justine Wills and Micahel Toms. **1998.** *True Work: The Sacred Dimension of Earning a Living.* **New York:** Bell Tower Press.

U.S. Department of Education. 2006. *A Test of Leadership: Charting the Future of U.S. Higher Education.* The Secretary of Education's Commission on the Future of Higher Education. Washington, DC.

---- 2006a *Answering the Challenge of a Changing World: Strengthening Education for the 21st Century.* Washington, DC.

Vesey, Laurence R. 1965. *The Emergence of the American University*. Chicago: Chicago University Press.

Viti, Ethel L. 1984. Liberal Arts Learning for Life. *PTA Today*, 9: 4 (February): 14-15.

Waks, Leonard J. 2004. Workplace Learning in America: Shifting roles of households, schools and firms. *Educational Philosophy and Theory* 36(5) (November): 563-577.

---- 2003. How Globalization Can Cause Fundamental Curriculum Change: An American Perspective. *Journal of Educational Change* 4; 4 (December): 383-418.

Warren, Constance. 1930. On the College Frontier: VIII. The Sarah Lawrence Plan. *The Nation*, November 19, 1930. 131(3411): 549-50.

Whitelaw, W. E. 1983. The Economy and the College Student," in Mary Ann F. Rehnke, ed., *Liberal Learning and Career Preparation*. Current Issues In Higher Education. AAHE Monograph, No. 2. 1982-83.

Wolff, Robert Paul. 1992 (originally published in 1969). *The Ideal of the University*. New Brunswick, NJ and London: Transaction Publishers.

Yeo, Stephen. 1996. Commentary: Work and Learning, Learning and Work--on Changing the Conversation. *Studies in the Education of Adults,* 28; 1 (April): 1-13.