

Sustainability in Colleges and Universities: Toward Institutional Culture Shifts

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Over the last thirty years, as environmentalists, scientists, and policy makers have more closely examined the world's ecological systems, the word "sustainability" has gathered force and become a movement in the United States (Cortese, 2003). The most frequently cited definition of "sustainability" comes from the 1987 Brundtland Report of the World Commission on Environment and Development in its description of new directions for "our common future": sustainability encompasses "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (p. 1).

Sustainability is part of the national public conversation and is becoming an increasingly central issue in the political landscape of the United States in the 21st century. Many business leaders and policy makers regularly recognize the impossibility of limitless economic growth on a finite earth (Onwueme & Bosari, 2007). While a serious public debate certainly exists around the issue of how to approach sustainability in the coming years, Campbell (1996) articulates, "In the battle of big public ideas, sustainability has won, but the task in the coming year is simply to work out the details" (p. 301). Since taking office in January 2009, United States President Barack Obama appears to be taking a serious stance on sustainability issues. He regularly communicates the country's commitment to the sustainability imperative, particularly in relation to global climate change, renewable energy, and green jobs: "I pledge to you that in this global effort, the United States is now ready to take the lead" (Reuters, April 5, 2009).

Historically, dialogue, research, and action within American colleges and universities have reflected the national public conversation. As Kerr (2001) articulates, "As society goes, so goes the university; but also, as the university goes, so goes society" (p. 194). Kerr's statement suggests an obligation on the university's behalf to carefully heed the national public dialogue in order to examine it, but it also suggests the university's critical role in leading change. The social and public purpose of higher education has been a historical pillar of the American university's mission (King & Mayhew, 2004; Zemsky, Wegner, & Massy, 2005; Merkel & Litten, 2007). Reuben (1996) writes that college and university goals must go beyond those that benefit the individual, continuing to underscore the sociomoral dimension of higher education that has existed for centuries. Sustainability, in its quest to secure intra- and inter-generational well-being, falls within this sociomoral call.

While colleges and universities do recognize that sustainability must play a role in their institutional life, many questions arise as to how higher education must best approach the topic. In order to explore this problem, examining the current research on sustainability within the higher education setting is important. A close examination of the literature will guide future researchers on how to better focus their work on sustainability within colleges and universities. What is the state of the research on sustainability within higher education institutions, and how might the research be enhanced? How can the research on sustainability in colleges and universities most accurately reflect the context of colleges and universities? This paper will focus on the literature related to sustainability in colleges and universities and how sustainability has been previously studied. Based on the findings in the literature, this paper subsequently offers tipping theory as an accompanying research lens in order to further investigate sustainability in colleges and universities.

Sustainability's Presence in Colleges and Universities

Many higher education institutions have already recognized that they must play a role in creating a more sustainable future. The Association of University Leaders for a Sustainable Future (ULSF), which includes over 350 universities, issued the following statement about the centrality of sustainability in higher education: "We believe that the success of higher education in the 21st century will be judged by our ability to put forward a bold agenda that makes sustainability and the environment a cornerstone of academic practice" (Report and Declaration of the Presidents Conference, 1990). Over the past two decades, over 1,000 university leaders, presidents, and vice chancellors have committed their institutions to change toward sustainability through pledges such as the Talloires Declaration (1990), Swansea Declaration (1993), Copernicus Charter (1994), Lindberg Declaration (2001), and American College and University Presidents Climate Commitment (2007) (Tilbury & Whortman, 2008). The Association for the Advancement of Sustainability in Higher Education (AASHE) was established in 2005 as a leader organization in sustainability efforts and has more than two hundred institutional and system members (Merkel & Litten, 2007). AASHE serves to help its members integrate sustainability across their campuses – in the curriculum, research, and operations. The Sustainable Endowments Institute also produces an annual Sustainability Report Card that offers an assessment on colleges' and universities' progress towards sustainability. Through the report cards, the Sustainable Endowments Institute seeks to encourage colleges and universities to prioritize their operations and investment policies regarding sustainability.

Beyond public purpose, many institutional benefits exist in pursuing sustainability. Blackburn (2007) highlighted the following benefits: strategic positioning as an ethical institution; bolstering relations with the community; enhancing students' employment

prospects as employers are increasingly interested in sustainability; attracting students, private donors, and government funders who care about sustainability; and cost-savings through waste reduction and energy conservation.

The Complexity of Higher Education and Sustainability

In exploring research approaches to sustainability in colleges and universities, comprehending the complexity of higher education in combination with the complexity of sustainability is necessary. Colleges and universities are highly decentralized, face competing imperatives and demands, and are steeped in tradition, making it difficult for any new concept to take root (Tilbury & Whortman, 2008). Given the diffusion of power within higher education institutions, not all aspects of colleges and universities can be managed (Edelstein, 1997). As a result of this distinctive culture of governance and organizational behavior, which is different from other types of institutions, administrators must take different approaches to leadership, strategy, and change efforts (Baldrige, Curtis, Ecker, & Riley, 1978).

The issue of sustainability is also complex, drawing from multiple disciplines, encompassing many efforts, and treading on new ground. The fields that sustainability issues traditionally draw from include engineering and environmental science, but sustainability issues transcend most discipline divisions to include such areas as education, philosophy, business, and law. Given that higher education is typically organized into highly specialized academic areas, designing sustainability-related research, curriculum, programming, and initiatives often requires overcoming these disciplinary boundaries (Cortese, 2003). The complexity of sustainability is also tied to the immensity of it; understanding the impact of sustainability ultimately means changing the way humans conceive of the world and their place in it (Gardner, 2006). Senge (2008) illuminated this thought, writing, "For most of us, the endless litany of environmental and societal crises is overwhelming, both emotionally and cognitively" (p. 25). The intangibility and enormity of sustainability often overwhelms us and subsequently creates a lack of interest in the issue and a commitment to it (Thomas, 2004). Beyond the psychological resistance to the topic also lies the financial resistance because sustainability initiatives often require an initial investment in order to gain long-term efficiency (Rees, 2003).

Thus, because of the complexity of both higher education and sustainability itself, major institutional change has yet to occur on most campuses (Tilbury & Whortman, 2008). Many institutions have only engaged in small and incremental steps on their path toward sustainability (2008). Despite the enormous efficiencies that can be garnered from adopting a more sustainable culture, few colleges and universities have achieved such a culture (Sharp, 2002). For example, many institutions start the sustainability journey with waste reduction or energy efficiency improvements, but then do not move

beyond this low-hanging fruit (Senge, 2008). A more comprehensive approach may be needed.

Previous Theoretical Frameworks

Throughout the last two decades, while the research studies on sustainability in the higher education setting have been limited, two primary theoretical approaches have been used to help make sense of how to approach sustainability in colleges and universities: leadership and strategy. This paper briefly examines these theoretical frameworks and explains how tipping theory can guide an approach that may appropriately accompany the current research approaches.

The most prominent theoretical lens that has been applied is leadership. Leadership theory is often employed when trying to understand how to shape the future. In their respective doctoral dissertations, both Shriberg (2002) and McNamara (2008) used leadership as a main lens to investigate sustainability in colleges and universities, examining how colleges and universities can better lead a successful change effort towards sustainability. Barlett & Chase's (2004) text, which includes case studies on sustainability initiatives from eighteen different colleges and universities, also speaks to the leadership lens. While the leadership lens did not frame their study, they discovered that in most cases the sustainability initiatives were begun by one individual – a leader – who decided to create change on his/her campus.

Other authors concur that leadership is a highly useful lens. Senge (2008) wrote that strong leadership is necessary in order to gain our desired, sustainable future rather than doing “the best we can to cope with the circumstances we believe our beyond our control” (p. 372). Cortese (2003) articulated that leadership is the imperative ingredient, writing, “Without supportive leadership, campus sustainability efforts have a hard time attracting the resources and compliance needed to succeed” (p. 11). Further, Merkel & Litten (2007) emphasized that leaders inevitably control the political and financial resources, so their support is essential. Perrin (2001), after conducting a brief study on the greenest college campuses even created a “Perrin’s Law” about leadership: “No college or university can move far toward sustainability without the active support of at least two senior administrators” (p. B9).

While leadership is undoubtedly a useful and necessary lens to sustainability research in colleges and universities, the leadership literature on this topic does not seem to fully account for colleges’ and universities’ diffused power structure and negative perception of hierarchical leadership. For example, Shriberg (2002) asserted that top leadership commitment (governing board, president, and administrators) is an essential force for campus sustainability in terms of providing a strategic vision and enhancing coordination. Yet, colleges and universities do not function through a formal,

hierarchical, top-down structure like many corporations. Rather than power primarily stemming from the top of the organization, colleges and universities operate through a system of shared governance, which The American Association of University Professors defines as “shared responsibility and joint effort involving all important constituencies of the academic community, with the weight given to the views of each group dependent on the specific issues under discussion” (1971). Thus, moving forward in the research on sustainability in colleges and universities, researchers may be wise to employ the leadership lens in a way that accounts for the decentralized nature of higher education institutions. Birnbaum (1988) wrote, “In higher education, there is a strong resistance to leadership as it is generally understood in more traditional and hierarchical organizations” (p. 22).

Strategy literature is another theoretical approach to sustainability in higher education. Henson, Missimer & Muzzy (2007) wrote that while individuals at institutions within higher education are taking strides toward sustainability, they lack a strategy that originates from a clear definition of success. Henson et al. (2007) articulated that an effective strategy would involve a logical and generic set of guidelines to inform the sustainability process and implement a plan. McNamara (2008) spoke of strategy as part of the leader’s change management process, articulating that one should create a vision and a guiding coalition. The fact that a strategy is necessary when trying to implement any change makes logical sense. However, the way that the literature frames the concept of strategy often presumes that the vision and subsequent plan of action should come from the leadership at the head of the institution.

An Accompanying Research Perspective

Although few comprehensive research studies on sustainability within the higher education setting exist, the studies that have been conducted seem to inadequately attend to the unique terrain of colleges and universities. The studies do seem to appropriately capture the complexity of sustainability, but lack a deep exploration of the complexity of colleges and universities. In other words, the past frameworks used to address sustainability in higher education institutions - primarily leadership and strategy - do not comprehensively account for the decentralized nature of higher education governance and its distinctive organizational behavior. Perhaps this gap in the research originates from the reality that the most in-depth studies on the topic have been conducted by researchers from outside the field of higher education – from fields such as environmental studies (e.g. Shriberg, 2002), leadership (e.g. McNamara, 2008), and engineering (e.g. Henson et al., 2007).

Thus, while leadership, strategy, and systems thinking do provide value in theorizing how sustainability in colleges and universities should be approached, this paper would like to introduce tipping theory as a complementary lens to use in conjunction with

these current theoretical approaches. Using a research approach that harnesses a more diffused power system may serve to accompany the existing theoretical frameworks that already seem to capture the complexity of sustainability. In short, a theoretical perspective that is designed for colleges and universities' unique governance and organizational behavior is needed.

In using tipping theory as an accompanying theoretical framework, the research may become more attentive to the nature of colleges and universities and ultimately serve to better understand and foster institutional culture shifts. A 'tipping point' signals an apparent change in the way people think and communicate about a specific topic (Besel, 2007). A tipping point is "the effect of many effects, often small and seemingly insignificant" (Warren, 2008, p.1). The tipping point is when a social behavior, idea, or trend takes off and spreads rapidly through a community (Gladwell, 2000). For the purposes of this paper, a tipping point represents the point in time when sustainability takes off within a college or university community and spreads rapidly among the community members.

Tipping theory relies foundationally on a social interaction model of change: that human beings tend to form groups with similar-minded individuals, that human beings connect with different groups to help build these groups into loose coalitions, and that such coalitions can engender change that surpasses what one would anticipate based on the social standing, power, and resources of the individuals who comprise the coalition (Daynes, Esplin, & Kristensen, 2004).

Tipping theory allows us to view a college or university as a system in which, under the right conditions, very small changes in inputs result in big changes in outputs (Wood, 2005; Meadows, 2006). Inputs could include ideas, people, and resources. Possible outputs could include behavior changes and cultural shifts. Through the theoretical lens of tipping, change is produced by "diffuse, irregular efforts of students and faculty found in the 'shadow' of the university – the area outside of the 'mainstream' of campus life and separate from the traditional governing structures of the institution" (Clugston & Calder, 2000, p.108).

The theory of 'tipping' has been employed by sociologists, social psychologists, and economists in explaining how many social phenomena follow the rules of epidemics. Tipping was first introduced by sociologists to describe how a particular percentage of non-white residents in a previously white neighborhood instigated a 'white flight,' resulting in a total occupation of non-whites in a neighborhood within a short period of time – and with the change rarely being reversed (Grodzins, 1957). The tipping phenomenon has also been examined for schools, clubs, and occupation based on gender, age groups, and languages.

While the theory of tipping came into popular use in the 1970s, Malcolm Gladwell's *The Tipping Point: How little things can make a big difference* (2000) truly popularized the theory. Gladwell explained that social epidemics occur when a system in equilibrium receives a specific sort of jolt. That jolt, when delivered by the right type of person carrying the right message in the right context, disrupts the equilibrium, thereby creating a rapid expansion of a particular behavior. Thus, rather than change stemming from individuals with institutional power, change can occur when a small number of people whose roles often fall outside typical measures of power adopt a behavior, pushing the system out of equilibrium and creating a larger shift in behavior – a social epidemic.

Tipping theory still remains a somewhat untapped resource in higher education research. Tipping theory is principally about change, and a limited amount of change process literature exists in higher education, especially in comparison to a field like business. However, tipping theory is most frequently used in the context of communities. Colleges and universities, especially residential ones, are communities in themselves. In thinking about higher education institutions as communities with diverse interests but tied together through a common space and structure, tipping theory seems to align well with the college and university setting.

While behavior is undoubtedly complicated, the higher education setting is ripe for study because it involves many individuals who behave in ways that are contingent on one another. Proximity is a powerful determinant of influence. Students, for example, study together, play together, work together, and eat together. Campus community members are also sensitive to the college campus surroundings. For instance, on residential campuses, when students see how dorms dispose of waste, they receive a message; it's part of the campus' 'hidden curriculum' (Orr, 2002). Some community members are particularly influential among their peers.

Adopting a sustainable culture requires that a mass of faculty, staff, and students exhibits an "ethic of conservation" – an ingrained habit of behaving in ways that minimize on impact on the environment (Friedman, 2008). A community that demonstrates an "ethic of conservation" imposes norms on themselves and acts voluntarily rather than having the norms dictated to them from above (2008). For instance, if an ethic of conservation were the norm, those individuals who engage in highly wasteful behavior would be regarded in the same way as someone who lights up a cigarette on a plane would be looked at today (Friedman, 2008). An institutional culture of sustainability does not prescribe the type of behavior, but it does determine the likelihood that people will behave in probable ways. In other words, a culture "develops the boundaries of the probable" (Birnbaum, 1998, p. 176).

Tipping theory, by nature, is imaginative and aspirational. It excites people because it allows them to explore change from an entirely different viewpoint

(Ringelheim, 2006). A theoretical framework with a positive lens is vital to use when addressing sustainability because too many environmentalists in the past have used a “doomsday discourse,” consistently employing verbs such as stop, restrict, and prevent to talk about sustainability (Nordhaus & Shellenberger, 2007, p. 7). Instead, individuals working toward a more sustainable future must focus on “creating the good” rather than “stopping the bad” (2007, p.7).

Like all theoretical approaches, some challenges may exist to using tipping theory as a theoretical lens for institutional culture change in colleges and universities. First, tipping theory may be best suited for specific types of higher education institutions such as residential campuses and liberal arts institutions. For example, the students on residential campuses typically interact with each other more frequently outside of the classroom, making tipping theory particularly relevant given its emphasis on social systems. Further, liberal arts colleges – which were historically founded on the premise of preparation for participation in public life for the common good (Schneider & Schoenberg, 1998) – may be particularly committed to fostering an institutional culture of sustainability.

Second, tipping theory cannot stand alone as a theoretical perspective. Nevertheless, the fact that it can be used in conjunction with other theoretical approaches holds great merit. For example, while leadership is an essential lens to use, the type of leadership exercised could focus more on facilitating individuals’ own critical thinking and problem-solving rather than using authoritative leadership. Individuals leading sustainability efforts could also create a strategy to identify the community influentials within the faculty, staff, and students and train these individuals to positively influence others on campus through their words and actions. These specific examples serve as a way to combine the lenses of both leadership and strategy with tipping theory.

Tipping theory can allow us to better focus the research on sustainability in higher education institutions and provides a foundational launching point for helping to frame the sustainability conversation within higher education. This theoretical perspective enables us to characterize the issue and gain a deeper understanding of interventions that could effect institutional change on college and university campuses.

Implications and Future Research

In conclusion, sustainability in colleges and universities is a relatively new and growing topic within higher education research. The recent literature on the topic primarily focuses on leadership and strategy. While the lenses of leadership and strategy are surely necessary to advance research on sustainability in higher education, an accompanying approach that also captures the organizational behavior and governance of colleges and universities is needed. Tipping theory as a theoretical perspective attends

to the decentralized structure of higher education institutions and views change in a more systemic way. Utilizing tipping theory in conjunction with leadership and strategy appears to be valuable in researching how to transition to a more sustainable culture within colleges and universities.

Merkel & Litten (2007) call for more research that will produce knowledge to aid the higher education community in becoming more efficient and effective at addressing the sustainability challenge. Through further research, gaining a greater understanding of ways to generate change and identifying levers for tipping points is possible. Studying tipping theory as it relates to sustainability in colleges and universities will ideally help explain behavior and identify types of interventions to target. Further research could investigate how sustainability becomes accepted and instituted by higher education community members and identify the key triggers within the system that help to mainstream sustainable behavior. Examples of research that holds the potential to guide student affairs professionals includes: the effects of modeling pro-environmental behavior, the role of university-wide committees focused on sustainability, the role of institutional storytelling, and exploring partnerships with academic units such as Environmental Studies programs.

In terms of specific institutions, further research could examine a higher education setting with a highly proactive sustainability agenda in order to explore tipping points. For example, based on the Sustainable Endowment Institute's College Sustainability Report Card 2010, such institutions could include University of Pennsylvania, Harvard University, Stanford University, Pomona College, Amherst College, Oberlin College, and Williams College. Further research could examine an institution that has successfully achieved a culture of sustainability, researching what tipping points, if any, occurred through the change process. Research on how sustainability operates in colleges and universities can better inform higher education institutions on how to effectively approach the creation of a culture of sustainability.

Conclusion

Through future research that informs an appropriate approach to sustainability, colleges and universities can work towards operating in sustainable ways and be able to better train students – our future leaders – to solve the intricate environmental problems of the present and future. Not only do significant resource efficiencies exist in pursuing a sustainable culture, but if more higher education institutions can transition toward such a culture, the capability exists for this culture to be infused in other sectors of society.

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