Are Business Students Buying It? A Theoretical Framework for Measuring Attitudes Toward the Legitimacy of Environmental Sustainability

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ABSTRACT
Environmental sustainability has begun to penetrate the business school curriculum. Whether it ultimately becomes a key component of managerial decision-making models will depend upon whether it is perceived as *legitimate* within the context of profit-making enterprises. This paper draws upon the cognitive psychology and organizational legitimacy literatures to develop a conceptual framework for operationalizing perceived legitimacy. This framework can be used to develop survey instruments and simulations that evaluate the effectiveness of various pedagogical approaches to integrating sustainability into business school curricula. Copyright © 2005 John Wiley & Sons, Ltd and ERP Environment.

BUSINESS SCHOOLS HAVE BEGUN TO INTEGRATE SUSTAINABILITY INTO THEIR CURRICULA, AND THE question has recently been raised as to whether it has achieved legitimacy among students and faculty as a topic worthy of serious consideration (Springett and Kearins, 2001). To answer this question, it would be useful to first understand the concept of legitimacy from a cognitive standpoint, then identify the key beliefs that can affect perceptions of legitimacy, and finally develop an instrument capable of assessing individual attitudes toward the legitimacy of sustainability. Such a tool would enable educators, whether in an academic or corporate setting, to determine the degree to which students truly consider sustainability an integral part of the managerial decision-making process. It would also allow them to assess the effectiveness of various pedagogical approaches in enhancing the legitimacy of sustainability, and could even be used to identify perceptual gaps that could be most efficiently targeted in order to improve overall legitimacy. The objective of this inquiry is to develop such a tool.

While there has been a marked increase recently in the number of elective courses offered on the topics of environmental management and sustainable business, there has been little progress in integrating these concepts into core courses in finance, accounting or strategic management (World

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Resources Institute, 2003). This remains the case even as evidence mounts linking sustainable environmental business practices with long run profitability (Fittipaldi, 2004; King and Lennox, 2001; Lanoie and Tanguay, 2000; Russo and Fouts, 1997; Wagner *et al.*, 2001). Some scholars argue that the traditional notion that a win for the environment is necessarily a loss for the bottom line is still being perpetuated at most colleges of business administration, where it permeates the curricula and the views of many educators (Hoffman and Ventresca, 1999).

A more fundamental bias may be embedded in the very structure of the educational system (see, for example, Huckle and Sterling, 1996; Sterling, 2001). Rewards for business students (practical skills, entry-level positions and established career paths) as well as faculty (legitimacy, salaries and status) are most readily obtained by studying or teaching within the framework of functional specialties such as finance, accounting, marketing or operations. Sustainability, however, can only be addressed effectively through synthetic analysis that spans the established sub-disciplines of business and integrates topics, such as the natural sciences, that are not part of the standard curriculum. It also requires a commitment to education as a *transformative* learning process, in which students are challenged and given the opportunity to develop entirely new ways of understanding the role and behavior of the business enterprise. At most business schools, however, standardization and a mechanistic model of the firm encourage a tendency toward *transmissive* learning, whereby students are rewarded for adopting and applying relatively narrow models and methods that are inadequate to encompass the meta-issues that are central to sustainability.

This institutionalized resistance to the sustainability paradigm can adversely influence business students' perceptions of the legitimacy of environmentally sustainable business practices. It is abetted by the fact that a significant proportion of students enter business school with surprisingly regressive attitudes. For instance, almost a third (31.5%) of MBA students recently surveyed at top business schools in the US, Canada and the UK agree that a company's environmental responsibilities extend no further than complying with the law (Aspen Institute, 2003). On the one hand, one might be encouraged that *only* less than a third held this view, but compare this statistic to the virtual unanimity that exists regarding the principle of, for example, profit maximization, and it is clear that environmental sustainability suffers a relatively large credibility gap. Student perceptions of executive attitudes, which can be important sources of validation, are also revealing: When asked to weight the relative importance that they believe corporate leaders give to social and environmental conditions when making business decisions, MBA students guessed that executives grant them only about one-sixth the weight of shareholder interests.

These attitudes, if reinforced by models, case studies and faculty attitudes, can undermine the credibility of transformational paradigms such as sustainability, and may shape students' thinking and constrain their actions long after they assume executive roles in companies. Ajzen's (1991) general theory of planned behavior posits that attitudes contribute to intention, and intention is a powerful predictor of behavior, particularly in the absence of constraints that would diminish one's sense of personal control or efficacy. Even if student attitudes toward sustainability are favorable, however, institutional resistance to it at business schools, and cultural bias and incentives that promote short-term profit maximization at publicly held companies, can diminish their sense of personal responsibility for sustainable management practices and inhibit them from championing sustainability once they achieve positions of relative authority.

For instance, a 1996 survey of environmental managers at 185 firms in the US and Canada found that the largest internal roadblock to successfully managing EH&S (environment, health and safety) issues was inability to convince top management that EH&S was a business (rather than technical) issue (Shelton, 1996). In a follow-up survey two years later, EH&S managers asked to identify the most important barriers to breaching this 'green wall' cited reasons such as 'Top management does not see a bottom-

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line contribution', 'Environmental management is seen as more of a nuisance than a strategy', 'Executives are focused on the bottom line on a quarter-to-quarter basis' and 'The lingering view that [the environment] is a pain that must be resisted' (*Industry Week*, 1998).

This managerial myopia is not confined to the ranks of US business schools and companies. Asian business schools in particular have been slow to incorporate sustainability and environmental management concepts into their curricula. Only one Asian school, The Philippines' Asian Institute for Management, is among 36 business schools worldwide judged to exhibit either 'cutting edge, 'significant' or 'moderate' levels of activity in terms of offering sustainability training (World Resources Institute, 2003). Given that most of the capital resources of Asian–Pacific nations are controlled by ethnic Chinese-owned companies, it is of particular concern that Chinese-language case materials on sustainability are still relatively scarce, and that, even when materials have been developed by Chinese business faculty, schools have resisted their adoption (Hildebrandt and Turner, 2002). Theirs may seem a rational response to the relatively low demand for such training by prospective employers in the region. Independent ratings services find that Asian firms, with the notable exception of Japanese companies (Kanda, 2003), are over-represented among the ranks of poor environmental performers (Fittipaldi, 2004). This result, in turn, may be a function of the relatively low environmental awareness and concern among Chinese (Chan, 1999) and other, non-Japanese, Asian consumers.

Even if sustainability concepts are included in business school curricula, there is no guarantee that students will be persuaded to incorporate them into their business decision-making models, either in school or on the job. On the one hand, research indicates that environmental education does increase *sensitivity* to environmental issues among business students (Cordano *et al.*, 2003), but enhanced sensitivity to the importance of environmental issues is only one step toward the goal of greener management practices. A student may be sensitive, and even sympathetic, to the need for environmentally responsible management practices, but still may consider them peripheral, or even antithetical, to the success of the firm. In order to integrate sustainability into managerial decision-making processes, students and executives must be persuaded of its *legitimacy* as a business issue. Assessing the persuasiveness of pedagogical strategies, modalities or content will first require a theoretical framework for operationalizing and measuring the perceived legitimacy of sustainability as a core business concern.

There are a variety of potential applications for a valid indicator of perceived legitimacy. From the standpoint of pedagogical research and evaluation, it could be used in formal educational settings to gauge attitudinal impact of the introduction of course materials, cases, lectures and simulations related to various aspects of environmental sustainability. A legitimacy indicator could also prove to be a valuable diagnostic tool. A survey instrument or other vehicle for measuring attitudes, administered at the beginning of a period of instruction, could be used to determine which pedagogical approaches or substantive content would be most effective in increasing students' or employees perceived legitimacy of environmental sustainability.

Note that, for purposes of conceptual simplicity, this inquiry focuses on the managerial paradigm of *environmentally* sustainable management. Sustainable management, broadly defined, involves consideration of an organization's environmental and *social*, as well as its financial, performance. As yet, however, there is no broad consensus as to just what types of social policy or impact are truly central to a firm's long-term success. As a recent survey article states, '. . . a precise definition and a watertight business case for social sustainability remain elusive . . .' (Foot and Ross, 2004, p. 124).

On the other hand, environmental or ecological sustainability is narrower in scope, and it is somewhat easier to perceive a consensus, at least at an abstract level, as to what it means. In simple terms, most definitions involve some variation of the basic imperative to leave the earth the way we found it so that others can enjoy it. For companies, this imperative might be reasonably encapsulated by the following definition:

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> Ecologically sustainable companies use only natural resources that are consumed at a rate below the natural reproduction, or at a rate below the development of substitutes. They do not cause emissions that accumulate in the environment at a rate beyond the capacity of the natural system to absorb and assimilate these emissions. Finally they do not engage in activity that degrades eco-system services (Dyllick and Hockerts, 2002, p. 133).

In order to simplify development and explication of the *legitimation* construct, the following analysis is thus restricted to the consideration of the perceived legitimacy of environmental or ecological sustainability.

The Role of Perceived Legitimacy in Decision-Making

As has often been noted, individual and collective decision making within organizations does not closely resemble the idealized process of rational utility maximization, at least partly due to constraints on time, information and processing capacity (March, 1978; Simon, 1978). Rationality is bounded, not only by common cognitive errors and varying frames of reference (Hoffman, Riley, Troast and Bazerman, 2002; Tversky and Kahneman, 1986), but by adherence to personal and collectively established interpretive *schemas* that influence what information decision makers actively seek or allow into their analyses, how they interpret that information, how they evaluate possible alternative courses of action and how they perceive and integrate or learn from the results of their actions (Daft and Weick, 1984; Harris, 1994; Sharma, 2000).

These schemas evolve partly in response to experiences and outcomes, through a process of organizational learning (Daft and Weick, 1984). But responding to new environmental pressures or opportunities that the organization and its decision makers have not previously faced requires either the appropriation and adaptation of pre-existing schemas, often through the application of analogies or metaphors, or the acquisition of new schematic elements. The adoption or rejection of these schemas or schematic elements will depend to a great extent upon whether key decision makers consider them *legitimate*. Suchman (1995, p. 574) offers a working definition of legitimacy as 'a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions'.

The process of adapting old and adopting new schemas is as much a social as it is a cognitive process. Harris (1994, p. 309) suggests that this process involves a 'contrived mental dialogue' between a person's internal view of what makes sense to them and their perception of what other relevant individuals think. Similarly, Ajzen's (1985) theory of planned behavior suggests that the likelihood that people will engage in a given behavior depends partly upon their attitudes toward the behavior, i.e. personal assessment of the right course of action, and partly on the subjective norms, i.e. attitudes of relevant peers and superiors, surrounding the behavior. Perceived legitimacy, i.e. accordance with both personal *and* social assessments of appropriateness, is thus an important factor in determining which mental models, heuristics or schematic elements are used to guide our search for information and possible solutions, our evaluation and application of those alternatives and our interpretation of their results.

Legitimacy as a Theoretical Construct

Legitimacy is a multidimensional psychological construct. As suggested by the previous discussion, one dimension has to do with the *referential locus*, either internal or external to the individual, of the

legitimizing imperative. Cognitive psychologists have suggested that legitimacy is attained or conferred through a combination of both *propriety* and *validity* (Dornbush and Scott, 1975), terms that correspond roughly to Ajzen's (1985, 1991) *attitudes* and *subjective norms*. Propriety refers to perceptions or belief that an action or policy is 'desirable, proper, and appropriate', according to an individual's personal evaluative criteria. Validity refers to individuals' beliefs that they are obligated to respond to social pressure to engage in actions or conform to policies and social norms, even in the absence of a personal sense of propriety. Validity is a collectively established form of legitimization, conferred by both a*uthorization*, i.e., individuals who possess authority convey their support for the action or rule, and *endorsement*, i.e., individuals' peers endorse the action or rule or help to validate an idea, action or social arrangement.

A personal sense that a given situation is legitimate from the viewpoint of propriety can be reinforced by endorsement and authorization, or attenuated if endorsement and authorization are lacking (Walker and Zelditch, 1993; Hegtvedt and Johnson, 2000). For example, individuals participating in behavioral experiments have proven less likely to challenge organizational arrangements that they view as unfair if the arrangements received authorization and endorsement, i.e. validation. On the other hand, individuals who conform to social expectations in response to external validation tend to subsequently increase their belief in the propriety of their adopted behaviors (Thomas *et al.*, 1986).

This empirical evidence suggests that in order to assess the perceived legitimacy of a particular policy or course of action one must consider both the personal, or internal, and collective, or external, *locus* of the legitimizing impetus. Not only should personal attitudes regarding an action or rule's appropriateness, i.e. its propriety, be elicited, but also perceptions of the attitudes of peers and authority figures, i.e. validity. Responses by US and UK MBA students to survey questions regarding the relative executive attention that is given, and should be given, to competing corporate interests when decisions are made suggests that the two types of perception can vary considerably. The students themselves assigned twice as much weight to social and environmental considerations as they believed that corporate executives would, while giving shareholder interests only two-thirds the weight that they thought executives would (Aspen Institute, 2003, p. 25).

There is a second dimension to the legitimacy construct. There are various *evaluative criteria* that contribute, whether consciously or not, to individual perceptions of legitimacy. The organizational legitimacy literature has identified three categories of evaluative criteria: *pragmatic*, *moral* or *cognitive* (Suchman, 1995). Individual assessments of *pragmatic utility* are based upon the instrumental ability of a social arrangement, such as a policy or power hierarchy, to deliver desirable benefits for the organization. Moral legitimacy depends upon the arrangement's fit with ethical or social standards, which could be termed *normative consonance*. The third category*, cognitive* legitimacy, accrues to arrangements that simplify or help make sense of a chaotic decision-making environment, and thus serve as burden-reducing heuristics. They often become so institutionally ingrained as standard operating procedures that their normative appropriateness and/or pragmatic utility are simply assumed or ignored rather than consciously evaluated.

By juxtaposing these two dimensions, *referential locus* and type of *evaluative criterion*, a comprehensive classification of the various components of a social arrangement's perceived legitimacy can be arrayed in a 3×3 matrix (see Table 1). It is possible, and arguably desirable, to simplify this classification framework by reducing the number of relevant categories for each dimension, without sacrificing much in the way of conceptual resolution. First, regarding the cognitive aspect of evaluative criteria, it is currently a rare company or business school where sustainability considerations are an acknowledged and accepted component of core decision-making methodologies. Likewise, it would be a rare individual who regards these considerations as standard operating procedure. Models and methods of sustainable management are also inherently more complex than short-term profit-maximizing approaches, so they can not provide the decision-simplifying benefits that would confer cognitive legitimacy. Researchers are

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Referential locus	Evaluative criteria		
	Pragmatic	**Normative**	**Cognitive**
Personal *propriety*	Do I believe that this will help the organization achieve its goals or obtain benefits?	Do I believe that this is the 'right' thing to do, regardless of its pragmatic utility for my organization?	Do I believe that this simplifies the decision making process?
Peer group *endorsement*	Do fellow students/workers believe that this will help the organization achieve its goals or obtain benefits?	Do fellow students/workers believe that this is the 'right' thing to do, regardless of its pragmatic utility for their organization?	Do fellow students/workers believe that this simplifies the decision-making process?
Authority figure *authorization*	Do teachers/bosses believe that this will help the organization achieve its goals or obtain benefits?	Do teachers/bosses believe that this is the 'right' thing to do, regardless of its pragmatic utility for their organization?	Do teachers/bosses believe that this simplifies the decision-making process?

Table 1. Components of legitimation

thus much more likely to find varied assessments of the pragmatic value or moral appropriateness of environmental sustainability than of its cognitive utility, of which one might expect to find consistently low assessments. The explanatory value of this indicator should be undermined by its lack of variance alone.

One can also argue that any social arrangement's perceived *cognitive* legitimacy is a second-order perception, derivative of its pragmatic utility or normative consonance. That is, any heuristic adopted by individuals to help simplify the decision-making process will have first proven its value in providing normative or pragmatic benefits. Normative benefits, in the case of sustainability, might include reducing the cognitive dissonance of decision makers who are uncomfortable with the perceived tension between their business practices and personal values. Pragmatic benefits would include any of the myriad cost reductions or revenue enhancements that support perceptions that it pays to be green (see for example Azzone and Bertele, 1994; Lanoie and Tanguay, 2000; Porter and van der Linde, 1995; Sing, 2000; Willard, 2002). In essence, the cognitive legitimacy construct begs the question 'Why do social arrangements, or decision-making rules or models, become institutionalized in the first place?'. Before they can attain cognitive legitimacy by becoming standard operating procedures, they first attain legitimacy through their perceived utility either in satisfying pragmatic goal-seeking requirements, or by aligning personal or organizational behavior with normative values held by executives. Alternatively, they must help simplify the decision-making process, which is inherently unlikely in the case of sustainability. Including in our analysis what Suchman (1995) refers to as the *cognitive* aspects of legitimation could thus be seen as unnecessary at best, or as a form of double counting at worst, and they can be excluded from further consideration with little risk of loss in explanatory value.

Further simplification can be achieved within the *referential locus* dimension if the endorsement and authorization classifications are folded into a single *external validation* category. This conceptual aggregation is not to suggest that endorsement and authorization necessarily move in tandem, but that some *combination* of the two contributes to legitimation through external validation, independently of personal

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Referential locus	Evaluative criteria	
	Pragmatic utility	**Normative consonance**
Internal beliefs (*propriety*)	Do I believe that this will help the organization achieve its goals or obtain benefits?	Do I believe that this is the 'right' thing to do, regardless of its pragmatic utility for my organization?
External validation (*endorsement and authorization*)	Do fellow students/workers and teachers/bosses believe that this will help the organization achieve its goals or obtain benefits?	Do fellow students/workers and teachers/bosses believe that this is the 'right' thing to do, regardless of its pragmatic utility for their organization?

Table 2. Primary components of legitimation

propriety. Even if subsequent empirical studies find that the two indicators are orthogonal, their effects are likely to at least be interactive. Any empirically derived index of external validity should probably incorporate measurements of both endorsement *and* authorization. However, for the purposes of this preliminary theoretical inquiry, the parsimony of a combined external validation category would seem to outweigh any residual loss of explanatory value.

This refined set of salient *referential locus* and *evaluative criteria* categories yields a 2 × 2 array of what we suggest are the primary components of legitimation. In the case of a decision-making paradigm such as sustainability, its legitimacy depends on a combination of internal beliefs and externalized perceptions regarding its pragmatic utility or normative consonance (see Table 2). Note that the decomposition of internal beliefs into categories corresponding to pragmatic utility and normative consonance represents a slight refinement of what Ajzen's (1985, 1991) theory of planned behavior refers to as *attitudes*. Likewise, beliefs regarding external assessments of pragmatic utility and normative consonance combine to form what he terms *subjective norms*, recognizing that social norms evolve from widespread acceptance on the basis of either pragmatic or moral considerations, or both.

Attitudinal assessment techniques, whether surveys, open interviews or laboratory simulations, could be used to determine each of an individual's or group's four 'component legitimacy scores'. If, for example, a survey instrument were used to elicit the extent of perceived legitimacy of sustainability by using Likert-scaled responses to either direct or indirect questions corresponding to each of the four categories, the results could be plotted on indices arrayed along axes such as those shown in Figure 1. Each score would be of interest independently for hypothesis building and testing, particularly when attempting to evaluate the effectiveness of various pedagogical methods in influencing the components of perceived legitimacy. *Overall* perceived legitimacy could be represented by drawing lines between the score coordinates on neighboring axes, thus producing a *radar chart* useful for visualizing either individual or group-average scores. The total area of the resulting quadrilateral polygon could then be treated as a rough indicator of *overall* perceived legitimacy.

The *focal point* of the radar chart quadrilateral, i.e. the point equidistant between the two sets of scores on opposing axes, might also be of interest. As a static indicator, it suggests the degree to which overall perceived legitimacy is balanced between the various components. As the focal point approaches zero, attitudes toward the legitimacy of sustainability might be considered to be less ambivalent. Individuals with ambivalent attitudes toward a behavior have been shown to be less likely to adopt the behavior, and to be more easily dissuaded from adopting it (Armitage and Conner, 2000). Thus, one important goal of educators may be to reduce the degree to which students hold ambivalent attitudes regarding sustainability. The focal point could be used to assess a student's or class's degree of ambivalence, and to
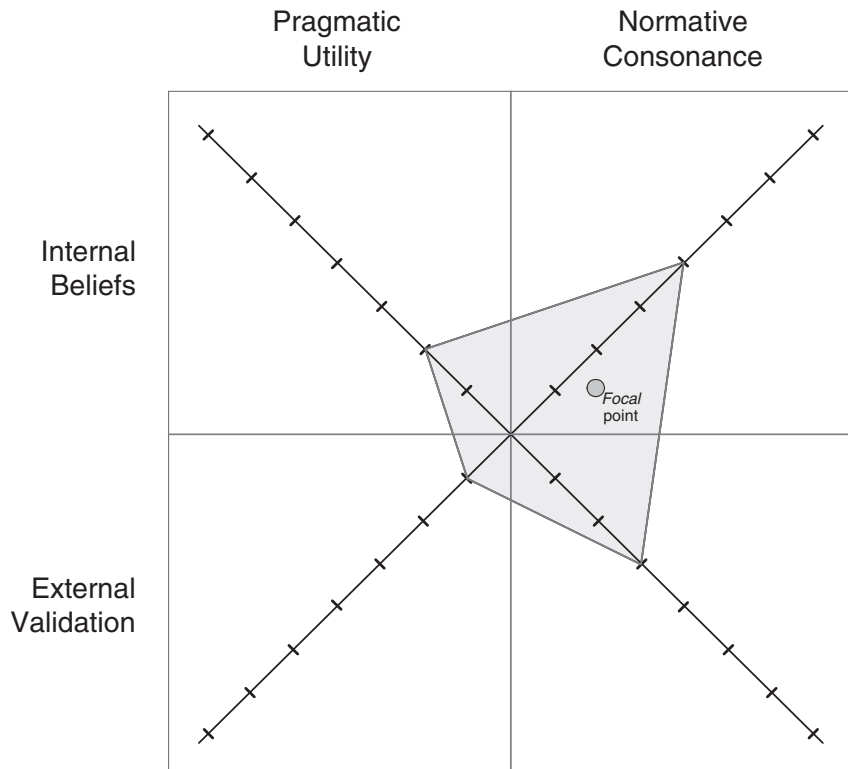
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Figure 1. Legitimacy component scores, overall legitimacy and focal point.

identify which of the four components of legitimacy should be addressed via curriculum in order to reduce that ambivalence. As a dynamic indicator that can shift in response to pedagogical interventions, the focal point could also serve as a tool for hypothesis testing.

Hypothesis Testing

The effectiveness of various pedagogical frameworks and methodologies could be tested using either the *component*, *area* or *focal point* indicators. For example, increasing students' overall perceived legitimacy might be a primary objective of faculty who integrate sustainability concepts into the business school curriculum. If the curriculum presents material that reinforces positive perceptions of sustainability's pragmatic utility or normative appeal, whether directly *via* lecture or exercises, or by example *via* case studies, one might expect the corresponding component scores to increase as a result. Thus, we have the following hypothesis.

> H1. A business student's overall perceived legitimacy of sustainability, as reflected by the total area enclosed by the radar graph, will increase when sustainability concepts and strategies are introduced.

Where sustainability is embedded in the curriculum might mediate the impact it can be expected to have on its perceived legitimacy. As mentioned earlier, the symbolic status of core classes might induce students to regard the topics they address as more central to the mission of preparing them to assume posi-

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tions of managerial responsibility. The UK's Sustainable Development Education Panel, consisting of 31 leading industrialists, recently emphasized the need to integrate sustainability into courses covering functional specialties such as finance, accounting, marketing, operations, or strategy, rather than presented in 'stand-alone' courses such as such as environmental management, ethics or social responsibility (Forum for the Future, 2000).

> H2. The sustainability curriculum will be more effective in increasing overall perceived legitimacy if it is integrated into core courses than if it is presented in electives or courses 'peripheral' to the core.

How the material is delivered, i.e. pedagogical modalities applied, might also be of interest. For example, using the case method to discuss real-world companies responding successfully to environmental challenges exposes students to external validation of the pragmatic value of incorporating environmental considerations into the decision-making process. Its impact on this component score would presumably exceed that of lectures that transmit such material with little reference to actual companies or their executives.

It is also possible that case studies might be particularly effective in influencing perceptions of external validation of normative consonance. The need for, and potential impact of, such external validation is indicated by the results of a pre-test administered in the spring of 2004 to 71 undergraduate students during the final week of a Business, Government and Society class, at a state university in the western US. Along with questions oriented toward demographics and instrument validation, students were asked to what extent they agreed (*internal beliefs*), and to what extent they thought that business executives in general agreed (*external validation*), with the following statement concerning normative consonance:

> A company's efforts to reduce its environmental impact should go beyond what the law requires, even if profits might be reduced, *because it's the (morally) right thing to do.* (4 = agree strongly, 3 = agree somewhat, 2 = disagree somewhat and 1 = disagree strongly.)

As one might expect, the highest average score (2.18) was recorded for internal beliefs regarding the moral appropriateness of environmentally sustainable business practices, which were significantly different (at the 0.01 level) from students' perceptions of executive attitudes (1.01). These undergraduates appear to agree with previously cited surveys of graduate business students that indicate low perceptions of external validation by business executives of the moral appropriateness of sustainability. This finding suggests the existence of ambivalent attitudes that, as previously discussed, could reduce the likelihood of students transforming their values into intention and, eventually, into action. Thus the *need* for education that emphasizes successful executives' regard for the moral imperative of management action toward environmental sustainability is indicated.

The pre-test results also provide reason to suspect that such efforts may be *effective*. The potential for significant case-induced increases in perceived external validation of environmental sustainability is suggested by student responses to the question

> How important do you think environmental concerns are *to executives* when companies develop and implement their strategies (investment, product development, marketing, etc.)? (1 = very important, 2 = moderately important, 3 = a little important, 4 = not at all important.)

When the sample was segmented by respondents' total number of years of prior full-time employment, the result was striking: The more work experience students had, the more they believed that executives

regard environmental concerns as important to their strategic decision making (the difference was significant at the 0.001 confidence level, using one-way ANOVA). Number of years worked full time averaged 1.83 for students who answered 'not at all important', 2.59 for those who chose 'a little important', 4.13 for those selecting 'moderately important' and 7.0 for those who answered 'very important'. In essence, greater exposure to real-world business decision making increased perceptions of the external validation of environmentally sustainable practices. By extension, presenting real-world case studies in the classroom can be expected to positively affect perceptions of external validation.

> H3. Perceptions of external validation of normative consonance and pragmatic utility will increase more in response to case studies that present successful efforts to incorporate sustainability concerns and strategies into the managerial decision-making process.

Conclusion

This inquiry represents a preliminary attempt to develop a theoretical framework for measuring the perceived legitimacy of environmental sustainability among business students. It extends Ajzen's theory of planned behavior by segmenting both internal *attitudes* and external *subjective norms* regarding sustainability into the subcategories of pragmatic utility and normative consonance. This level of resolution is necessary in order to identify and measure the primary factors that contribute to individual perceptions of legitimacy. The framework should be useful for informing the development and application of a range of attitudinal measurement tools, whether survey instruments, personal interviews or laboratory simulations.

There are a variety of potential applications for multidimensional measurement of perceived legitimacy. From the standpoint of pedagogical research and evaluation, it could be used in formal educational settings to gauge attitudinal impact of the introduction of course materials, cases, lectures and simulations related to various aspects of environmental sustainability. As a diagnostic tool administered at the beginning of a period of instruction, a validated perceived-legitimacy instrument could be used to determine which pedagogical modalities or substantive content would be most appropriate for attempting to reduce attitudinal ambivalence and increase the overall perceived legitimacy of environmental sustainability among students. For example, if scores on the perceptions of 'external validation of pragmatic utility' component are low, then presenting case studies that feature real companies and executives saving money and pursuing strategic objectives by engaging in environmentally sustainable practices might be the most effective approach. At the very least, the ability to reliably measure the components of perceived legitimacy will help educators determine whether business students are truly buying into the paradigm of environmental sustainability.

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References

Ajzen I. 1985. From intentions to actions: a theory of planned behavior. In *Action Control: from Cognition to Behavior*, Kuhl J, Beckmann J (eds). Springer: New York; 11–39.

Ajzen I. 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes* **50**: 179–211.

Armitage CJ, Conner M. 2000. Attitudinal ambivalence: a test of three key hypotheses. *Personality and Social Psychological Bulletin* **26**(11): 1421–1432.

Aspen Institute. 2003. *Where Will They Lead? MBA Student Attitudes about Business and Society*. Business and Society Program.

Azzone G, Bertele U. 1994. Exploiting green strategies for competitive advantage. *Long Range Planning* **27**(6): 69–81.

Chan RYK. 1999. TEnvironmental attitudes and behavior of consumers in China: survey findings and implications. *Journal of International Consumer Marketing* **11**(4): 25–52.

Cordano M, Ellis KM, Scherer RF. 2003. Teaching about the natural environment in management education: new directions and approaches. *Journal of Management Education* **27**(2): 139–143.

Daft RL, Weick KE. 1984. Toward a model of organizations as interpretation systems. *Academy of Management Review* **9**(2): 284–293.

Dornbush SM, Scott WR. 1975. *Evaluation and the Exercise of Authority*. Jossey-Bass: San Francisco.

Dyllick T, Hockerts D. 2002. Beyond the business case for corporate sustainability. *Business Strategy and the Environment* **11**: 130–141.

Fittipaldi S. 2004. When doing the right thing provides a payoff. *Global Finance* **18**(1): 18–22.

Foot DK, Ross S. 2004. Social sustainability. In *Teaching Business Sustainability, Vol. 1: From Theory to Practice*, Galea C (ed.). Greenleaf: Sheffield; 107–125.

Forum for the Future. 2000. *Business Curriculum Audit*.

Harris SG. 1994. Organizational culture and individual sensemaking: a schema-based perspective. *Organization Science* **5**(3): 309–321.

Hegtvedt DA, Johnson C. 2000. Justice beyond the individual: a future with legitimation. *Social Psychology Quarterly* **63**(4): 298–311.

Hildebrandt T, Turner JL. 2002. *Greening Business in China, China Environment Series*. Woodrow Wilson International Center for Scholars; Washington, DC.

Hoffman AJ, Riley HC, Troast JG Jr, Bazerman MH. 2002. Cognitive and institutional barriers to new forms of cooperation on environmental protection. *American Behavioral Scientist* **45**(5): 820–845.

Hoffman AJ, Ventresca M. 1999. The institutional framing of policy debates: economics versus the environment. *American Behavioral Scientist* **42**(8): 1368–1392.

Huckle J, Sterling S. 1996. *Education for Sustainability*. Stylus; Sterling, VA.

Industry Week. 1998. Cracks in the green wall. 19 January: 58–68.

Kanda Y. 2003. *Trends in Corporate Sustainability Management*, Discussion Paper 2004.3. Institute for Global Environmental Strategies (IGES) Kansai Research Center; Hyogo, Japan.

King AA, Lennox MJ. 2001. Does it really pay to be green? An empirical study of firm environmental and financial performance. *Journal of Industrial Ecology* **5**(2): 105–116.

Lanoie P, Tanguay GA. 2000. Factors leading to green profitability: ten case studies. *Greener Management International* **31**: 39–50.

March JG. 1978. Bounded rationality and the engineering of choice. *Bell Journal of Economics* **9**: 587–608.

Porter ME, van der Linde C. 1995. Green and competitive: ending the stalemate. *Harvard Business Review* Sept.–Oct.: 120–134.

Russo MV, Fouts PA. 1997. A resource-based perspective on corporate environmental performance and profitability. *Academy of Management Journal* **40**(3): 534–559.

Sharma S. 2000. Managerial interpretations and organizational context as predictors of corporate choice of environmental strategy. *Academy of Management Journal* **43**(4): 681–697.

Shelton R. 1996. *Hitting the Green Wall*, summary report. Arthur D. Little; Cambridge, MA.

Simon HA. 1978. Rationality as process and as product of thought. *American Economic Review: Papers and Proceedings* **68**: 1–16.

Sing J. 2000. Making business sense of environmental compliance. *Sloan Management Review* **41**(3): 91–100.

Springett D, Kearins K. 2001. Gaining legitimacy? Sustainable development in business school curricula. *Sustainable Development* **9**: 213–221.

Sterling S. 2001. *Sustainable Education: Re-Visioning Learning and Change*. Green: Totnes, Devon, UK.

Suchman M. 1995. Managing legitimacy: strategic and institutional approaches. *Academy of Management Review* **20**(3): 571–610.

Thomas GM, Walker HA, Zelditch M Jr. 1986. Legitimacy and collective action. *Social Forces* **65**: 378–404.

Tversky A, Kahneman D. 1986. Rational choice and the framing of decisions. *Journal of Business* **59**(4): 251–278.

Wagner MW, Schaltegger S, Wehrmeyer W. 2001. The relationship between the environmental and economic performance of firms. *Greener Management International* **34**: 95–108.

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Walker HA, Zelditch M Jr. 1993. Power, legitimacy, and the stability of authority: a theoretical research program. In *Theoretical Research Programs*, Berger J, Zelditch M Jr. (eds). Stanford, CA: Stanford University Press; 364–381.

Willard B. 2002. *The Sustainability Advantage: Seven Business Case Benefits of a Triple Bottom Line*. New Society: Gabriola Island, BC.

World Resources Institute. 2003. *Beyond Grey Pinstripes: Preparing MBAs for Social and Environmental Stewardship*. Aspen Institute Business and Society Program.

Biography

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