

Integrating Sustainability into Management Education: A Status Report

Nancy McGaw, Deputy Director,
Aspen Institute's Business and Society Program

Mary C. Gentile, Ph.D.

1. INTRODUCTION

The purpose of this paper is to provide an overview of approaches taken by leading business schools around the globe to build the capacity of graduate students to:

- Understand business practices that “promote sustainable development and consumption patterns to alleviate poverty and increase the quality of life for all people,” and
- Recognize the “tremendous power of the private sector and business activity to harness resources to create sustainable good and services that are valued locally and globally.”

These educational objectives reflect central themes at the first UN Global Compact Academic Conference on “Bridging the Gap: Sustainable Development.”

The source of information for this overview is data collected in a survey of business schools, called *Beyond Grey Pinstripes*, which is conducted biennially by the Business and Society Program at the Aspen Institute and the World Resources Institute. (The survey project website, www.BeyondGreyPinstripes.org provides extensive information about the survey and participating schools.) To supplement these data, the authors then conducted interviews with selected faculty to learn more about their approaches to teaching sustainability and related concepts. See Appendix 1 for a list of faculty interviewed and course syllabi reviewed for this paper.

The scope of the *Beyond Grey Pinstripes* survey goes beyond “sustainability” or the particular capacities referenced above. It is much more encompassing in its attempt to collect data to illustrate how MBA programs are “preparing graduates for social and environmental stewardship.”¹ However, what the authors have done for this paper is to screen the data in order

¹ Specifically, the *Beyond Grey Pinstripes* project team looks for evidence that each activity, program and course reported by the schools covers topics within the domains of social impact management and/or environmental management. These domains are defined as follows: **Social impact management** is the field of inquiry at the intersection of business practice and wider societal concerns that reflects and respects the complex interdependency between the two and focuses on how to manage the complex interdependency between the two. **Environmental management** covers the spectrum of reactive to pro-active strategies that companies and organizations use to address environmental issues across the full range of their business activities – including regulatory compliance, eco-efficiency, and business strategy.

to study how schools are introducing sustainability concepts and other related topics, such as globalization, economic development, and poverty alleviation.

The data that form the basis of the *Beyond Grey Pinstripes* 2003 report were collected from October 2002 through January 2003 from 100 leading business schools which elected to respond to the invitation to participate in this survey (reflecting a 19% response rate). Participating schools are listed in Appendix 2 to this report. They are located in 20 countries – 68 are in the U.S. and the remainder from Africa, the Americas, Asia, Australia and Europe.

The paper is presented in five sections:

- The Extracurricular Environment in Leading Business Schools
- Overview of Survey Data on Business School Curricula
- Sustainability Content in “Traditional” Business School Disciplines
- Approaches to Teaching Sustainability
- Summary

2. THE EXTRACURRICULAR ENVIRONMENT IN LEADING BUSINESS SCHOOLS

The business schools that participate in the *Beyond Grey Pinstripes* survey are highly selective schools. They draw students from around the world and are able to choose students from a large applicant pool. These students – typically quite accomplished already – are definitely upwardly mobile.

Student attitude research conducted by the Aspen Institute of MBA students at a subset of these schools show that nearly half of students surveyed select “more and better career opportunities” or “better financial skills” as their primary benefits from attending business school.² MBA students expect to acquire the technical skills they will need to get better jobs and more financial compensation, and the curricula at the business schools are dedicated to meeting those expectations.

Explorations about business as an agent for positive social change are still relatively rare in this environment. Still, we see evidence in the data reported in the *Beyond Grey Pinstripes* survey that meaningful discussion and debate the complex relationship between business and society are taking place both inside and outside the classroom – at least at some schools.

In this section of the paper we provide a brief overview of how students are tackling the subject of sustainability, including issues related to globalization and poverty alleviation, in events and programs *outside* the classroom.

² Aspen Institute, Business and Society Program. *Where Will They Lead? MBA Student Attitudes about Business & Society*. December 2001.

2.1 Conference and speakers:

Schools participating in *Beyond Grey Pinstripes* reported over a total of 700 events (conferences, seminars, panel discussions, speaker series) that took place during two academic years that addressed some social and or environmental impact issues related to business practice. For purposes of this paper, we searched the event descriptions in the data base for certain key words to get a sampling of events that deal specifically with issues related to sustainability, globalization, poverty and development.

We selected the following key words: poverty, poor, development, community development, globalization, sustainability, microfinance, emerging markets, living standards, welfare. What the search produced is a list of conference and speakers – well over 100 events – that explore one or more of these topics. For example:

- Wharton, University of Warwick and Stanford Business School all hosted conferences that directly tackled the question of what, if any, role business should play in alleviating poverty.
- Microfinance was a subject explored in conferences and seminars at several schools – Michigan, Asian Institute of Management, Harvard and Stanford among them.

Globalization was the organizing concept for a number of events at schools around the world: The Asian Institute of Management, George Washington University and Yale report a lecture series on globalization. Wharton, Yale and University College Dublin note that they have held seminars on the topic of ethical globalization. Columbia hosted a seminar on “Globalization at an Impasse” and University of Navarra held one on “the Benefits of Globalization.”

The topic of sustainability – variously defined and applied – is taking center stage at many of the extracurricular events at business schools. At least 25 schools reported events dealing with this topic which run the gamut from speakers on career options in sustainability to conferences on sustainable investment options and sustainable tourism.

It is worthwhile to reflect on what the data tell us about why these events are taking place. One important driver is student interest. While there is no doubt that student engagement in business school is driven largely by ambition, students also demonstrate convictions about the importance of considering the social and environmental impacts of their decisions

Over several years of surveying students at a dozen leading business schools, we found that students consistently expected to be more evenhanded than their predecessors in managing companies in ways that take social and environmental conditions into account.³

Moreover, student enthusiasm for inquiry into the diverse responsibilities of business appears to be increasing. In that regard it is worth noting the growth of an international student organization, called Net Impact. This group is “a network of emerging business leaders

³ The Aspen Institute’s Business and Society Program, *Where Will They Lead? MBA Student Attitudes about Business & Society 2003*. Full research report, May 2003, p. 26.

committed to using the power of business to create a better world.” Since 1993 Net Impact’s membership has grown to 10,000 individuals and there are now 90 Net Impact graduate student and professional chapters around the U.S.

Aspen’s own survey data also confirm a marked increase between 2001 and 2002 in the degree of interest by students in having issues related to corporate responsibility raised in all academic disciplines in business school.⁴

2.2 Internships and consulting opportunities

Some schools provide opportunities for students to get “hands on” experience in the developing world. Four examples are illustrative:

- MBA students at Columbia University who are interested in seeking careers at the interface of business and international development can become a part of the Managers for International Development Initiative (MIDI). This group gives students the opportunity to consult with small businesses and entrepreneurial ventures in developing countries.
- Similarly, the mission of Kellogg Corps at Northwestern University is to make opportunities available for second year students, during the summer immediately following graduation, to volunteer their time in bringing business skills and management expertise to non-profit organizations in developing countries around the world.
- Notre Dame students can participate in the ACCION summer internship program. They work with ACCION sites internationally where they develop their skills while working to enhance options available to micro-entrepreneurs in the communities where they work.
- In addition, many business schools now work with the MBA Enterprise Corps, a Division of Citizens Development Corps, which sends volunteers to developing countries around the world. The program works to “enhance trade, technology transfer, and investment opportunities in emerging market countries through the experience and energy of recently graduated MBAs.”⁵

2.3 Institutes and Centers

A promising development at business schools is the increasing number of institutes and centers that have a specific focus on sustainability. Appendix 3 lists 12 such centers that were reported in the Beyond Grey Pinstripes survey or identified by faculty interviewed for this paper. The centers are emerging at schools throughout the world – in Europe and North and South America.

⁴ Aspen Institute, Business and Society Program, *Where Will they Lead ? 2003 MBA Student Attitudes about Business & Society*, Executive Summary, May 2003, p. 12.

⁵ See <http://www.mbaec-cdc.org/>. According to the data on the website there are now 52 schools that participate in the program.

These centers play an important role in institutionalizing a school’s focus on particular issues because they provide a common platform for convening, seeking grants for research and programs, and communicating with a wider audience. Often these centers are staffed by teaching faculty and also by an administrator who supports the activities of the center.

As most of these centers are relatively new – many were established in the late 1990’s – their promise has yet to be proven. Still, they do seem to be setting an institutional framework in the schools in which they are housed that influences course content and the overall environmental of the school.

3. OVERVIEW OF THE SURVEY DATA ON BUSINESS SCHOOL CURRICULA

Of all the courses reported to us by the 100 schools that participated in the last *Beyond Grey Pinstripes* survey, the project team found that 1220 of them - 259 required (core) courses and 961 electives - had some content related to social or environmental issues. The table below demonstrates how these courses are arrayed by categories assigned to each course by the project team. Most assigned categories are the same as the departments in which the course is offered or the content discipline. In other words, a finance course with some content on business ethics is still categorized as a finance course. But a strategy course that is organized around issues related to sustainability is categorized as a course in sustainability.

Table 1: Core and Elective Courses with Social and Environmental Content by Category

<u>Assigned Category</u>	<u>Core</u>	<u>Elective</u>	<u>Assigned Category</u>	<u>Core</u>	<u>Elective</u>
accounting	15	37	leadership	11	13
business and society	25	14	management	9	20
business history	0	4	marketing	17	35
business law	4	21	negotiations	0	5
communications	4	3	operations	16	15
community development	0	12	organizational behavior	20	19
CSR / Ethics	37	103	other	3	10
diversity/x-cultural mgmt	0	35	practicum	8	48
economics	19	39	public/nonprofit	0	81
entrepreneurship	3	15	public policy	0	28
environmental mgmt	4	116	quantitative methods	6	0
finance	7	44	social entrepreneurship	0	17
governance	0	14	strategy	14	23
human resources	5	43	sustainability	4	42
Info Technology	4	17	tourism	0	16
int'l bus / globalization	24	72			
			Grand Total	259	961

Although data collected in the 2003 *Beyond Grey Pinstripes* and earlier surveys are not directly comparable,⁶ it is reasonable to conclude from the analysis of the content in these courses that there is an increasing amount of discussion about the role of business and the relevance of sustainability to business in both required and elective courses in business schools:

- A higher percentage of schools (45% in 2003 versus 34% in 2001) require one or more courses in the following areas: ethics, corporate social responsibility, business and society and sustainability. While not every course in each of these categories builds students' capacity to understand sustainable business practices or to explore the role that business can play in alleviating poverty, many of the course descriptions evidence some content along these lines.
- In 2003 24 schools reported a total of 42 electives that are specifically dedicated to a discussion of sustainability. This number compares favorably with the 2001 survey in which 13 schools reported 19 courses with a sustainability focus.
- Interestingly, twelve US schools in 2003 reported offering elective courses that provided opportunities for students to study and conduct consulting assignments in emerging markets. (Comparable data from 2001 are not available.)⁷ One school, IMD in Switzerland, requires MBA students to complete an international consulting assignment in its "Leadership Experience" course.

4. SUSTAINABILITY CONTENT IN "TRADITIONAL" BUSINESS SCHOOL DISCIPLINES

Despite increased content on sustainability and globalization issues in business school curriculum – particularly in elective courses, there continues to be a marked shortfall in the extent to which these issues are finding their way into "traditional" business school subjects like marketing, finance, operations management, information technology, especially those that are included in the courses required of all MBAs. In this section we present brief descriptions of notable exceptions in three disciplines – marketing, economics and information technology.

4.1 Marketing

In the 2003 *Beyond Grey Pinstripes* data the project team found 52 marketing courses (17 required and 35 elective courses) that included some content on social impact management and/or environmental management. Often this content consists of discussions about ethics in marketing, public policy and marketing, social marketing, environmentally sound packaging, cross-cultural marketing and the social impact of advertising. Fewer courses offer rigorous

⁶ The participating schools in the 2001 and 2003 surveys are not exactly the same, and there were data from 82 schools in 2001, 100 schools in 2003.

⁷ In Dartmouth's "Field Study in International Business" course in its Tuck School, for example, students work with NGOs in developing countries. At the Fisher College of Business at Ohio State in its "Emerging Markets Study Abroad" course, students "have the opportunity to understand first hand how globalization and the development of emerging markets impact the societal and environmental make up of the countries visited."

examination of the questions raised when one considers the intersection of marketing and sustainability issues. Two exceptions are noted below.

Jill Klein, a marketing professor at INSEAD, developed a teaching case on Adidas' response to a potential consumer boycott of athletic shoes and has used this case as a way to open wide-ranging discussions that address complex issues related not only to marketing but to other disciplines such as economics and organizational behavior. She has even taken the unusual step of engaging other faculties from these disciplines to team teach the case with her.

The background for the case was Adidas' sponsorship of Euro 2000, a highly visible soccer tournament and the disruption threatened by an NGO, the Clean Clothes Campaign, which sought to draw attention to the working conditions in which athletic shoes and clothing were produced. The case she wrote deals with the complicated issues facing businesses when they work in impoverished communities, e.g., identifying appropriate labor practices for the market, managing cross-cultural issues associated with negotiating with foreign factory owners, and evaluating the benefits to the community and the business of staying put and the costs of pulling out.

In her classes, students role play, taking the role of workers, for example, or foreign factory owners or NGO representatives. Debates ensue about ways to resolve conflicting expectations, the impacts on the entire worker's family if the jobs were eliminated, and ways businesses could collaborate with governments to address issues of poverty in the communities where they do business.

Students have welcomed the opportunity the case presents to think across disciplines and about decision sequences and the intended and unintended consequences of decisions and to discuss issues associated with globalization. The case helps them realize that their decisions as business executives affect the lives of millions.

Dr. Klein concurs that this content is quite unusual for a marketing course. Such complex questions about the role of a company are most often handled in ethics or business and society courses.

At the Yale School of Management, Professor Ravi Dhar teaches a required marketing course in the MBA. He cited two examples of cases used in the course that raise complex issues related to social equity and business opportunity. In one case the class discusses the marketing of tobacco. As this product tends to be over-consumed by minority or lower income or less well-educated populations, this case leads to a discussion about consumer sovereignty and consumer vulnerability. Students more likely to be concerned about the purposeful exploitation of these vulnerabilities for commercial profit are more likely to consider certain constraints. While others, who believe wholeheartedly in the right of the consumer to choose, are more likely to champion a laissez faire approach.

Professor Dhar considers part of his role as a faculty member is to be open to such discussions and protect the right of all students to have their say in class discussions. He also strives to find win/win strategies for businesses where they can do better by doing good.

Another case used in his class is Population Services International (PSI) about the sale and distribution of family planning products in Bangladesh. He points out the importance of the case is less about what transpired in the mid-1980's in Bangladesh as it is about the timeless challenges the case presents. Key among them is the challenge of reconciling public and private objectives and expectations. Major players in the case include the Agency for International Development with its concern for cost-effective production and distribution of contraceptives; the Bangladeshi government with its concerns about the reach of the program; and PSI itself, a non-profit organization, but one evaluated by its supporters in terms of its brand market share.

This case presents some of the dilemmas faced by partnerships that engage both public and private entities. It also challenges students to contemplate ways to measure benefits beyond short-term financial outcomes and to consider how you can market products where individuals do not see the immediate benefits and whether corporations should explicitly endeavor to produce and market products that are beneficial to society.

Dr. Dhar was uncertain whether his approach to the teaching of marketing differed from peers in his discipline. However, he was convinced that the particular mix of students at Yale School of Business – from business, government and the non-profit sector - produced more robust debate and probing questions about conflicting values than might be expected at schools that draw more exclusively from the business community.

4.2 Information Technology

Despite the widely recognized potential for technology to be harnessed to provide opportunities for individuals in impoverished communities – and possible revenue streams for businesses around the globe – there is very little evidence that courses on information technology in business schools even broach the subject. Instead, most of the 4 required and 17 elective information technology courses that received credit for some social and environmental content in the last *Beyond Grey Pinstripes* survey did so because they include content on topics such as ethical issues in technology and privacy.

An important exception is the unusual elective course entitled, “Information and Communication Technology for Social Enterprise,” offered by Professor Michael Gordon at the University of Michigan Business School. An award-winning teacher and Ph.D. in computer science, Dr. Gordon is committed to teaching students how to use technology in innovative ways in for-profit companies to serve social needs.

For example, he introduces students to technology-based enterprises such as one he visited recently in a tiny, remote village in rural India. There a woman is renting broadband connectivity and reselling it to fellow villagers. In one instance, using a webcam, she was able to help a local citizen send a picture of his goat afflicted with an infection to a veterinarian hundreds of miles away. The villager got the help he needed to protect his livelihood.

This course gives students a perspective on poverty and the need for cooperation across public and private sectors. For many students it is an eye-opening experience. They see unimagined

business opportunities that address critical needs. Many comment that such content should be in required courses for MBAs.

4.3 Economics

In the 2003 *Beyond Grey Pinstripes* survey, participating schools reported 19 required and 39 elective economics courses that contained some content related to social and/or environmental management. Topics often noted include the impact of externalities, anti-trust issues with impacts on the commons, and theories of wealth distribution.

A limited number of economics faculty teach courses with a much more specific focus on economic models and choices and their impact on impoverished people who make up 2/3rds of the world's population. Virtually all of these courses are taught as electives, not as part of the required curriculum for MBA students. Two exceptional elective courses are cited below:

- Professor David Levine at Berkeley teaches an elective course, “Business Strategies for Emerging Markets.” Although much of the content is drawn from economic theory, the course is taught as a strategy course. He guides students into thoughtful discussion about topics like why some countries are rich, others poor; what development policies are helpful for alleviating poverty and the role social marketing can play in solving development challenges. About a third of the course deals with water privatization, health care franchising, and microfinance. An over-arching concern in the course is to give students an opportunity to think creatively about ways that business can be helpful in supporting development objectives.
- Professor John McMillan at Stanford teaches a course on International Development which “examines global poverty from a business-school point of view: i.e. starting from the proposition that nations are poor because their markets and firms are not working as they should.” The course is organized around several topics: social peace and the economy, economic growth, globalization, markets and firms, and governments.

5. APPROACHES TO TEACHING SUSTAINABILITY

This section of the paper provides an overview of diverse courses offered in various business school departments that share a common dedication to the topic of sustainability.

When it comes to courses specifically dedicated to sustainability, business schools have made progress, from 13 schools reporting 19 electives on the topic in our 2001 survey to 24 schools reporting 42 electives in 2003. But these electives represent only about 4% of the total number of electives reported by the 100 participating schools that had *some* social or environmental impact management content. And there is a large universe of electives that do not make even that hurdle. And only four required core courses on sustainability were reported. Of course, these numbers do not include the courses on other topics where sustainability issues are raised but do not occupy the center of the syllabus. Nevertheless, it becomes clear from these data that sustainability is most definitely at the margins in the business school curriculum.

That said, our intention here is to look at the presence rather than the absence, and to assess what we can learn from the experiences of faculty who do teach in this arena. Therefore we scanned our database for faculty who had developed dedicated courses on some aspect of sustainability and conducted phone interviews with several to learn more about their approaches to this complex subject.

We interviewed these faculty, reviewed their syllabi and have gleaned a number of observations and lessons which we hope may serve to encourage others in their curriculum development efforts and to offer some likely pathways for such efforts.

5.1 Definitional Questions

Perhaps in a rather pedestrian fashion, the first of our interview questions was: “how do you define sustainability?” And while everyone could offer a definition, several sighed audibly and with a bit of frustration at the very question.

At base, their definitions tended to be some version of the ‘Brundtland Commission’ offering: that is, meeting “the needs of the present without compromising the ability of future generations to meet their own needs.” (The World Commission on Environment and Development, *Our Common Future*, Oxford University Press, 1987:8). They each had their own spin, of course. For example, Thomas Gladwin offered that “Sustainability is about bringing human economic activity into harmony with social and environmental life support systems in perpetuity, in a just way.”

But then some interviewees started to raise concerns about “definitions” as a starting point. Stuart Hart, for example, suggested that as soon as we frame our discussion as about “sustainability,” we have disempowered ourselves. To the practitioner’s ears, the conversation becomes one of “compliance” and we have positioned ourselves/our students as being about constraints on action, rather than possibilities. Instead we should be discussing strategy since strategy, by definition, is about dealing with ambiguity and that’s what sustainability considerations introduce into the managerial decision-making process.

Andrea Larson, sharing Hart’s reaction, also spoke and writes about the notion that the way we think about the environment is evolving and becoming more expansive and even fragmented: expansive because we are thinking in more holistic and connective terms (e.g., the biosphere rather than the local air quality, or the links between social status and environmental quality) and fragmented because increasingly we need to engage the expertise and influence and interest of more disciplines, professions and communities to address these questions. This means that “sustainability” can seem even more daunting to address, and efforts to define the term can become conversation “enders” rather than openers.⁹

These two definitional caveats – that is, (1) the idea that the terrain of sustainability is large, necessarily cross-disciplinary (and thereby challenging to the status quo) and evolving, and (2) the idea that the approach we take to the subject (one of compliance versus one of strategic

⁹ Andrea Larson, “Reframing Global Environmental Issues through an Innovation and Entrepreneurship Lens,” # UVA-ENT-0041, Darden Business Publishing, University of Virginia, 2003, pp.1, 2.

decision-making, for example) can determine our effectiveness – reflect a seeming polarity at the heart of this topic. And this question of challenge or opportunity is central both to the teaching and the practice of sustainability.

Stuart Hart and Mark Milstein capture and express both sides of this polarity in the following statement:

Waves of scientific and technological discovery or major periods of socioeconomic change drive episodes of creative destruction. We are now in the early stages of such a revolution, the transformation toward sustainable development. Most large corporations developed in an era of abundant raw materials, cheap energy and limitless sinks for waste disposal. During the past few decades, however, it has become increasingly clear that many technologies developed during this period contribute to the destruction of the very ecological systems on which the economy depends....In the absence of dramatic change, we are destined to devolve into a world of environmental degradation, social upheaval and mass migration.¹⁰

This quotation expresses both the challenge – that is, the specter of impending doom – as well as the opportunity – that is, the idea that this very upheaval is in fact a transformative process that can create the conditions of a new sustainable form of economic activity. Both are real; both inform our understanding of the other.

And interestingly, our faculty interviews revealed that this same polarity of challenge or opportunity is reflected in course design, in student interest, in faculty incentives, and in institutional approaches to the topic of sustainability. We found challenges and critiques of the curricular status quo as well as the seizing of institutional opportunities. And what emerged were a number of critical questions and drivers, as well as a range of pathways toward innovation and successful integration of sustainability into the MBA curriculum.

If approaching this curricular agenda from a position of *challenge* and critique, it seems important to find ways to nurture the parts of the student that respond to hope. And if approaching the agenda from a stance of *opportunity*, it seems important to shape and direct the students' innovative energy with an understanding of context and consequences. So challenge informs opportunity and vice versa....and here is how we saw this playing out.

5.2 Curricular Frames for Courses on Sustainability

The syllabi we reviewed (see Appendix 1 for faculty interviewed and syllabi reviewed for this paper), as well as the general descriptions of other courses we scanned from our *Beyond Grey Pinstripes*, revealed three broad curricular frames applied to the subject of sustainability. Sometimes an entire course is positioned within one of these frames, and sometimes a course adapts each of these frames at different points within the syllabus. As with most taxonomies, the lines between these three frames can become blurred at times, but we believe it is a useful way to distinguish different approaches and the concomitant challenges and opportunities that come

¹⁰ Stuart L. Hart and Mark B. Milstein, "Global Sustainability and the Creative Destruction of Industries," *MIT Sloan Management Review*, Fall 1999, Volume 41, Number 1, p. 24.

with them. We are not in a position to evaluate the relative merits of one course or another, but rather the courses below are shared in the hope that they may provide ideas; suggest topics, approaches and materials; and hopefully inspire new innovation.

The first frame is one of *Critique*. From such a vantage, faculty and students will examine habits of mind and widely shared, though often unconscious, assumptions about business objectives, practices and degrees of freedom with regard to the business interface with environmental and social contexts. Of course, embedded in this Critique is a positive alternative, and in most cases we found this to be a more holistic, systems thinking approach to the intersection of business practice and the natural world.

An example of this approach can be seen in Thomas Gladwin's course on "Systems Thinking for Sustainable Development and Enterprise." Gladwin explains that instead of approaching sustainability as a business opportunity (which, he says, is an "easier sell"), he uses this course to try to get to the bottom of why things are as they are: that is, what are the deep causes for human behavior that threatens sustainable survival. He quips that his approach has earned him the fond (?) nickname of "Dr. Doom and Gloom."

After the initial five weeks of the course spent learning the qualitative art of systems thinking and its primary tools (e.g., mental models, mechanistic vs. holistic thinking, complexity, complex adaptive systems, causal loop mapping, etc.), teams of students select a topic related to sustainability (e.g., poverty, biodiversity, globalization, climate change, etc.) and practice using a state-of-the-art simulation software tool to model complex and dynamic systems, revealing how their topic impacts global change. Then they are asked to build models at the intersection of two topics, allowing them to see the interactions and to build dynamic hypotheses, creating a theory of the future which allows them to experiment with ways to intervene in complex systems and ways to stabilize them.

Gladwin acknowledges that students are "bombarded" for 14 weeks with painful statistics that challenge them emotionally as well as cognitively. He recognizes that there is a "grief cycle" students experience at the front end of the course that needs to be respected and explicitly addressed. Gladwin talks with the students about the role of courage in facing the kind of knowledge the course offers. And he says that after a while, students begin to recognize limiting assumptions that underlie the "ways of thinking" that they apply in their other core courses. For example, they begin to question the tendency to "externalize all costs" in accounting or to "discount the future" in finance.

In this way, the course is a critique of the traditional business curriculum as well as the implicit and explicit "ways of thinking" prevalent in much of business practice. As Gladwin himself admits, this means that the course can be threatening to some and painful even to those who embrace it. But it provides students with a practical and powerful tool for analysis – systems thinking – which as Gladwin points out, is invaluable not only to address sustainability questions but as a rigorous way to understand complexity, uncertainty and unpredictability in the business world. By offering practical tools, by acknowledging the emotional challenge of the material, and by appealing to the students' own desire to exercise courage, Gladwin tempers the critique with pragmatism and opportunity.

In the syllabus for his required Operations course, “Nurturing Sustainable Operations: Seeing Business from a Natural System Perspective,” H. Thomas Johnson writes: “Virtually all business practitioners and academics today believe that Earth’s natural systems can be managed as part of the economic system. In contrast, this course views the economy as part of the natural environment, and subject to its imperatives.” Thus he explicitly positions his course as a critique of the MBA core, embedded within it. Understandably this has won him some critics. Like Gladwin, he invites students to consider their own patterns of thinking and expression.

One of the powerful and controversial parts of the syllabus is his explicit incorporation of questions concerning the framing language and the mental paradigms of the other parts of the students’ curriculum. For example, the following are a few of the study questions in his syllabus:

- Does your business education shape you for a career that merely fits the contours of the global economic system or does it also equip you to better understand how careers in that system affect life in Earth’s biosystem?
- Name one or two differences between the message delivered in this course concerning MBM [Management By Means] and managing a system and what you have learned in other courses about supply-chain management, financial control systems (e.g., “levers of control”), and strategic marketing management.”

While the leading framing of such questions may trigger resistance from students, the fact that Johnson includes explicit attention to language and to helping students equip themselves to “speak” an alternative vision can be empowering. For example, he asks: “If there were no way for you to use quantities or numbers, how would you assess the operations and the performance of a business organization?” While this may seem an impossible question at first blush, it comes at the end of a course where he has shared examples of alternative operations management methods that illustrate a different relationship between people, the natural world and the organizations that facilitate their interaction.

The second frame is one of *Pragmatism*. From such a vantage and in such courses, faculty and students will examine the use of existing tools and analytics to address recognized and existing business goals and problems. Sometimes they will bump up against the limits of these existing tools or uncertainty about existing objectives, but the default is to work toward and with the familiar. We also found examples of courses that went into some depth within a particular industry or a particular functional area to consider the role of sustainability.

For example, Geraldo Ferrer’s “Sustainable Operations” course is an elective that focuses on implementation and draws on Operations, Accounting and Marketing issues. Ferrer explains that about half of the material would be appropriate to the core curriculum, especially accounting, thereby illustrating one of the functions such elective courses can play as curriculum development engines, providing the impetus to create and test new materials that might then migrate into the core once they have proven successful.

Ferrer explains that from a purely financial perspective, most of the environmental innovations he discusses in this course can also save money. He explains that MBA students have a “default”

position to containing costs: that is, they won't even talk about the idea if it doesn't save money. So his class is organized around the implementation issues that arise when a manager tries to address environmental concerns economically and effectively. His main focus is upon the intersection of risk management (in this case, environmental risk), quality management and safety management. He believes that it is on these three issues that operations managers are judged; the financials are a "given," an assumed backdrop to these issues where they can exercise more control and skill.

With regard to Operations, the course covers topics like life-cycle analyses, reverse logistics operations, closed-loop operations. From a Marketing vantage, it covers operations and planning decisions regarding branding products with recycled content. The course also covers ISO 14,000 certification. Ferrer has written many of his own cases and also uses an in-class role play simulation ("Transformation Management" copyright 2004, REALIA GROUP.com) that challenges students to design an environmentally efficient transport vehicle that will be evaluated on both economic and environmental performance. Ferrer works to reveal the many ways in which environmental and economic performance are synchronous.

John Ganzi's course on "Financial Analysis: Integrating Sustainability" takes a different approach. It focuses on the financial services industry and the way its institutions "evaluate and quantify how environmental and other sustainability issues affect the financial performance of their corporate clients and their investments." The course examines the three main services of the industry – credit, underwriting and direct investment – and looks at examples of the way players in each area think about and evaluate the risk exposure and investment value. After an introductory presentation of strategy, concepts and industry overview, the course focuses on specific examples, case studies (often written by Ganzi) and industry guest speakers.

The premise of the course is that environmental issues have real and often quantifiable financial implications for risk management, and that there is good data to show that ignoring environmental risk increases financial and environmental risk. Clearly this is a course that operates within the traditional outlines of financial practice but it expands students' understanding of the tools available for evaluating environmental risk. The more possible it appears to consider such questions, one might conclude that the more likely they are to do so.

We found several examples of courses that used standard economics concepts to illustrate and explore sustainability issues. These courses are particularly interesting because they highlight the often under-emphasized economic concepts of public goods and market failure and externalities, thereby encouraging students to utilize the frame of economic theory in a less dogmatic and a more nuanced fashion. For example Professor Robert Repetto at Yale teaches a course on "The Economics of Sustainable Development." Through the examination of several specific sustainability problems (e.g., fisheries, biodiversity, deforestation, water) and the methods offered in economic theory for measuring and remedying such problems, Repetto shares the strengths and the limits of the theory.

The third frame is one of *Business Opportunity*. In one sense, this may seem like an extension of Pragmatism, since economic opportunity is certainly a familiar business objective. However, from this vantage of Business Opportunity, faculty and students intentionally look for the market

or the technology or the business model that changes the way economic activity operates and the role it plays. They are looking for the disruptive innovation.

In Tom Dean's syllabus for his course on "Sustainable Venturing," he writes: "This course is based on the belief that entrepreneurs are powerful agents of social and economic change who, if properly harnessed, can drive, rather than hinder, our movement to a sustainable economy and environment. Accordingly this course will focus on the entrepreneurial opportunities that result from global social and environmental trends."

The course is enormously popular with students, appealing, Dean says, to their desire to "make money and then save the world." The theoretical grounding for the course is in the concept of market failures and Dean proposes that entrepreneurial activity is the path to a sustainable future. He organizes the course around four different sectors each semester (e.g., green building, natural foods, renewable energy, fuel cells, water markets, climate change strategy), and he is constantly adding new content. In addition to the readings, cases and guest speakers on each of the course's four industry sectors, students are assigned a team research project/presentation that involves scoping out the entrepreneurial opportunities around sustainability in their own chosen sector.

Andrea Larson's course on "Sustainable Innovation and Entrepreneurship" shares many similarities with Dean's course in that she appeals to the energy and power of entrepreneurial innovation in attracting students and she comes to this topic from the conviction that there is a tremendous amount of economic opportunity at the intersection of entrepreneurship and natural systems. She also brings in many guest speakers who speak compellingly of this opportunity. But Larson articulates why the "lens of entrepreneurship" is so critical to addressing these issues, explaining that: "The study of entrepreneurship investigates the causes, mechanisms, and effects of changes outside the range of existing practices. It is the explanation of new ways of meeting human needs."¹¹ In a sense, she is arguing how this Business Opportunity framing for sustainability departs from the framing of Pragmatism.

Larson also adds another layer to her approach. She argues for the importance, even the necessity, of listening to the voices of "outsiders" in order to be able to see existing practices in these new ways. She is arguing that sustainable entrepreneurship requires and will usher in a greater stakeholder orientation.¹²

There remain two courses that seem to explicitly span all three frames – Critique, Pragmatism and Business Opportunity. Stuart Hart's "Sustainable Global Enterprise" is in many ways a strategy course, using that discipline's competitive analysis as a conceptual frame for discussing company case examples. On the other hand, the course is certainly a form of Critique, positioning the need and opportunity for sustainable strategies within a commentary on the challenges facing our planet and our species as a result of past choices. And finally, his emphasis on "Bottom of the Pyramid" economic opportunities as a means to economic value, the remedy for social inequities and needs, and the engine for more sustainable business practices certainly reflects a "Business Opportunity" frame of reference.

¹¹ Larson, p.4.

¹² Larson, p.1.

Hart attempts to present his critique in a positive frame, much as he does in this section's opening quotation. For example, he introduces the concept and urgency of sustainability by using the realities of population growth as a driver. He uses a brief videotape to graphically present this projected explosion. This visual presentation reveals to students a compelling and frightening reality. Hart then mentions the phenomenon of chronocentrism, the idea that everyone thinks that the time they live in is special. However, he points out, we have evidence to suggest that the time we live in is, indeed, special. It's a time when the future of our planet and our species is at stake. Because of his framing, a frightening reality, a challenge is transformed into an opportunity.

As well, Hart transforms the idea that sustainability is all about restraint and about doing less, arguing that we actually need more economic growth, not less – but it needs to be at the bottom of the economic pyramid and we need to change the way we do it. This course is a critique wrapped in pragmatism and directed toward a business opportunity.

Similarly, Kathia and Alexander Laszlo's course on "The Three S's of SuccesseSS: Strategy, Systems, Sustainability" presents a critique of classical perspectives on strategic management; teaches traditional as well as innovative tools from within strategy and organizational studies; and positions the whole course within a Project Oriented Learning experience that, for instance, involves students consulting for a Mexican start-up company in the recycling industry or engages them in a research project to understand the world view of Mexican executives and their readiness to embrace sustainable strategies.

We can see from this discussion of several diverse approaches to the teaching of sustainability that some element of each frame – Critique, Pragmatism and Business Opportunity – is ultimately required to impart various essential learnings and to reach different students with different needs and levels of interest. But we also gathered some non-curricular but nevertheless useful insights from our conversations which we will share below.

5.4 Students

We heard from interviewees fairly consistently that student interest in sustainability coursework was greater among international students than those from the United States (most of the faculty interviewed were from U. S. Schools). In general, MBA students were seen as less open than undergraduate students. However, a core group of interested students and faculty could be seen to influence the wider MBA population.

Students were reported as being more attracted to the courses framed around business opportunity, although there are a consistent group of students who are committed to environmental and sustainability issues. Similarly, those courses that were organized around an industry (e.g., financial services) or around a functional ability (supply chain management, entrepreneurship) did attract some students who would not otherwise have enrolled in a sustainability elective.

5.5 Faculty

Faculty often reported that their interest in this area grew out of their dissertation research, although interestingly that research was not always about environmental or sustainability issues. For example, a dissertation on entrepreneurship could trigger the focus on sustainability as the occasion for innovation.

In addition, several faculty pointed out that working in this area could be dangerous for junior faculty. On the other hand, some of the more expansive school efforts had committed tenured faculty who would involve doctoral students in their work, thereby helping to pave the way for their future career prospects.

It was also noted that often there is only one faculty person working in this area at a school, meaning that if he or she decides to teach something else or to move to another school, the course goes away.

5.6 School Context

Faculty we interviewed described the often idiosyncratic paths that they and their particular institutions had taken toward including sustainability coursework in the curriculum. In some cases, this meant seizing opportunistic moments like the presence of a major donor who was pushing for more attention to the Business and Society issues in the curriculum. In a couple other cases, this meant building on the relationships between the business school and other programs, such as schools of natural resources or engineering, at the same institution. In one case, faculty seized on the opportunity to turn around an ailing core strategy course, using the integration of sustainability issues as the new lens around which to transform the syllabus. In another case, a faculty member reached out to colleagues from two other disciplines to team-teach the case study she integrated into her core Marketing course, thereby demonstrating the kind of cross-boundary thinking that is required to address sustainability issues and hopefully influencing her colleagues at the same time.

While many barriers to the integration of sustainability were identified, the most common message seemed to be to follow the passion of the few, to build opportunities for the many. A small core group of students, or of faculty, or – when one is lucky – of deans can build momentum that pervades the larger organization.

5.7 Recruiting

Recruiters were identified as mostly uninterested in sustainability issues. However, it was pointed out that often more senior executives were aware of the importance of such training and that message was not making it into the ranks of campus interviewers. Most explicit opportunities were still in engineering or around compliance.

6.0 SUMMARY

In summary, what do these examples from the extracurricular environment and the course content of MBA programs tell us about how well concepts of sustainability are being integrated into management education?

- Sustainability and globalization are subjects increasingly chosen for discussion at events held outside the classroom at business schools – but further research would be required to assess how wide an audience these discussions attract and how impactful the sessions are on students’ thinking about the business sector.
- As part of their diverse offerings to MBA students, some schools provide opportunities for students to get hands-on consulting experience in emerging markets – both through extracurricular internships and in elective courses.
- Students are often the ones who initiate the kinds of events and business school programs that build their capacity as emerging leaders to understand the types of business practices that “promote sustainable development and consumption patterns to alleviate poverty and increase the quality of life for all people.” They are essential drivers for change.
- A promising trend, but one yet to realize its full potential, is the emergence of institutes and centers housed at or supported by the business schools that encourage teaching, research and outreach to the business community on sustainability related topics.
- There continues to be scant evidence that topics related to the broad domain of sustainability are finding their way into many of the traditional business school course – with important exceptions. Students are being presented, however, at some schools with elective courses that do develop their ability to consider new ways to recognize the “tremendous power of the private sector . . . to harness resources to create sustainable good and services.”
- Courses with this content generally open students’ eyes to possibilities for business to thrive financially AND achieve social and environmental progress – and give them the chance to explore the constraints to achieving this result. They also provide a framework for students to wrestle with making decisions in situations where there are conflicting yet valid expectations held by diverse constituencies.

¹³ Andrea Larson, “Reframing Global Environmental Issues through an Innovation and Entrepreneurship Lens,” # UVA-ENT-0041, Darden Business Publishing, University of Virginia, 2003, pp.1, 2.

¹⁴ Stuart L. Hart and Mark B. Milstein, “Global Sustainability and the Creative Destruction of Industries,” *MIT Sloan Management Review*, Fall 1999, Volume 41, Number 1, p. 24.

¹⁵ Larson, p.4.

¹⁶ Larson, p.1.

- Courses addressing sustainability issues also expose students to cross-sectoral engagement as a tool for problem solving and innovation and as a result they often explore the complex challenges and opportunities of public private partnerships.

Appendix 1

Faculty Interviewed and Course Syllabi Reviewed

Our interviewees included:

- Associate Professor Thomas Dean, Leeds School of Business, University of Colorado at Boulder
- Professor Geraldo Ferrer, Kenan-Flagler Business School, University of North Carolina at Chapel Hill (until Fall 2004) and Naval Postgraduate School, Graduate School of Business and Public Policy (as of Winter 2005)
- Adjunct Professor John Ganzi, Kenan-Flagler Business School, University of North Carolina at Chapel Hill and Executive Director, Finance Institute for Global Sustainability
- Professor Thomas Gladwin, University of Michigan Business School
- Professor Stuart Hart, Johnson Graduate School of Management, Cornell University
- Professor H. Thomas Johnson, Portland State University
- Associate Professor Andrea Larson, Darden Graduate School of Business Administration, University of Virginia
- Associate Professor Jill Klein, INSEAD
- Professor David Levine, Walter A. Haas School of Business, University of California, Berkeley
- Professor Ravi Dhar, School of Management, Yale University
- Professor Michael Gordon, Associate Dean, School of Business Administration, University of Michigan

We also reviewed materials from:

- Drs. Kathia and Alexander Laszlo, EGADE -ITESM, Mexico
- Professor Robert Repetto, Yale School of Forestry and Environmental Studies

Course Syllabi Reviewed

- Sustainable Venturing (Dean)
- Sustainable Operations (Ferrer)
- Financial Analysis: Integrating Sustainability (Ganzi)
- Systems Thinking for Sustainable Development and Enterprise (Gladwin)
- Sustainable Global Enterprise (Hart)
- Nurturing Sustainable Operations: Seeing Business from a Natural System Perspective (Johnson)
- The 3 S's of SucceSS: Strategy, Systems, Sustainability (Laszlo and Laszlo)
- International Development (McMillan)
- The Economics of Sustainable Development (Repetto)
- Business Strategies for Emerging Markets (Levine)
- Sustainable Innovation and Entrepreneurship (Larson)

Appendix 2 Beyond Grey Pinstripes 2003 – Participating Schools

Arizona State (Carey), USA	Michigan, USA
Ashridge, UK	Minnesota (Carlson), USA
Asian Institute of Management (SyCip), The Philippines	Monterey Institute (Fisher), USA
Babson College, USA	New Hampshire (Whittemore), USA
Boston College (Carroll), USA	New Mexico (Anderson), USA
Boston University, USA	New York (Stern), USA
Cal Poly (Orfalea), USA	UNC (Kenan-Flagler), USA
Case Western (Weatherhead), USA	Northwestern (Kellogg), USA
Chicago, USA	Notre Dame (Mendoza), USA
CEIBS, China	Ohio State (Fisher), USA
Baruch (Zicklin), USA	Oklahoma (Price), USA
Claremont (Drucker), USA	Oregon (Lundquist), USA
Clark, USA	Pennsylvania (Wharton), USA
Colorado (Leeds), USA	Pepperdine (Graziadio), USA
Columbia, USA	Pittsburgh (Katz), USA
Cornell (Johnson), USA	Portland State, USA
Cranfield, UK	RPI (Lally), USA
Curtin, Australia	Rice (Jones), USA
Dartmouth (Tuck), USA	Saint Joseph's (Haub), USA
Detroit Mercy, USA	San Diego, USA
Duke (Fuqua), USA	Southern Mississippi, USA
ENPC, France	Stanford, USA
Emory (Goizueta), USA	Tampa (Sykes), USA
Erasmus (Rotterdam), Netherlands	Texas (McCombs), USA
ESADE, Spain	Thunderbird, USA
FGV (EBAPE), Brazil	Tulane (Freeman), USA
George Washington, USA	Universidad de Chile
Georgetown (McDonough), USA	Navarra (IESE), Spain
Georgia Tech (DuPree), USA	Nyenrode, Netherlands
Harvard, USA	UC Dublin (Smurfit), Ireland
Hawaii, USA	Calgary (Haskayne), Canada
HEC-Paris, France	UC Berkeley (Haas), USA
Illinois, USA	UCLA (Anderson), USA
Illinois Institute of Technology (Stuart), USA	Denver (Daniels), USA
IMD International, Switzerland	Durham, UK
INCAE, Costa Rica	Jyvaeskylae, Finland
IIM-Bangalore, India	USC (Marshall), USA
IIM-Calcutta, India	Stellenbosch, South Africa
IIMD (IPMI), Indonesia	Wales Swansea, UK
INSEAD, France	Warwick, UK
Instituto de Empresa, Spain	Valparaiso, USA
ITESM (EGADE), Mexico	Vanderbilt (Owen), USA
Iowa State, USA	Vermont, USA
Leipzig, Germany	Virginia (Darden), USA

Loyola Marymount, USA	Wake Forest (Babcock), USA
Loyola Chicago, USA	Wilfrid Laurier, Canada
Marist, USA	Wisconsin, USA
McGill, Canada	Wyoming, USA
Miami (Farmer), USA	Yale, USA
Michigan State (Broad), USA	York (Schulich), Canada

Appendix 3

Institutes and Centers which Report an Emphasis on Sustainability^{17*}

University	Center	Description
Case Western Reserve University, United States	Weatherhead Institute for Sustainable Enterprise (WISE)	Weatherhead Institute for Sustainable Enterprise (‘WISE’) convenes business leaders and scholars to learn together how to fundamentally change the ways in which we live—with all living beings and systems—so that future generations not only survive but thrive. http://www.weatherhead.cwru.edu/wise/index.html
Erasmus University, The Netherlands	Erasmus Centre for Sustainable Development and Management.	In both research and education, the centre explores new themes of sustainability and management within national and international networks. http://www.eur.nl/fsw/english/research/esm/
Fundacao Getulio Vargas, Brazil	The International Center for Sustainable Development (CIDS)	CIDS is an organization whose objective is to study, reflect upon, promote and publicize the concept of sustainable development. CIDS seeks to spread the notion of sustainability, helping to integrate the concept into the developmental process, in the management of public policies, within the business culture and social practices of participatory democracy according the principles of the UN’s Agenda 21. http://www.fgv.br/
IMD International, Switzerland	Forum for Corporate Sustainability Management	CSM is the corporate sustainability research program at IMD. Corporations participate in the forum to build a sustainability business advantage. The Forum initiates research and hosts seminars on corporate sustainability management. http://www01.imd.ch/research/projects/index.cfm?projectID=164
INCAE, Costa Rica and Nicaragua	Latin American Center for Competitiveness and Sustainable Development	CLACDS is the leading center of research in Latin America on the integration of sustainable development issues in national development strategies. The Center has been recognized worldwide for its groundbreaking work in improving business climate, sustainable business strategy and development, improving logistics for needy populations and business strategy for small and medium business sectors. http://www.incae.ac.cr/EN/clacds/
University of Calgary, Canada	TCPL International Institute for Resource Industries and Sustainability Studies	The Institute was created to promote inter-faculty and interdisciplinary research projects on strategic management of environmental and sustainable development issues relating to resource based industries. The focus is primarily on research into the management of ecologically and socially sensitive areas in Canada and the developing countries in which Canadian resource based firms conduct operations. http://www.ucalgary.ca/mg/tc_iris/
University of Colorado at Boulder, United States	The Center for Sustainable Tourism	The Center for Sustainable Tourism emphasizes analyses of tourism in terms of its net impact on economic, natural, and social capital foundation. To the extent possible, Center research utilizes the concepts of financial, environmental, and social accounting to quantify impacts and to identify potential tradeoffs and synergy among these different dimensions of tourism. http://leeds.colorado.edu/tourism/
University of Michigan, United States	The Frederick A. and Barbara M. Erb Environmental Institute	The mission of the Erb Environmental Management Institute is to become a premier source of knowledge and wisdom for the achievement of ecologically, economically and socially sustainable enterprise and development. In pursuit of this mission, we foster professional education, public outreach, social learning and scientific scholarship, all of which are supportive of the transition to sustainability. http://www.bus.umich.edu/FacultyResearch/ResearchCenters/Institutes/Fa

¹⁷ These institutes and centers were reported by schools participating in the Beyond Grey Pinstripes survey or during authors’ conversations with selected faculty.

		bm/
University of Navarra, Spain	Center of Studies for the Sustainable Enterprise	The center aims to undertake research to help the business world understand and manage the complex relationship of society and the environment, in accordance with the principles of sustainable development. Additionally, the center seeks to train managers to perceive and develop competitive business advantages from the challenges that arise from this relationship. http://www.iese.edu/en/RCC/CBS/Investigacion/EmpresaSostenible/Indice.asp
University of North Carolina at Chapel Hill, United States	Center for Sustainable Enterprise	CSE examines how global sustainability is redefining the competitive landscape for enterprises, and prepares graduates and executives to lead in the transformational change required. Its education, research and outreach help organizations gain competitive advantage by becoming drivers of social development and environmental improvement. http://www.kenan-flagler.unc.edu/KI/cse/index.cfm
University of Virginia, United States	The Ingenuity Project (TIP) at the Batten Institute	TIP brings together cross-disciplinary teams from areas including management, engineering, biology, architecture, chemistry, ethics, law and environmental science to converse, research and define ways in which economic activities can be redesigned for beneficial interdependence with natural systems. A primary objective is to study and document corporate strategies and practices in ways that will inform and foster a shift in business education.
York University, Canada	Sustainability Enterprise Academy	SEA provides Senior Executive Seminars on Corporate Sustainable Development featuring leading-edge thinkers and practitioners. http://www.sustainableenterpriseacademy.org/

*We also want to note several centers that do not necessarily have an explicit focus on sustainability, but that do raise issues regarding globalization. These centers include:

- The Ford Motor Company Center for Global Citizenship at Northwestern University
- The Center for the Study of Globalization at George Washington University
- Anselmo Rubiralta Research Center for Globalization at the University of Navarra, Spain
- The Tayloe Murphy Center at the University of Virginia
- The Yale Center for the Study of Globalization at Yale University
- Center for Global Business and the Economy at Stanford University