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The Knowledge Problem and the Firm: New and Existing Critiques of Graduate Management Education

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Introduction

Over the past 150 years, the advent and rise of formal management education in top graduate schools has changed radically where and how global business seeks and acquires talent. Whereas business was traditionally taught through practice and apprenticeship in a specific industry or context, general management education has emphasized the idea that managers can be well-versed in the topic of business administration (with its various components of strategy, finance, operations, and others) divorced from any specific context and independent of industry.

The market seems to indicate that such an education in general management is worthwhile: the number and type of general management degrees, led by the traditional 2-year Masters in Business Administration (MBA), have proliferated; and the price of such degrees has risen steadily. Within and without the management education system, however, various parties have leveled critiques questioning the validity of both the practice and concept of the general management degree. Often these critiques focus on very specific problems with management education – content emphases, format, etc. – but some critiques, like those of Henry Mintzberg propose more fundamental problems that require a conceptual and practical overhaul of graduate management education. This paper builds on the Mintzberg critique by offering a Hayekian analysis of graduate management education focused on how MBA programs approach (implicitly or explicitly) the knowledge problem in the firm.

It is our contention that many graduate programs neglect Hayek's knowledge problem, and in doing so, transmit through the students they train to the global business community a flawed, overly centralized view of the firm.

With the aim of helping to correct this flawed perspective, we advance several recommendations for the business education community that might aid in a more explicit and robust integration of the knowledge problem and its implications into graduate management education.

1: A Brief History of Management Education

An overview of management education

In 1819, liberal economist Jean-Baptise Say changed the course of modern management with the foundation of the first educational institution devoted solely to business and finance, *École Supérieure de Commerce de Paris*.[1] Indicating an emerging interest in the scientific study of business, the establishment of *ESCP* set in motion the movement that would put business on par with other educated professions like law and medicine. In 1881, the Wharton School of the University of Pennsylvania followed *ESCP* and brought business education to the United States; and in 1900, Dartmouth established the Tuck School of Business to confer the U.S. business world's first advanced degree (Broehl, 43-44), a masters in "commercial sciences" (named as such in 1902).[2] This was all very new. Until the 19th century, practitioners of business largely thought management merely a *function* of business, and business a vocational interest – something learned through apprenticeships, real-world experience, and hard work. By the late 1800s, however, the formalized study of business was gaining some prominence as a potential source of competitive advantage for workers.

In 1899, Frederick Winslow Taylor brought focus to this emerging discipline with the publication of his *The Principles of Scientific Management*. Taylor, an efficiency guru and failed employee of the Bethlehem Steel Company, claimed that management was a distinct practice – a science – and as such, worthy of study as a discipline unto itself.[3] In the introduction to *The Principles of Scientific Management*, Taylor wrote:

> In the past the prevailing idea has been well expressed in the saying that "Captains of industry are born, not made"; and the theory has been that if one could get the right man, methods could be safely left to him. In the future it will be appreciated that our leaders must be trained right as well as born right, and that no great man can (with the old system of personal management) hope to compete with a number of ordinary men who have been properly organized so as efficiently to cooperate.
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> In the past the man has been first; in the future the system must be first. This in no sense, however, implies that great men are not needed. On the contrary, the first object of any good system must be that of developing first-class men; and

[1] From the ESCP-EAP website, accessed May 07, 2007
[2] Wayne Broehl, *Tuck & Tucker* (1999), 43-44
[3] Stewart, Matthew. "The Management Myth". *The Atlantic Monthly*, June 2006

> under systematic management the best man rises to the top more certainly and more rapidly than ever before.[4]

Soon thereafter, influential universities across the United States (Stanford, MIT, Columbia, and others) established business schools to train these "great men"; and consulting firms like Booz Allen Hamilton (founded in 1914) and McKinsey & Company (founded in 1926) rose up to employ them. Management education quickly gained increasing respectability, particularly in the later half of the 20th century; and by December of 2006, the Association to Advance Collegiate Schools of Business International listed 543 accredited business schools, 92 of which were outside the United States, spanning all six continents and dozens of countries. In the thirty years between 1970 and 2003, business degrees went from 10.1 percent of all graduate degrees conferred to 22.9 percent; and if the writings of men like Say and Taylor have faded from prominence, the discipline they set in motion – the study of management – is here to stay.[5]

The benefits of an MBA?

Business is now one of the world's most highly pursued areas of graduate study, and its archetypal degree is the Masters in Business Administration, or MBA. Rather than seeking to cover a specific function, like accounting or systems design, the MBA teaches a general management skill set – creating men and women who, as Taylor envisioned, are prepared to lead and manage organizations. Between 1955-56 and 1997-98, the number of MBAs awarded in the United States rose from 3,200 to 102,171.[6] In 2000, George W. Bush became the first MBA president of the United States (Harvard Business School, 1975), and in 2002, 165 of the top 440 Chief Executives on the Forbes 500 list possessed MBAs, including, more recently, mega-CEOs like GE's Jeffrey Immelt (Harvard Business School, 1982) and disgraced Enron chief, Jeffrey Skilling (Harvard Business School, 1975). But what do students and their eventual employers get from MBAs?[7]

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[4] Taylor, Frederick W. *The Principles of Scientific Management*. http://www.principles-of-scientific-management.com/intro.htm

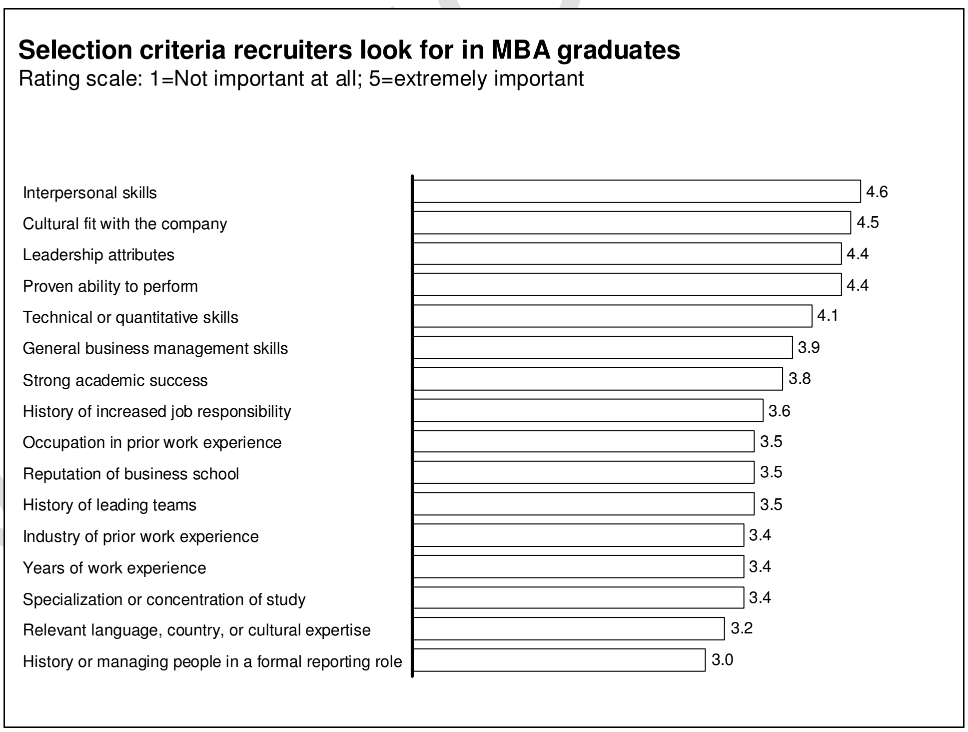
[5] National Center for Education Statistics: Digest of Education Statistics 2005, tables 250 and 251.

[6] Zimmerman, Jerold L., "Can American Business Schools Survive?" (September 5, 2001). Simon School of Business Working Paper No. FR 01-16.

[7] Herper, Michael. "Keep Your CEO out of Grad School" *Forbes*, 04/25/2002

From a student's perspective, the MBA is a door to critical skill development, leadership training, social and professional networking, and better post-graduate employment—it exists to create, certify, and coordinate Frederick Taylor's "great men."

First, these programs teach critical skill development. Some, programs pride themselves on excellence in functional areas, such as Wharton at the University of Pennsylvania and GSB at the University of Chicago in finance, or Kellogg at Northwestern University in marketing. Others schools differentiate themselves through their teaching method; for example, Harvard Business School employs the "case method" (learning specific functional lessons through analysis of real-world business situations) to bring educational lessons to life through decision making. Criticism of these methods abounds[8], but students and businesses seem to buy into, at least partially, the idea that MBAs acquire new and valuable capabilities at their chosen institutions. In surveys of employers, learned "skills" – interpersonal, technical, quantitative, and management – rank highly among the attributes sought by recruiters; and there is some reason to believe that MBA programs do effectively confer some of these skills, though it is difficult to tell whether they "teach" them or merely "certify" them in graduates (Exhibit 1).



[8] For a collection of critiques, see Section 2 "Existing Critiques of Traditional 2-Year MBA Programs"

Exhibit 1: Selection criteria sought by recruiters[9]

Business schools, particularly full-time programs, also give candidates an opportunity to build "social capital." Business schools serve as centers for like-minded, intelligent business people to construct the social networks that aid them in their business careers. As one current HBS student explains, "As important as my classes are my evening and weekend activities. I've never been in an environment with so many smart, like-minded people, and the networks I'm building now will serve me throughout my career."[10] Additionally, the very conference of a degree from a top university serves as certification of a graduate's aptitude. An MBA from Harvard, Wharton, or MIT is a sign that a student has both the analytical proficiency to achieve success in the business world and the professional polish to navigate its political waterways; students carry MBAs to employers like badges certifying they have the "raw horsepower" to compete in the upper echelons of the business world.

From an employer's perspective, MBA degrees, ideally, demark students with the knowledge and capability to handle the ever-changing environments of modern business. These businesses need people who can react to and change their organizations. As Tim Conlon, chief learning officer at Xerox, put it, "We need people with the breadth of experience to deal with the increasing velocity of change. An MBA can be part of—but not necessarily core to—leadership success."[11] Those who purchase the services of newly minted MBAs have varying motives. Some, like McKinsey & Company, which hired approximately 600 MBAs in 2005, need exactly the skills broad management programs claim to cultivate—leadership, problem-solving excellence, and adaptability.[12] Others, like some software firms, prefer students with greater levels of technical knowledge or industry-specific expertise. However, the social capital and "certification" functions of business school may be the most important to employers.

Many employers are quick to claim that an MBA is secondary in importance to experience but are seemingly contradicted by market indicators. As Hudson Asia Chief

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[9] "Corporate Recruiters Survey," Graduate Management Admission Council, April 2007, p. 2.
[10] Personal interview, HBS student JF, November 22, 2006.
[11] Bradshaw, Della and Simon London. "Shredded credibility? The MBA industry may be facing a shakeout: Academic pursuits not based on reality." *Financial Times*. April 29, 2005.
[12] Ibid

Executive Gary Lazzarotto stated, "In most cases, organizations are looking for experience. The MBA is seen as icing on the cake. It's certainly a positive or a good thing to have, but it isn't seen as the main differentiator."[13] Practice seems to contradict Lazzarotto's claim. The salaries offered MBA graduates indicate that employers are more willing to pay for the degree, at least at a top school, than they first admit. To quote Tuck Business School dean Paul Danos, "We've had a 65% rise in applications. Our students come in with an average salary of $70,000 and more than double that on leaving."[14] According to the GMAC, over the period 2002-2007, the average expected starting annual salary of graduate business students exceeded that of other graduate school students by 27% and that of undergraduate or first university students by 76%.[15] The big question is whether employers do this for the knowledge candidates have acquired in business school or for the certification of ability and experience these schools provide.

Taken together, these factors make an MBA a practical, predictable step towards a better position in the corporate world. Most of the publications that rank MBAs use graduate salary as a primary driver of the ranking system, and literature packets from MBA programs to potential candidates include extensive salary information concerning the previous year's graduating class. The purpose of the education, clearly, is to put students on a path to leadership roles in business, government, and non-profit organizations, and to receive the program's certification that one is ready—socially, intellectually, and professionally—for such roles.

Overall, the MBA has stumbled recently – but not much. Growth in applications has slowed or declined in the past several years after decades of rapid ascent (oft-cited reasons include economic conditions, higher entry barriers for international students, and rising costs of graduate school). Business School deans across the world are looking to reevaluate content and delivery mechanisms. Journalists and professors are critiquing programs, often in brash terms. But despite these concerns, program offerings continue to expand. New geographic regions continue to go online for MBAs (most notably, China); and the machine that is global business education rolls along, looking for new ways attract top candidates.

[13] "Ambition Drives MBA Challengers" *South China Morning Post*, October 8, 2006
[14] Hoare, Stephen. "MBAs: Grand Masters Consider their Tactics" *The Guardian*, January 24, 2006
[15] "Corporate Recruiters Survey," Graduate Management Admission Council, April 2007, p. 2.

Changing formats[16]

As part of the search for differentiation and increased credibility, availability, and impact, many MBA programs have begun to experiment with the format of their offerings – often targeting expansions at previously untapped pools of managers and executives unable or unwilling to take two years away from the job to pursue an advanced degree.

The traditional mode of delivery for an MBA is the **full-time degree**. In this format, students spend upwards of 20 months taking full-time graduate coursework on-site at a college or university. Top programs include Harvard, Northwestern, the University of Chicago, Stanford, Dartmouth, MIT, the University of Pennsylvania, Northwestern, INSEAD, and London Business School; and students often spend more than $100,000 to cover tuition and fees. While full-time degrees make up the majority of MBA awards, the Graduate Management Admissions Council notes that full-time MBA application growth fell in the time between 2001 and 2005, due partly to economic conditions and partly to the rise of alternatives like Executive and part-time MBAs. Full-time programs focus on teamwork and real-world problem solving (often through a content-delivery system known as the "case method"); and programs try to teach both functional capabilities (marketing, accounting, finance, and operations) and leadership. The two year experience is typically broken up by a 3-4 month summer internship; and as an alternative, some major programs (INSEAD, Northwestern) offer so-called accelerated or one-year programs, which can usually be completed in 12 months, often without the benefit of an intervening internship opportunity.

The **part-time MBA** is also rising in prominence. Part-time MBA programs recorded application increases surged from 27 percent in 2004 to 46 percent in 2005; and 55 percent of part-time programs plan to increase their class size in 2007.[17] Part-time MBA degrees, are similar to their full-time counterparts, but tend to serve a rival customer base composed primarily of working professionals who take a light course load of evening and weekend classes to accommodate their full-time employment. It often takes students three

[16] Not included in this section but worth noting is the Acton MBA. This non-traditional program is geared towards entrepreneurship, and employs several new models of learning and professorial incentivization; at this time, however, the program is unique and has not been adopted by a large percentage of the MBA-seeking population or the institutions that train them.

[17] "Graduate Management Applications up in 2006" GMAC news, December 2006.

years or more to complete their degree as they balance education and work; and many of the world's most prestigious schools do not offer substantial part-time programs. The student population consists largely of mid-level managers looking to take the next step in their careers. And while high-quality institutions like Chicago and Northwestern boast part-time programs, they are often regarded less highly than full-time MBA offerings.[18]
The fastest growing MBA format is the **Executive MBA (EMBA).** A 2005 GMAC application trends survey showed that the percentage of EMBA programs noting applications significantly up rose from 9 percent in 2004 to 15 percent in 2005; and while both full-time and part-time application declined in the 2001-2005 period, EMBA applications remained steady.[19] EMBA programs are designed to meet the needs of working professionals – managers and executives – whose positions prevent them from taking two years away from work for a full-time degree. These students generally have more work experience than full-time entrants, and the EMBA can be completed in two years – the same time frame as a traditional MBA. The average EMBA student is 36 years old with 13 years of work experience, eight in management, and classes require an 18-25 hour time commitment per week. Most are sponsored by their employer. EMBA programs now number more than 210 colleges and universities around the world, [20] and are gaining increased respectability, with top full-time programs like Northwestern, Chicago, Wharton, and Duke offering EMBA degrees.[21]

For managers looking to obtain an MBA without the personal or financial cost of EMBA, the growing number of **distance learning** options available from institutions like DeVry University, Babson College, and Auburn University are becoming increasingly popular.[22] Distance programs enjoy less prestige than traditional programs, and few of the top full-time programs have distance offerings. While they are cheaper and less time consuming than other programs, distance programs lack the same benefits of networking and social capital construction, but they are flexible—allowing students to enroll from remote

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[18] Part-time MBA program rankings from http://www.mbaadmission.com/part-time-mba.php, accessed May 07, 2007
[19] Applications Trend Survey, Graduate Management Admission Council, September/October 2005
[20] Why an MBA?" Executive MBA Council at http://www.emba.org/prospectives_why.htm, accessed May 07, 2007
[21] *BusinessWeek* 2003 "EMBA Rankings" from http://www.businessweek.com/bschools/03/emba_rank.htm
[22] *BusinessWeek*, 2006 "Distance Profiles" from http://www.businessweek.com/bschools/06/distance.htm

locations and study when time allows. Regular online or local attendance at certain programs is expected, and some group involvement is often incorporated into these local delivery mechanisms.[23]

Finally, based on his critiques of existing management education (addressed in section 2), business school professor Henry Mintzberg has helped build a graduate management program that differs substantially from existing programs, the International Masters in Practicing Management (IMPM). The IMPM targets senior managers aged 35 or over, and leads them through 18 months of courses followed by the writing of a major paper. Courses are delivered in 2 week units around the world—students travel from Canada to the United Kingdom, France, Korea, Japan, and India. Rather than focusing on functional silos, IMPM content is organized around managerial "mindsets"—reflective, analytic, worldly, collaborative, and action-oriented or catalytic. IMPM attempts to focus "directly on the development of managers in their own contexts—their jobs and their organizations."[24] The program size is limited so context-specific learning experiences can be created for each participant.[25] Overall, it has not gained the traction of other prominent forms of management education, but is receiving increases attention as Professor Mintzberg's teachings gain attention.

2. Existing Critiques of Traditional 2-Year MBA Programs

As with all graduate degrees, graduate management education in its many forms has suffered numerous critiques; and the most fundamental criticisms have, predictably, focused on the most common and highly prized graduate management degrees: The 2-year, full-time MBA.

[23] Ross, John E. "Distance Learning MBAs" from http://www.mba-courses.com/distance_learning_mba.htm
[24] From www.impm.org.
[25] IMPM, though an alternate MBA, still draws its teaching corps from top business schools globally, including McGill, INSEAD, Indian Institute of Management – Bangalore, KDI School of Public Policy and Management (Korea), Lancaster University (UK), and Hitotsubashi Univeristy, Jaist-Ishikawa, and Kobe University (Japan).

Critiques of the traditional MBA program typically fall into one of two categories: content or delivery.[26] A common *content* criticism is that, "MBA programs fail to teach ethics." A common *delivery* criticism is that, "MBA programs fail to provide students with opportunities to apply their learning." By reformulating these categories into questions, we can map critiques into a 2-by-2 matrix, shown in **Figure 1**.

	Do traditional MBA programs teach the right material?	
Do traditional MBA programs deliver content appropriately?	**YES**	**NO**
YES	(A) Supporters: Most employers, satisfied graduates, business school deans	(C) Reformers: Ethics/social responsibility critique; balance among disciplines critique; field-specific critiques (economics, entrepreneurship)
NO	(B) Rivals: Non-traditional offerings such as executive programs, European-style MBAs, variations among traditional MBA program teaching styles	(D) Renegades: Mintzberg's critique, plus they admit and then teach the wrong PEOPLE as well

Figure 1: 2-by-2 Matrix Positioning Critiques of MBA Programs

Quadrant A: Supporters

As discussed earlier, many people, including most MBAs and those who hire them, generally agree that traditional MBA programs teach the right material and deliver it appropriately. The Supporters might favor minor adjustments to MBA programs, e.g., more international content or less work during peak job interview times. These adjustments, however, would not fundamentally change the program. Employers who are Supporters are likely to recruit across top-ranked schools independent of the particular school's individual content mix or teaching style.

Quadrant B: Rivals

[26] The critiques mentioned here are by no means exhaustive; they are simply representative.

Critiques of traditional MBA program content delivery mechanisms – even if that content is assumed to be correct – come from several sources, we call Rivals:

- Part-time or executive MBA programs aimed at more seasoned professionals than typical full-time programs
- European-style one-year programs that also tend to attract more mature students
- Traditional MBA programs as they attempt to differentiate themselves from one another

Part-time or executive MBA programs typically target more-seasoned professionals than traditional 2-year full-time programs, and these professional usually work full-time during the course of their studies. While the ability to continue working is often positioned as a convenience to the student, some schools highlight this parallel working-learning experience as an enhancement to the student's education. The implicit critique of traditional programs is two-fold: first, for some students, the expected value of traditional programs fails to compensate for the opportunity cost of foregone wages; and second, shifts in delivery model (timing, participant experience, etc) can compensate for any loss of intensity or continuity.

European-style MBA programs also target more-seasoned professionals than typical 2-year full-time programs, but they do require full-time participation. In essence, European-style MBA programs are predicated on the assumption that more experience (typically five years more) on the part of their students allows for discarding half of the duration of traditional programs.

Traditional MBA programs also implicitly and explicitly critique one another by offering variations in teaching style. Case-based schools (HBS, Darden) tout that method as superior to learning mere theory, while more lecture-based schools point out that some fields (often accounting) lend themselves to teach-first, apply-later pedagogy. In general, however, differences between traditional programs boil down to differences in how a handful of characteristics are mixed: case versus lecture; classroom vs. in-the-field work; teaching by academics vs. practitioners; individual vs. team-based work; elective vs. fixed curriculum. No school among the top traditional programs is "pure" along any of these dimensions. As was mentioned earlier, the same institutions often offer different styles of MBA programs under the same roof: Wharton[27] and Columbia offer both traditional and executive MBA programs; the University of Chicago offers a traditional 2-year MBA, an evening or weekend part-time program, and an executive MBA; Northwestern University's Kellogg School of Management offers the same plus a one-year MBA program for students with "definite career goals" who are presumably less open to exploring other career paths; Stanford University does not offer a one-year MBA, but does offer a one-year Masters of Science in Management (Sloan Master's) for mid-career executives; MIT offers a traditional MBA plus SM degrees in management or management of technology. Among the hard-core case schools, HBS and Darden offer both traditional MBAs and EMBAs.

While Rivals may critique the delivery mechanisms of the traditional MBA or at least provide alternatives, most do so in the spirit of fielding a substitute product to a market segment underserved by the traditional MBA. Many take pains to show the alternatives are "at-least-as-good-as" the traditional MBA.[28]

Quadrant C: Reformers

Like Quadrant B's Rivals, the Reformers in Quadrant C are often themselves involved in business education in delivery, employment, or indirectly as commentators. Reformers generally see MBA degrees as useful (or at least influential) and the content of MBA programs as meaningfully affecting how degree recipients behave post-graduation. Reformers' critiques of the traditional MBA are one or more of the following:

- A core subject is missing
- The balance between subjects is suboptimal

[27] Wharton's website (www.wharton.upenn.edu/mbaexecutive) declares: "Wharton was founded in 1881 as the first collegiate business school, and that spirit of innovation still drives us today. With the Wharton MBA for Executives, you get the full Wharton MBA—the same degree, innovative curriculum, and world-class faculty as in Wharton's globally-acclaimed full-time MBA program—in a specially designed executive format."

[28] While individual institutions may offer various delivery mechanisms for MBA-style content, some observers reject the equivalence. Speaking of 1-year function-specific masters programs, the *Wall Street Journal* reports that, "Some recruiters contend that there's no substitute for an M.B.A. and that a specialized degree is likely to limit career opportunities" (*WSJ Online*, September 20, 2006, "Is Less Enough When it Comes to Bschool? By Ronald Alsop). Robert Bruner, dean of the Darden School, argues that a two-year program offers more opportunities for personal transformation through a full year of electives, more time for exploring career options and receiving coaching, more time for serendipity, and more time to engage in leadership activities through clubs, business projects, and internships (Dean Bruner's Blog, 9/14/2006).

- The content taught in a specific subject is wrong

A broad group of people assert that the first critique is apt: students, faculty, employers, commentators, etc. An excellent example of this group in action is the variety of business school responses to the ethics scandals that began in late 2001 with the implosion of Enron. Many Enron executives held MBAs (CEO Jeff Skilling hails from HBS, while CFO Andy Fastow is a Kellogg alum), were being advised by MBA-heavy consultants from McKinsey (an aspirational destiny for many MBAs and advancers of the "war for talent" mentality) and other firms, and were hiring MBAs by the dozen.[29] A popular "diagnosis" of why such high-powered businessmen behaved so unethically was that businessmen had never been trained in ethics, particularly in MBA programs.[30] Within a short period, employers began demanding "values-based" MBA graduates, and MBA programs began requiring courses in ethics, hiring more ethicists, and generally raising the profile of ethics-related investments. In the classroom, topics such as stakeholder theory of the firm, sustainability, and corporate social responsibility have been positioned as counterweights to the shareholder value model (with Milton Friedman often included as the defender of heartless, *laissez-faire* capitalism). For some MBA graduates, working for a socially-conscious business has become a top employment priority, supporting a cottage industry of those who generate "most socially-responsible" lists.[31] In the executive arena, CEO's such as Starbucks' Jim Donald and Whole Foods' John Mackey have been lauded as exemplars of socially responsible business. According to a *McKinsey Quarterly* survey of global executives, 84% believe their companies should, "pursue not only shareholder value but also broader contributions to the public good."[32] Whether these shifts in business education and the business environment produce more "ethical behavior" is an open question.[33] Globalization seems poised to be

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[29] See "The Talent Myth" by Malcolm Gladwell, *The New Yorker*, July 22, 2002.

[30] It is worth noting that Dennis Kozlowski, jailed ex-CEO of Tyco, is not an MBA; nor is Bernie Ebbers, jailed ex-CEO of WorldCom; nor is Richard Scrushy, jailed ex-CEO of HealthSouth; nor is Sanjay Kumar, soon-to-be jailed ex-CEO of Computer Associates.

[31] The October/November issue of *MBA Jungle* features the headline "Business Unusual: MBAs Out to Save the World." Starbucks ranked #1 in MBA Jungle's survey, followed by BP, S.C Johnson & Son, Tyson Foods, and DuPont.

[32] *MQ Newsletter*, 12/2006.

[33] A 2003 Aspen Institute report entitled, "Where Will They Lead?" found that between entering business school and the conclusion of their first year, belief that maximizing shareholder value is the primary responsibility of a company increased for MBA students (p. 3, Executive Summary). Aspen attributes this to "the powerful place shareholders occupy in the first–year curriculum" (p. 4, Executive Summary). The report also measured changes in students' other values.

the next “big topic” rolled into the business school curriculum, though more as a key theme affecting all subjects, not as a distinct subject on its own.[34]

The second critique is often proffered by faculty who deliver “soft” courses such as communication, organizational behavior, or ethics, particularly when fighting with core courses (finance, marketing, operations, strategy, quantitative analysis) for “airtime” in the curriculum. Also included in the “suboptimal mix” group is Stanford business professor and commentator Jeffrey Pfeffer. Pfeffer maintains that the dominance of an individualistic economic perspective on business—particularly in strategy, the field that in theory unifies the actions of a firm and is dominated by Harvard economist Michael Porter—is related directly to bad management. In reality, Pfeffer’s critique is of so-called Chicago-school economic assumptions about utility-maximizing *homo economicus* (his focus on context and organizational knowledge would make him at least Austrian-friendly) and of organizational behavior’s lack of influence relative to strategy.[35] Pfeffer rightly critiques how Porter-dominated strategy is taught (externally-focused, treating part of the firm as a black box). Many other strategy academics find the same weakness in Porter, putting them into the third category of Reformers.

The third group of Reformers is the most narrow, involving faculty in a particular field talking to (or at) one another about how substantively that subject should be taught. As noted above, business strategy academics approach the subject from very different angles. Michael Porter, the most famous strategy academic, tends to approach strategy using tools of industry analysis and the firm’s position versus others. Sharon Oster of Yale School of Management, challenges Porter less through refutation than by expansion, examining constraints on strategy coming from inside the firm.[36] Michigan strategist C.K. Prahalad offered another perspective on strategy through the notion of “core competency,” something that the firm can do well (a capability-based point-of-view) that also benefits customers, is hard to imitate, and can be extended to new markets (a competitive point-of-view). This diversity of opinions is hardly surprising or

[34] See outgoing Yale School of Management dean Jeffrey Garten, *New York Times*, June 19, 2005.
[35] See, “Bad for Business?”, *The Economist*, 17 February 2005.
[36] See *Modern Competitive Analysis* (1990). Oster does emphasize an economic approach to strategy, as does Porter, but her application is quite different.

controversial, and it extends to every subject taught in business schools. But no matter the internal stakes in the debate over *how* the subject should be taught to MBAs, this group of Reformers takes for granted *whether* the subject should be taught to MBAs.

Quadrant D: Renegades

In Quadrant D stand the strongest critics of traditional MBA programs, those who find both the content and delivery wanting. Ironically, the most prominent voice in this Quadrant teaches at leading business schools: Henry Mintzberg, of Canada's McGill University and France's INSEAD.[37]

Mintzberg's critique of traditional MBA programs is multidimensional, focusing on delivery and content, and taking umbrage at the type of people MBA programs attract. In 2000, Mintzberg told *Fast Company*, "The MBA is a fabulous design for learning about business… But if you're trying to train managers, it's dead wrong. The MBA trains the wrong people in the wrong ways for the wrong reasons."[38] As noted, besides offering a fundamental critique of traditional MBA programs, Mintzberg has helped build an alternative, the IMPM, focused more on practicing management that studying it—constructed to correct for the issues addressed in his critiques.

Mintzberg's intellectual critique of traditional MBA programs is grounded in this concern for context. Mintzberg opens his 2004 broadside *Managers Not MBAs* with the following salvo:

> It is time to recognize conventional MBA programs for what they are—or else close them down. They are specialized training in the functions of business, not general educating in the practice of managing. Using the classroom to help

[37] While Mintzberg is the most prominent academic critic of traditional MBA programs, a subtle but powerful critique comes from employers (usually in consultancies) who take on MBAs but also recruit in-house and from other degree programs. For example, the Boston Consulting Group hires large numbers of MBAs but also hires JDs, MDs, PhDs, and other graduated-educated individuals. Non-MBAs are placed through a 3-week crash course in how BCG tackles business problems, and then are turned loose doing the same executive advisory work as their MBA colleagues. This practice suggests MBA programs have value primarily as talent identification programs, while the content they deliver can be covered adequately in a fraction of the time.

[38] "You Can't Create Leaders in a Classroom," by Jennifer Reingold, *Fast Company*, October 2000, p. 286.

> develop people already practicing management is a fine idea, but pretending to create managers out of people who have never managed is a sham….
>
> Every decade in the United States alone, almost one million people with a credential called the MBA descend on the economy, most with little *firsthand knowledge* of customers and workers, products and processes. There they expect to manage people who have that knowledge, which they gained in the only way possible – through *intensive personal experience* (emphasis added).[39]

Mintzberg finds traditional MBA programs' attempts to address the issue of context by varying delivery methods from lectures to games, projects, and simulations to be unrealistic: "The problem is that 'the real world' is not out there, to be plucked from some tree of practice. It has to exist in here—not just in the classroom, but in the head of the learner."[40] Mintzberg also finds the case study method wanting. While acknowledging the case study method may be "as close as business schools have gotten" to practical experience, it is "hardly as close as they can get."[41] Mintzberg's critique of the case study method again hinges on context: "The skills developed in the case study classroom are the skills of decision making—just like in the theory-oriented schools. And, again, even these skills are highly circumscribed: The data for the decisions are given, while *tacit knowledge* of the situation is absent and so ignored (emphasis added)."[42] Mintzberg goes on to assert that the case study method mirrors bad management as practiced in the field:

> What the case does simulate (and encourage) may be precisely the problem with so much managing today: the executive office where people sit around discussing words and numbers far removed from the images and feel of the situation under consideration, the verbal in place of the visual and visceral, management as some kind of artifact distant from the situations it so mightily influences…. How is insight to come from debates about products no one has ever touched for customers no one has ever met?[43]

Mintzberg also criticizes traditional MBA program content, which he sees as trapped in functional silos unrelated to how business is managed in practice: "Almost everything done in almost every business school today takes place in the terms of the specialized

[39] Henry Mintzberg (2004), pp. 5-6.
[40] Ibid, p. 43.
[41] Ibid, p. 51.
[42] Ibid, p. 51-52.
[43] Ibid, p. 53.

functions, whether an idea researched, a program designed, a course taught, or a professor hired."[44] Mintzberg faults the field of strategy in particular for failing to provide a unified view of the functions—laying most of the blame at the feet of Michael Porter: "Porter taught the business schools to develop analysts not strategists…. With this shift…from concern for synthesis to focus on analysis, the one field in the business school that was supposed to be about general management itself became narrowly specialized."[45] Mintzberg wryly observes that Porter and his colleagues were forced to break away from HBS's General Management group to form a new one: Competition and Strategy. But far from being a dispute about the shape of a particular discipline, the move away from "strategy as unifying synthesis" to "strategy as specialized analysis" made strategy less relevant to the practice of managing:

> Synthesis is the very essence of management. Within their own contexts, managers have to put things together in the form of coherent visions, unified organizations, integrated systems, and so forth. That is what makes management so difficult, and so interesting. It's not that managers don't need analysis; rather, it's that they need it as an *input to synthesis*, and that is the hard part. Teaching analysis devoid of synthesis thus reduces management to a skeleton of itself. This is equivalent to considering the human body as a collection of bones: Nothing holds it together, no sinew or muscles, no flesh or blood, no spirit or soul (emphasis added).[46]

Mintzberg faults MBA programs for failing to provide a unifying framework for the functions. He is equally skeptical about the Reformers' battling for the inclusion of leadership and ethics courses in the core curriculum. Without a unified view of management—and without students who have dealt extensively with organizational or ethical issues—such courses become mere surveys: "So the soft skills and the soft issues end up as questionable content in the MBA programs, not because they are unimportant, but because the rest of the content and the nature of the students marginalize them."[47] Clearly, for Mintzberg, neither the rivals nor the Reformers go deep enough in their criticisms of traditional MBA programs.

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[44] Ibid, p. 31.
[45] Ibid, p. 34-35.
[46] Ibid, p. 37.
[47] Ibid, p. 41

The consequences, Mintzberg concludes, are both personal and professional. Personally, MBAs buy-into the illusion that no problem is beyond their solving, when the enormous complexity and context-dependence of those problems should inspire the opposite reaction – humility: "If the business schools were really doing their job, were truly creating leaders, their graduates would be known for their *humility*, not their arrogance. Certainly they would graduate with an acute appreciation of *what they do not know*" (emphasis added).[48] Professionally, MBAs tend to take jobs that keep them removed from the "nuts-and-bolts" of running a business: "The jobs that MBAs consider hot or cool are not the real activities at the heart of business. Companies generally do only two things of ultimate consequence: They make things, they sell things… MBA programs take people who have hardly ever made anything or sold anything and then make damn sure they never will." Mintzberg does not view the planning, marketing, and finance roles most MBAs enter as useless. Rather, they are attractive to MBAs for the wrong reasons: "[MBAs] are drawn to the hands-*off* activities, because that is where prior experience in the industry is least necessary and where the abstraction of aggregates—money in finance, targets in planning, statistics in marketing—shield them from the messiness of people and products. This amounts to an extension of that *secondhandedness* of business education into the world of work (emphasis added)."[49]

3. A Hayekian Critique: The Knowledge Problem and the Firm

Building on the critiques offered by Mintzberg and others in coordination with the social thought of economist F.A. Hayek, we offer an additional criticism of the traditional MBA. We contend that a critical flaw in the vision and practice of traditional business school programs stems from general neglect of what Hayek termed the "knowledge problem" (Hayek, 1945) among business scholars. Mintzberg touches on these topics, but never drives to the core issue: that by de-emphasizing the importance of dispersed, specific knowledge in the Firm, business schools may be teaching students to overemphasize the beneficence of central planning in the firm (and correspondingly, the importance of their role within it). This has broad implications for the global business

[48] Ibid, p. 75.
[49] Ibid, p. 89.

community and the performance of the firms within it. Because business schools shape the viewpoints of thousands of managers, failure to integrate Hayek's insights into their management theories may well cause management professors to misguide their pupils, with significant consequences for individual behavior and ultimately firm performance.[50]

The Use of Knowledge in the Firm

Friedrich Hayek's "The Use of Knowledge in Society" (1945) was directed toward the challenge of national economic planning, but his observation that "…the economic problem of society is mainly one of rapid adaptation to changes in the particular circumstances of time and place"[51] just as accurately describes the challenge facing the firm.[52] Hayek noted that knowledge is unclear, fragmented, and dispersed across society. Though he did not offer a precise definition of "knowledge," we might say that it is *the understanding, based on experience, reason, and an awareness of certain facts, about alternative actions and their likely consequences*. It is precisely this combination of individual understanding, combined with the local (i.e., confined, and not available to others), circumstantial nature of knowledge, that Hayek said made the centralized command and planning necessitated by socialist economic systems inherently inferior to decentralized systems.

Just as knowledge is dispersed in such a manner across society, any student of organizations can attest that it is likewise fractionated within the firm. Hayek delineates three elements of the knowledge problem, each of which represents a challenge facing the firm as well:

1) Communicating dispersed and tacit[53] knowledge to planners;
2) Discovering the best means of using this knowledge in planning; and
3) Determining who will do the planning[54]

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[50] Nucor, a publicly traded steel mini-mill operator, has embraced an explicitly decentralized management style, and has outperformed the S&P 500 by nearly 350% over the last 10 years.
[51] Hayek (1945), p. 524.
[52] An observation previously made by Ellig and Lavoie 1995), Ellig (1995), and Foss (2001). See also Nonaka and Takeuchi (1995).
[53] In an earlier work Hayek (1935) observed that much of the dispersed knowledge critical to integrated economic action was tacit to the point that its holders would be unable to communicate it to planners.
[54] "The various ways in which the knowledge on which people base their plans is communicated to them is the crucial problem for any theory explaining the economic process. And the problem of what is the best way of utilizing knowledge initially dispersed among all the people is at least one of the main problems of

While implementation has emerged (among social sciences other than economics, at least) as a factor fruitfully studied in its own right,[55] here Hayek seems to embed it within the concept of planning, and we will do the same for the concept of graduate management education and the firm.[56] The conclusion one draws from Hayek's analysis is that decentralized authority in a system of liberty and free-moving prices best enables an economic system to produce wealth in a dynamic (read: realistic, human) environment. Holding decision-making authority in the hands of a few, on the other hand, wastes the particularized knowledge "of place and time" that enables a free society to prosper.

It stands to reason that failure to distribute authority across the firm in a manner that enables it to likewise take advantage of "place and time" knowledge will generate consequences for the firm that in some respects approximate the consequences of socialism—low levels of innovation, inability to respond to economic changes, significant resource waste, low productivity, and so on. Insofar as the firm's ability to profitably serve customers depends on adaptation and innovation, failure to harness local knowledge undermines profitability. As Hayek notes, ". . . economic problems arise always and only in consequence of change."[57] Realities like the decline in average firm tenure on large cap indexes like the Standard & Poor's 500, increasing globalization of customers and competition, and the rise of strategy as an explicit focus of managers suggest that change will only become a more imposing feature of the firm's environment**.** Failure to adequately respond to the knowledge problem, then, may well carry increasing penalties for businesses.

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economic policy—or of designing an efficient economic system. The answer to this question is closely connected with that other question . . . that of *who* is to do the planning." Hayek (1945), pp. 520-521.

55 See for example Lindblom (1959); Pressman and Wildavsky (1973); and Sabatier and Mazmanian (1980).

56 Were we to treat (properly) implementation as a bundle of decisions and actions separate from that of the planning function, we might conclude that there are other knowledge challenges in addition to the three elucidated by Hayek in his 1945 article: 4) determining who will do the implementing; and 5) communicating to the implementers. A thorough treatment might illuminate additional elements, such as communication back from implementers to planners regarding results, followed by additional iterations up and down the chain between thinkers, planners, and doers. Hayek's key point still stands no matter how many such complications we add, however, in fact it is likely strengthened; fractionated knowledge (which is only further fractionated by the division of planners from implementers) mitigates strongly in favor of decentralized authority, indeed it necessitates it, if anything close to the productive potential of the system is to be achieved.

57 Hayek (1945), p. 523.

Assigning decision-making in the firm based on who has the best (often local) knowledge, however, is a widespread aspiration (or at least a stated value) of many U.S. executives.[58] Just as every manager understands that he is supposed to nod when someone asserts that "people are our greatest asset," the ideal of decentralized authority is widespread in the U.S., as witnessed by the vast numbers of popular business press offerings touting it, as well as the paucity of those advocating greater centralization and control by top management. The very ubiquity of the term "micromanagement," and its associated negative connotation, indicates that managers understand that they are supposed to favor structure, systems, processes, and culture that harness local knowledge, even if they aren't conversant with that term.

A challenge facing the firm in this endeavor, however, is that whereas prices (as Hayek observed) serve to coordinate the activities of individuals in a free society, there is no such internal price system operating within the firm. Furthermore, while prices coordinate the multifarious ends of diverse actors in the marketplace, the firm must cultivate the pursuit of *shared* ends among its resourceful, evaluative, self-interested agents.[59] To do so, it must replace prices with some form of knowledge that serves to communicate to "'the man on the spot' . . . such information as he needs to fit his decisions into the whole pattern of changes of the larger economic system."[60] In the firm, this might comprise strategic plans, production schedules, guiding principles, vision and mission statements, or any number of directives crafted to loosely coordinate activity among the firm's agents.[61]

The phrase "loosely coordinate" is important, because the end of such guidance is to approximate the function of prices in the free society—to enable the possessor of local knowledge (Hayek's "knowledge of time and place") to act on that knowledge with

[58] This is not simply a matter of "decentralization," however, many firms are finding that visibility and quality of decision-making can be improved by centralizing functions like information technology and marketing, rather than dispersing the decisions to individual units.
[59] Jensen and Meckling (1994) authored a much-cited paper identifying homo economicus as the most realistic and useful model of agent behavior within the firm.
[60] Hayek (1945), pp. 524-525.
[61] Ellig and Lavoie (1995) note that firms use "shared values, job rotation systems, bonus plans, and other initiatives . . . that promote both autonomy and cooperation" (176). Foss (2001) says the knowledge integration function of market prices is handled inside the firm by "corporate 'intrapreneurs,' by management information systems, by routines, and by shared cognitive constructs, such as corporate culture" (219).

minimal direction from superiors, yet in a manner that advances the goals of the firm.[62] Thus we would not put detailed rules, step-by-step instructions, or other *action-directing*, as opposed to *end-specifying*, guidance tools in the list of those that serve to loosely coordinate agent behavior within the firm.[63] *Vision* will serve here as a short-hand for directives that serve the loose coordination function, the term being both widely understood and holding some substantive (albeit divergent) meaning in that regard.[64]

Thus, while prices serve to coordinate the activities of independent agents pursuing their disparate ends in a free society, vision serves to coordinate the activities of interdependent agents pursuing common (or perhaps non-conflicting) ends within the firm.[65] Development of loosely coordinating tools is one means by which owners, then, have overcome the knowledge problem articulated by Hayek, suggesting (thankfully) that an awareness of Austrian economic theory is not necessary for the profitable operation of a business.

The Use For Knowledge in Business Schools

The rise of professional management, however, poses a threat if it teaches practices and worldviews that contradict Hayek's observations as well as the wisdom embedded in the decentralized structure and strong performance culture that is the reality in some firms, and the aspiration (at least stated) of many others. As we noted above, early business schools were founded on a "Great Man Theory of Management." There is reason to believe this view persists. Bennett (1998) argues, for example, that the popular concept of Re-engineering (Hammer and Champy, 1993), which gained so much attention from business managers in the 1990's, is in fact a grand-planning approach to firm management, in which existing institutions and local knowledge are ignored in pursuit of an ideal vision constructed by a small group of insulated management experts. The same tendency can be found in the concept of "best practices," which assumes companies can

[62] Of course the practical challenge of aligning individual incentives with the firm's goals can itself be daunting.
[63] A distinction Hayek (1960) noted, between commands (which afford little room for discretion or use of local knowledge) and laws or general rules (which leave room for the application of local knowledge).
[64] See for example Senge (1990); Collins and Porras (1994); and Koch (2007).
[65] This assumes away another implementation challenge, which is that of formulating and communicating the vision, and fostering a concomitant culture, such that agents within the firm largely internalize it and behave as intended. Many managers would insist that this is precisely the challenge of management in a large firm.

improve performance simply by imitating the actions of top performers. Insofar as we find that the teachers of current and future managers "minimize the importance of the knowledge of the particular circumstances of time and place,"[66] and further, that their students listen (and phenomena like Re-engineering suggest that they do), we might well conclude that neglect of the knowledge problem by business schools portends negative consequences for organizational performance.

As noted, Henry Mintzberg, though not versed in the language of Austrian economics, argues that neglect of local knowledge is precisely what most business schools teach, and more, that their students are listening (Mintzberg, 2004). The practical effect of the Master's in Business Administration (MBA), Mintzberg contends, is to elevate those with little or no practical knowledge of how the firm's actual work is done into positions of authority over those who do possess this practical knowledge. Worse, the typical MBA program divorces planning from implementation,[67] such that the practical knowledge of underlings is an afterthought. The real work of business, in other words, is strategy without context, and financial activity uninformed by strategy. Business schools teach future managers to view themselves as the key decision-makers, even though, according to Mintzberg, ". . . far more important, especially in large networked organizations of knowledge workers, is what they do to enhance the decision-making capabilities of others."[68]

Mintzberg blames the mentality of business-school teachers (citing the literature of Harvard and other business schools to entertaining, if not methodologically rigorous, effect), the nature of the talent they recruit (relatively inexperienced students), and their teaching methodology. This last deserves especial consideration here, because it bespeaks a mentality geared toward the neglect of local knowledge. Though some business schools

[66] A charge Hayek leveled at professional economists and others enamored with the notion of technical experts planning society's way to greater prosperity (1945, p. 522), suggesting a possible parallel (not explored in this paper) between the mentality of those who believed in management of the economy by highly trained experts, and those who advocate management of the firm by highly trained experts.
[67] Whereas for Hayek the two were so intimately connected that he failed to distinguish between them where perhaps it might have been fruitful to do so, many professors of business—Mintzberg contends—see implementation as something beneath the executive's consideration.
[68] Mintzberg (2004), p. 38. Note that Hayek would likely observe that every thinking, working individual in the firm is a knowledge worker, given the interrelatedness of fractionated, local knowledge.

have more courses featuring a traditional, lecture-the-principles approach, while others emphasize case study courses like those pioneered by Harvard, Mintzberg argues (as we observe elsewhere in this paper) that the two styles are converging, such that a student at any major business school is likely to receive instruction using both pedagogies—but little else.

From Mintzberg's point of view, and relevant for our discussion here, these methods are indistinguishable in that they diminish the importance of local knowledge. A principles approach has little to say about "the particular circumstances of time and place," except insofar as students are reading and discussing Hayek or some other work that deals explicitly with the concept of dispersed knowledge and mechanisms for harnessing it (which almost none, as a scan of syllabi from any number of business school curricula will reveal, are doing). Mintzberg's description of the case study method, meanwhile, invoking the language from various sources marketing this approach, captures his critique of that presumably more context-oriented method:

> "Dozens of students sitting in neat rows pronouncing on stories they read the night before 'captures the essence of leadership,' exposes the 'big picture,' gives them 'responsibility for decisions,' promotes 'learning by doing,' puts the students 'at home in any management situation,' turns them into 'risk takers,' and makes them 'general managers.' It all sounds a bit silly, except for the fact that tens of thousands of graduates have left Harvard believing it."[69]

While case studies at least seek to engage students in thinking about how to apply management concepts, "The data for the decisions are given, while tacit knowledge of the situation is absent and so ignored."[70] Mintzberg does not employ the concept of tacit knowledge in a Polanyian sense (Polanyi, 1966), but instead means something like local knowledge. The term is well-taken, however, because tacit knowledge is a form of local knowledge, and critical to discovery, and therefore to innovation within the firm. To note that the Captains-of-Industry mentality fostered in business schools neglects tacit knowledge, as defined by Polanyi, only underlines the conclusions drawn thus far.

[69] Mintzberg (2004), p. 51.
[70] Mintzberg (2004), pp. 51-52.

Mintzberg is not the only person familiar with business school pedagogy to question its effectiveness at increasing managerial competence.[71] Porter, Muller, and Rehder (1989) likewise argued that business schools emphasize narrow technical skills over teaching the capacity to think, let alone manage. Chris Argyris (1980) concluded from his study of instructors at Harvard, Virginia, Stanford, Yale, and other top business schools that the case study approach not only fails to teach students to question the underlying values and policies operating in their firms, but actually encourages the opposite. Raelin (1990) argued that traditional business schools do not prepare students to engage personnel in a manner that facilitates organizational performance and discovery. Hayes and Abernathy (1980) contended that the decline in respect for operations and industry knowledge, and the concomitant rise of marketing, finance, and legal specialists to top ranks of American industry, can be blamed in part on the American business school mentality, a "preoccupation with a false and shallow concept of the professional manager . . . an individual having no special expertise in any particular industry or technology who nevertheless can step into an unfamiliar company and run it successfully through strict application of financial controls, portfolio concepts, and a market-driven strategy."[72] Add a big helping of Michael Porter's *Competitive Strategy* (1980), which took business schools by storm in the aftermath of Hayes and Abernathy's critique, and their description is arguably still quite apt.

In Defense of Strategy

One might argue, in defense of managers as strategists, that neglect of local knowledge actually makes sense. Strategists, after all, take the global view, searching the environment in which the firm operates for unique opportunities to capture outsized returns. While there is a noteworthy debate about whether the neoclassical competition model, which focuses on building structural advantages over competitors (because equilibrium otherwise prevents inordinate profits), is adequate, especially in light of Austrian-economics based models of the firm and markets as consisting of dynamic discovery processes,[73] either model might embrace the executive as high-level strategist, and thus exempt him from responsibility for harnessing local knowledge. Hayek didn't

[71] For a summary of 200 articles addressing this question, see Cheit (1985).
[72] Hayes and Abernathy (1980), p. 74.
[73] See for example Jacobson (1992) and Armentano (1982).

claim, after all, that only the knowledge of the blue-collar worker mattered; he recognized that “a body of suitably chosen experts may be in the best position to command all the best knowledge available.”[74] So long as implementation of the plan is as seamless as Hayek himself seemed to assume, then perhaps top managers—and therefore the business schools that train them—need not worry themselves with the “particular circumstances of time and place.”

The problem with this view, however, is inherent in the concept of strategy itself. The editors of a compendium by Wharton strategy professors explain it well:

> “The strength of a given strategy is determined not by the initial move, but rather by how well it anticipates and addresses the moves and countermoves of competitors and shifts in customer demands over time. The strategy’s success also depends on how effectively it addresses changes in the competitive environment from regulations, technology, and other sources. As the pace of change in the competitive environment has increased in many industries, so has the *need for the explicit recognition of this dynamism in the formulation of competitive strategies*.” [emphasis added][75]

In short, the entire purpose of strategy is to evoke and guide change. Whether the targeted change is in the competitive environment, as strategists in the Porter tradition suggest, in the internal performance of the firm, in the introduction of new products or services, or any other number of substantive adjustments to the firm’s activities in pursuit of higher returns, by strategy is designed to induce alterations in the behavior of customers, employees, and/or vendors. And if they are successful, these strategic moves necessarily provoke change among competitors,[76] and sometimes among government agencies.

What’s more, strategy is developed in a probabilistic environment. Lack of certainty about outcomes is one of the primary reasons, after all, that a competitor isn’t already doing whatever it is we think will increase our profitability.

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[74] Hayek (1945), p. 521.
[75] Day and Reibstein, eds. (1997), p. 2.
[76] The dynamic and interdependent nature of strategy is made explicit in the work of several strategy scholars, including Ming-Jer Chen, Donald Hambrick, and Wenpin Tsai.

Any strategic action must therefore leave room for feedback and adjustment (what strategy scholar L. J. Bourgeois refers to as "emergent strategy"). Strategy, then, if it is worth anything at all, takes place in an environment of dynamic change, which means that the strategist cannot afford to ignore local knowledge, which is critical to strategic adjustment as well as adaptation, continued innovation, and the sheer tactics of reaction (to competitors' adjustments to one's strategy, for example) and immediately pressing whatever advantages or opportunities one's strategy may have generated. Grand planners divorced from the doing of the firm's everyday work are at a distinct disadvantage, should they neglect local knowledge, precisely at the point where their strategic thinking has begun to pay off. As Hayek notes:

> "Of course, if detailed economic plans could be laid down for fairly long periods in advance and then closely adhered to, so that no further economic decisions of importance would be required, the task of drawing up a comprehensive plan governing all economic activity would be much less formidable."[77]

Mintzberg (1993), among others, would go further, arguing that strategy by its very nature must be a discovery process. It injects change into an interrelated system, at the same time that others are introducing changes of their own, and as a consequence it must depend on local knowledge in formulation, implementation, assessment, and adjustment. To treat strategic planning as some separate activity from the fundamental operation of the firm is to neglect the very information on which successful strategy depends. Even if we conceive the future roles of business school students to be entirely high-level strategy, they still need respect for local knowledge, and ideally, some training in how to harness it.

Neglect of the knowledge problem by business schools is especially troubling because the growth in numbers of students trained by business schools has coincided with an explosion in the number of large firms in the U.S. As noted earlier in this paper, the number of U.S. MBA's grew from 3,200 in 1956 to over 100,000 in 1998. During that same period, the number of businesses with 100 or more employees ballooned from

[77] Hayek (1945), p. 523.

51,725 in 1956, to 12,908,368 in 1998.[78] It is important to understand that the opportunity cost of central planning increases with the size and complexity of the organization (or society) being centrally managed. Business schools, in other words, have been spreading an analytical, central-planning mentality at a time when the need for managers to attend to dispersed knowledge has been growing.

4. The Knowledge Problem: Implications and Further Investigation

In some respects, the challenge of erasing the grand-planning mentality from business schools parallels the challenge of doing so in other institutions. As corporations grow to the size of small nation-states, the temptation will be to rely on the knowledge of a privileged few rather than trusting the dispersed knowledge of thousands of workers. Technological progress, meanwhile, is making it increasingly tenable to monitor such dispersed people, locations, and processes in a robust way. In the end, this would seem to change little. Centralized planning will encounter the same knowledge problems now as it has in the past, in these contexts as it has in past contexts. Unfortunately, the prescription: *Everyone should read Hayek*, while laudable, is not in itself sufficient. We suggest several improvements at the level of the educational institution, the hiring firm, and the graduate—many of which, as the foregoing discussion of Mintzberg and others indicates, are already under experimentation. Perhaps these recommendations are little more than the exhortation that schools, firms, and students should be more Hayekian, which in the end is little removed from, *Everyone should read Hayek*, but we offer them nonetheless.

Educational institutions

1. *Restructure the undergraduate business major*. A firm foundation in the principles and theories of economics, philosophy, logic, and sociology, and history, is likely to do far more to produce a graduate capable of absorbing the right lessons from practical management experience than an overweighting of undergraduate courses in business administration, human resource management, and entrepreneurship. While the former impart tools for understanding human

[78] 1956 and 1998 data are from the U.S. Statistical Abstract and Statistics of U.S. Businesses databases of the U.S. Census Bureau (1960, 1998).

societies and organizations, the latter, when provided to teenagers with virtually no management experience, run the risk of being like driver's education for ten-year-olds—the knowledge will prove useful one day, but they're unlikely to remember any of it by the time it matters. To be sure, an exposure to basic business concepts—and more importantly, to the practice of statistics, computing, writing, microeconomics, accounting, and financial analysis—can be valuable to an aspiring businessperson. But the focus of the business major should be less parochial, and more concerned with the fundamental building blocks of intelligent thought and analysis that are imperative to business success.

2. *Root business school curricula in firmer theoretical foundations*. Every business student likely takes a class where she hears about Coase, or perhaps Williamson (or even more rarely, Hayek), but more plentiful are courses focused on the *doing* of business, independent of much thought about the presuppositions for all of this doing. Business students should, in other words, be guided through a much more rigorous grappling with theories of the firm,[79] of economics, and of human motivation. Answers to questions like: Why does this entity called a *business* exist? What is value? and, Why do some people excel while others shirk? are likely to have significant impact on the success of one's human resource, strategy, and compensation decisions. Even an increase in relevant readings of those thinkers, like Peter Drucker, who were able to eloquently bridge the divide between understanding and doing would allow students to root their actions in a more robust understanding of the reasons for and implications of those actions.

3. *Integrate theory and practice*. While business schools are known for requiring a small amount of business experience before granting admission, Mintzberg and others have argued that this removal of the (relatively inexperienced) student from the context of work—precisely when he is preparing to be introspective about the doing of that work—seems unwise. Insofar as humans seem to learn best when they can immediately apply concepts, why not instead model business education after apprenticeships? The idea, whether captured in Mintzberg's International Masters in Practicing Management, in the "action-learning" approach of Raelin

[79] See Foss (1994) for a discussion of the potential for an Austrian theory of the firm.

(1997), the “leading-learning” model of Argyris (1993), or something similar, is that students can best learn business (or any other skill) by having a context in which to immediately apply classroom ideas to real problems, under the guidance of skilled practitioners. The factors mitigating against this approach are considerable: business schools would have to be more flexible about when, where, and what they teach, faculty would have to focus on being more relevant (with immediate negative feedback for irrelevance), and businesses would have to accommodate student-practitioners. It is worth noting, however, that in every profession where the time-lag between poor training and death is short (e.g., aircraft piloting, surgery, weapon usage), the learning-by-doing methodology governs. It is only in fields where poor training can be obscured, or gradually overcome by on-the-job learning, that the separation of theory and practice is allowable.

4. *Develop more skill-based training*. Not only can business students benefit from an apprenticeship model, they can benefit from a greater focus on the practical skills (the “blocking and tackling”) that are essential if higher-level abilities to strategize and develop unique vision are to prove fruitful. A number of important but neglected management skills, like problem-solving, coaching, communication, and even introspective analysis, can be taught, just not in a traditional classroom setting, nor through a case study. It seems commonplace, in fact, to read about brilliant strategists who flounder in business because they are weak on “soft skills” like building consensus and listening. Insofar as these types of skills are critical components of effective management, business schools ought to build the capability to develop them in practical settings. While there is a dichotomy of sorts between “soft-skill” schools (e.g., Harvard) and “hard-skill” schools (e.g., Wharton), we are suggesting something beyond a greater classroom focus on human resources and negotiation. Instead we mean intensive, interactive engagement. While there are many books on problem-solving and decision-making, for example, at some point a student must be thrown into a situation where a real problem must be solved among people with differing agendas. Practical skills like how to run a meeting, brainstorming and force-ranking alternatives, discerning root causes, convincing individuals to take ownership

over solutions, and so on, can only be learned in a real-life setting, with the aid of someone experienced at these tasks.

5. *Redesign the HBS case study*. A great many Harvard Business School case studies implicitly support the Great Man Theory of Management by focusing on a handful of top decision-makers, offering a superficial picture of the organization studied. A richer and more revealing approach would be to interview a far broader set of employees familiar with the case (though this would likely reduce significantly the number of businesses willing to participate). Some schools often do this (including Harvard), but its expense can make it a limited option, or not even possible for smaller schools. Relying simply on written case studies featuring interviews of a handful of people, however, may be more harmful than no case studies at all, because it encourages the natural human tendency to believe that complex organizations can be directed from on high.

6. *Provide students rankings of companies based on their new manager rotations*. Some companies make a point of requiring new management hires to move through several parts of the company, in order to appreciate the deep knowledge required in each, as well as to expose the employee to the business in a holistic way. Business schools should emphasize the critical importance of this approach, and support a collaborative ranking of companies, based on feedback from graduates who have gone to work for them, explicitly evaluating how well each company does at giving new managers a genuine breadth of exposure to all aspects of the business. This would enable students to make the right decisions about their own intellectual and leadership development.

Hiring firms

1. *Implement rotation programs for recent grads.* Many businesses, like Home Depot,[80] General Electric, United Technologies, and Cargill have substantial rotation programs for new hires and recent graduates that expose them to the organization from the "bottom-up." The industrial company Danaher even starts newly minted MBA's running a small facility in order to give them critical contextual knowledge. Inevitably, these programs give new hires a sense of the

[80] See Home Depot's career website (https://careers.homedepot.com/cg/content.do?p=blp_testimonials)

culture of the organization, an appreciation for the local knowledge necessary at each level of the organization, and a sense of humility when facing the complications inherent in the day-to-day workings of the organization. If, in coordination with business schools ranking hiring organizations according to their rotation programs and students selecting for those programs, hiring firms take these programs more seriously, a critical addition to graduate education can take place within the hiring organization. Additionally, at consulting firms, hedge funds, investment banks, and other firms outside traditional "industry" (but still top destinations for MBA graduates), rotations at client organizations might at least give students hands-on experience dealing with those organizations before entering the workforce to advise them. Particularly those new hires with little incoming industry experience might be placed in short-term externship or apprenticeship programs with client organizations where they learn the intricacies of practical management first-hand.

2. *Place a higher emphasis on experience in hiring.* Business schools will place more value on experience when hiring firms do. Currently (as demonstrated by Exhibit 1) hiring firms place little emphasis on past work experience under the influence of what we maintain is a flawed Great Man theory of the firm. Businesses should revisit this assumption, and realize that even in strategy roles, practical experience can be of substantial benefit in new hires.

3. *Focus on firm culture and values.* As students of management must learn to identify and understand the theories that guide their practical actions, firms must develop cultural guidelines that clearly identify these underlying beliefs (e.g., the benefit of dispersed knowledge, organization-wide entrepreneurship, etc.) and encourage employees to understand them, adopt them, and incorporate them as "values" in their daily actions. Nations have grown accustomed to the necessity of guiding documents (like the preamble to the U.S. Declaration of Independence). Firms should realize that broad understanding and shared values in increasingly large corporations could be similarly beneficial for organizational cohesion, culture, and strategy. In some cases, this may even include the distribution of specific literature (preexisting, like Hayek, or internally generated, like the latest

tome published by those who run operations at Toyota) that gives the sense of a cohesive shared value set within the firm.

Students:

1. *Value intellectual curiosity*. Many employees of the modern firm divorce their daily actions within the firm from broader social context. However, a true understanding of the macro trends that influence global business (and global consumers) and of the theoretical foundations that influence the operations of individual firms requires a broader intellectual curiosity and a willingness to engage these topics. This may mean the abandonment of *Forbes* or *Monday Night Football*, on occasion, for the *Economist* or the works of Ludwig von Mises; but it might also give practitioners a more robust understanding of the various frameworks within which they operate. This, admittedly, is an admonition to read Hayek.

2. *Choose programs and firms that emphasize hands-on experience*: The effort of business schools and firms to place a higher value on hands-on experience will matter little if students do not select schools and firms that offer such experience. In choosing schools, students might focus on those with healthier apprenticeship and team-building models, more opportunities for practical experience, and diverse classes of practicing managers who can share their experiences with the broader group. In choosing firms, they might veer towards those with management rotation programs or externships that allow them to see the inner workings of industry or of their particular firm from the bottom-up.

Granted, many of these proposed reforms would need to be investigated in further detail and elaborated to be practical. Many are more cultural than tactical—requiring a harder-to-define shift in the theories that currently underlie global business and business education than a few simple and easy-to-define processes. This in turn suggests that while classical liberal and libertarian organizations have focused on producing a generation of young scholars to populate the ranks of the academic social sciences, more attention ought to be paid to placing good scholars in business schools. While we have assumed that the teachers and students in these schools are generally “with us” when it comes to free markets (itself perhaps not an established fact), we are mistaken to assume that whatever appreciation they may have for the power of market processes extends to their managerial practices. And insofar as these practices profoundly influence not only prosperity, but also the perception of business and work by millions of employees, this is not a trivial outcome. How much sympathy will workers have for markets and business when their personal experience is alienation from any sense of value creation, and resentment at the neglect of their skills and knowledge? A business education system that actively values the wisdom of Hayek and other classical liberal thinkers might create a business and educational community better qualified to advance the interests of the global economy and of global business moving forward, and most important, the prospects for expanding liberty and prosperity.

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