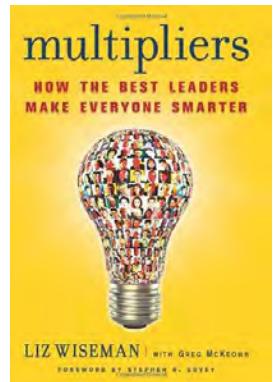


Are You a Multiplier or Diminisher?

By: Liz Wiseman, Author, *Multipliers: How the Best Leaders Make Everyone Smarter*

September, 2010



Organizations tend to find smart, talented people and then promote them into management. But many of these people cling to their own capabilities and fail to see and use the full genius of their team. They may be smart leaders, but they shut down the smarts of others and have a draining or diminishing impact. These Diminishers come at a high cost because they waste the talent and intellect of team members, get less than half of the capability of the people around them, and cut the intelligence and capability of their organizations in half at a time when we need leaders who can do more with fewer resources.

Why do some leaders amplify intelligence while others diminish it? We find Diminishers and Multipliers differ in the following ways:

Diminishers include: 1) Empire builders who hoard and underutilize talent; 2) Tyrants who create anxiety and suppress thinking; 3) Know-it-alls who tell people what to do; 4) Decision makers who make isolated decisions; and 5) Micromanagers who take over, control. What they get is less than half of people's capability!

Multipliers include: 1) Talent magnets who attract and optimize talent; 2) Liberators who create intensity that requires best thinking; 3) Challengers who extend challenges; 4) Debate makers who debate before deciding; and 5) Investors who instill ownership and accountability. What they get is 2X capability from people!

Intelligence Multipliers

Leaders who use their intelligence to amplify the smarts and capabilities of people around them are Multipliers of intelligence—they inspire employees to stretch themselves to deliver results that surpass expectations. These leaders hold a unique set of assumptions about intelligence. Whereas Diminishers see a limited number of smart people and assume that no one else will figure things out without them, Multipliers see an abundance of intelligent people and assume that people are smart and will figure it out.

This core assumption is at the root of the five leadership practices that distinguish Multipliers. They: 1) see genius in others; 2) create intensity that requires best thinking; 3) extend challenges; 4) debate decisions; and 5) instill ownership and accountability.

Multipliers don't get a little more from people around them—they get vastly more. Multipliers utilize people at nearly 100 percent of their capacity, meaning they get twice the capability from their people than Diminishers do. Imagine what is possible if everyone led like a Multiplier and got the full intelligence and capability on their team. Most leaders think they are getting more from their people than they really are.

Accidental Diminishers

Few Diminishers see the restrictive impact they have on others. Many of them are promoted into management, being praised for their intellectual merit and assuming they are supposed to have all the answers. Others worked

for Diminishers or in diminishing cultures so long that they've gone native. As one high-tech Director said, "I have the heart and mind of a Multiplier, but I've lost my way."

Organizations create hierarchy that is inherently diminishing and causes people to shut down and comply; thus, many well-intended leaders accidentally diminish the smarts of their people. Here are three popular types of Accidental Diminishers:

- **Visionaries:** Visionaries are big thinkers who lay out a compelling picture of the future and evangelize it. But they might be providing too prescriptive a vision to their team and not leaving enough space for others to think through the challenges and build the intellectual muscle to make the vision a reality. Consider the impact of a new VP at a consumer electronics company who was hired to drive growth in an important emerging market. He laid out a bold vision for the business in his region. But instead of engaging his team's enthusiasm, his effect was the opposite—and people became apathetic. One key member of his team put it this way, "there is such a huge gap between what he is telling us to do and what we actually can do, we just give up. We have no idea how we can make his vision a reality."

- **Idea Guys:** Idea Guys are fountains of creativity, and their minds race with non-stop ideas. They may think they're sparking innovation, but they cause whiplash as people scurry to keep up with each new idea, making minor progress in many directions. One product executive would launch a new focus or initiative each week. His director of operations recalled, "He'd tell us on Monday, "We needed to catch up with Competitor X." The organization would scurry, throw a "Hail Mary" pass and make progress for a few days, but then lose traction when they were given a new goal to chase next week.

- **Rescuers:** Many well-intending managers jump in and rescue their people or a project to help the person avert failure and get on the path of success. But when rescuing struggling people, you weaken their ability to think for themselves and to learn how to spot problems and recover from them. Instead of creating a cycle of success, you create chronic dependency on the leader. When a new VP at GAP, Inc. redefined her role as a Multiplier, she stopped jumping in to trouble-shoot problems for her team, shifted the burden of thinking to them, and gave them greater accountability.

Accidental or not, you are not tapping the full brainpower of your team.

Lead Like a Multiplier

How can you stop being a Diminisher and start being a Multiplier? Here are three simple but powerful starting points:

1. **Shift from answers to questions.** Don't provide all the answers—ask the right questions. Use your knowledge of the business or a situation to ask insightful and challenging questions that cause people to stop, think, and rethink. Instead of continually selling your vision, ask the questions that get other people thinking and piecing together that vision for themselves.

2. **Dispense your ideas in small doses.** If you are an idea guy who is prone to toss out more ideas than anyone can catch or have the gift of gab, try dispensing your ideas in small, but intense doses. Introduce fewer ideas, and leave white space. Providing more distance between your ideas creates room for others to contribute; and, people really listen when you say something. Imagine playing your ideas like poker chips, carefully placing each where it creates the most value.

3. Expect complete work. People learn best when they are fully accountable and experience the consequences of their work. Instead of jumping in and fixing the work of others, give it back to them and let them know what needs to be improved or completed. Ask people to go beyond pointing out problems: Ask them to find a solution. By wrestling with it, they'll grow their capability and operate more independently.

Intelligence might be your most underutilized asset. If you've cut resources and have fewer people but the same workload, realize that the brainpower needed to solve your most pressing challenges is sitting right in front of you. Spot the ways you might be inadvertently diminishing others and who can become Multipliers who fully utilize and amplify the intelligence and capability of the people around them.



SPECIAL COMMENT

US Academic Medical Centers: Complex, Successful Organizations Driven by Integrated University-Hospital Strategies

New Challenges on the Horizon

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Summary

Academic medical centers (AMCs) are among the most complex organizations issuing debt in the US municipal market. Large organizations generating billions of dollars in consolidated annual revenue, AMCs are often the biggest employers and drivers of economic development in their metropolitan regions. Defying easy categorization and often confused with smaller and more numerous teaching hospitals, AMCs are actually hybrid university-hospital organizations. They are typically centered on the nation's leading research universities which operate medical schools, often spanning different legal entities that can issue debt separately. In this publication, we define the broad characteristics of AMCs and explore the two basic organizational models —university-owned and university-affiliated—that drive the university-hospital relationship.¹

Following a decade of greater integration, better competitive positioning and improved operating results, AMCs face heightened credit risks in coming years. Federal and some state governments are pressuring hospitals to become more cost effective, which is especially challenging for AMCs due to their high operating cost structures. The weak outlook for funding for hospital reimbursements and research grants also indicates rising pressure on AMCs as they deal with ebbing revenue growth.

» contacts continued on the last page

¹ In future publications, we will publish additional research on AMC credit characteristics, including assessment of past financial metrics as well as an outlook for this important subsector straddling the higher education and health care industries.

Greater Integration Drives AMC Success, but More Risks Ahead

AMCs operate multiple lines of business based on their core functions of medical education, primary-to-quaternary patient care, and basic research. Larger ones often extend their activities to include clinical drug trials, creation of new biomedical inventions/clinical procedures, and technology transfer, including commercialization of research discoveries.

In the 1990s, US universities faced weakening performance at their hospitals and many decided to sell or spin-off their hospitals in a strategy intended to separate the perceived higher risk of the hospital from the more stable university. That trend reversed over the past decade as universities and hospitals began to capture greater value from closer integration.²

Fueled by heightened federal research funding from 1995-2005, a sharp rise in large gifts for biomedical research, and more professional hospital management, integrated AMCs expanded significantly in the past decade. Many adopted competitive strategies used by leading hospital systems, including the purchase of feeder community hospitals and tougher bargaining with insurance companies, allowing them to become better financial performers than in the prior decade. Some have grown so large that they serve important roles as economic engines and large employers within their geographic regions.

The next decade will likely be more challenging for AMCs as they will face tougher credit challenges, including:

- » Continued slowdown in federally sponsored research,
- » Reduced graduate medical education (GME) funding,
- » Expense reduction, especially in light of need to support research and teaching missions,
- » Integration of faculty physician plans and balancing different needs of community and faculty physicians, and
- » Uncertain impacts of federal healthcare reform which will reward high quality performers with low cost structures.

However, these risks have not prevented the sector from growing. Often with support of state or local governments, new medical schools have been established and some existing medical schools have merged with universities to expand the university's research reputation and create a greater clinical care footprint.

² There are multiple cases of high profile legal separations of hospitals from their parent universities, later followed by re-integration, including Stanford University, University of California at San Francisco, University of Southern California, and New York University.

Defining the Academic Medical Center: Beyond the Teaching Hospital

We define an AMC as a combined university-hospital entity operating under well-defined parameters and centered on a medical school³. Far more than just a teaching site for medical students, the AMC carries out a full complement of clinical, research, and educational activities through an established partnership between the medical school and its owned or affiliated teaching hospital(s). There are typically very close working relationships across senior leadership teams at the medical school and the hospital and, in some cases, board composition overlap or joint governance, although this varies across institutions.

The medical schools at the center of these university-hospital partnerships are housed within some of the highest rated research universities that have global reputations, attract top faculty and students, and operate diversified research programs funded by grants and contracts from the public and private sectors. These research universities have established relationships with hospitals, providing opportunities for hands-on teaching for medical students and “bench to bedside” translational research. Although many hospitals have some medical education component and serve as “teaching hospitals,” most teaching hospitals are not actually part of an academic medical center. In addition to their comprehensive tertiary and quaternary clinical care programs, AMCs provide education for medical residents and other students, and physicians at the hospital often hold faculty positions at the medical school. Most also provide significant primary and secondary patient care, especially in affiliated or owned feeder hospitals that generate referrals for higher-end services delivered at the core AMC hospital.

In Appendix A, we provide a list of major US academic medical centers, where research funding from the National Institutes of Health (NIH) across the university-hospital entity exceeds \$50 million. In conjunction with this publication, this database has also been released in an [Excel format](#).

Distinguishing Credit Characteristics of AMCs: Tripartite Mission Resulting in Revenue Diversification and Stronger Balance Sheets

Academic medical centers tend to be large and complex organizations benefiting from diversified revenue that contributes to relatively high debt ratings. As shown in Appendix A, the median rating is Aa2 for universities and A1 for hospitals, for the rated universities and hospitals included in the appendix. In addition to net patient revenue generated at the hospital, faculty practice plans or clinics, AMCs rely on research grants and contracts, student charges, philanthropy, state support, and endowment spending to support operating activities. Graduate medical education (GME) funding from the federal government helps to subsidize the costs of training residents and medical students. Research and teaching activities are typically not fully covered by grants and tuition income, respectively, and are often subsidized by surpluses generated from patient care. Depending on the operating or affiliation agreement between a hospital and medical school, the hospital may make recurring transfers to the university to support strategic investments, program development, and educational activities. This is sometimes done in the form of a “Dean’s Tax.”

³ We identify a small number of major AMCs that are not centered on a medical school. These institutions conduct significant research and patient care and are identified in Appendix A as “Independent Hospital and Research Organizations.”

The patient care component of the AMC is carried out at the hospital(s), faculty practice plans, and in some cases, a network of outpatient settings. Distinguishing factors of these clinical sites may include:

- » High-end tertiary and quaternary procedures and a multitude of specialties, distinguishing an AMC from a community hospital focused on primary and secondary clinical care,
- » On average, higher case mix indices than most community hospitals,
- » In some cases, national and international draw of patients as a result of the AMC hospital's clinical expertise and reputation, and
- » Location in urban settings and role as the region's safety net hospital and trauma center, providing care for a relatively high proportion of Medicaid and uninsured patients. As a result, clinical operating performance may be pressured by higher levels of uncompensated care.

The financial performance of AMC hospitals has generally improved over the last decade. Many that were struggling now generate stable and, in some cases, above average operating margins. For example, Duke University Health System (Aa2) and New York University Hospitals Center (A3) have significantly improved their operating margins from modest deficits or very small surpluses in FY 2003 and 2004 to bigger surpluses in FY 2010 and FY 2011. Also improving their performances over the past decade are the hospitals of Stanford University (Aaa), the University of California (Aa1), the University of Pennsylvania (Aa2), the University of Rochester (Aa3), and Vanderbilt University (Aa2).

AMC hospitals learned over the past decade to use their market strength in the provision of tertiary and quaternary services to gain better reimbursement rates in commercial insurance contracting. They also effectively adopted the strategies of successful health systems and community hospitals: increasing productivity and trimming expenses, acquiring smaller hospitals, establishing outpatient centers to improve patient access, and aligning with community physicians in order to gain scale and generate referrals.

Virtually all highly rated major universities have robust fundraising programs that generate tens or hundreds of millions of gift revenue annually. In contrast, philanthropy for most stand-alone hospitals and hospital systems tends to be much more modest. Donors are especially attracted to supporting research at an AMC's medical school, making fundraising a major credit strength of many academic medical centers that most of their competitors lack. The few standalone non-university medical centers are also successful in attracting private gifts, and a few other hospital sub-sectors, including children's hospitals and specialized hospitals such as cancer research institutions, are also adept at attracting significant donor support. In some cases, universities and their owned or affiliated hospitals have joined forces to launch coordinated capital campaigns. The most successful AMC fundraisers are recipients of sizeable gifts and have strong balance sheets, including restricted funds to support future research, educational activities and capital projects.

Broad Range of Organizational Models and University-Hospital Credit Linkages

There is a broad spectrum of AMC models (Exhibit 1), ranging from a university's full ownership of a hospital to legally independent operations and arm's length transactions. Some universities own their hospitals or serve as the sole corporate member of the hospital. Others are legally distinct entities with very tight affiliations and in some cases, overlapping governance and management. Some of the largest AMCs are comprised of a medical school and hospital(s) that are legally independent organizations, but have tight working relationships and are highly dependent on each other for research, academic, and clinical cross-collaboration. Two prominent examples are Washington University in St. Louis (Aaa, stable) and BJC Healthcare (Aa2, stable) as well as Harvard University (Aaa, stable) and its many Boston-area teaching hospitals. Neither of these universities directly owns a hospital, but each is part of a very large, prominent academic medical center, with high levels of research and clinical activity. The varied arrangements and uniqueness of these relationships warrant analyzing the credit impact of these partnerships on a case-by-case basis.

Over time, university-hospital relationships and operating models change according to the perceived risks and benefits accruing to both organizations. Organizations may grow closer or potentially distance themselves for a variety of reasons, including financial motives, industry trends, or relationship dynamics of senior leadership. During the 1990s, there was a pronounced trend of universities divesting or distancing themselves from their financially struggling hospitals. Examples included Georgetown University (A3, positive), George Washington University (A1, stable), Tulane University (A2, stable), and University of Minnesota (Aa1, stable). However, over the last decade, management and governance teams of universities and their affiliated or owned hospitals have largely grown closer with greater coordination regarding competitive strategy, research, financial and capital planning, and fundraising. There are several examples of jointly coordinated comprehensive capital campaigns.

EXHIBIT 1**Two Basic Organizational Models for Academic Medical Centers****Ownership**

Examples: Emory University, Vanderbilt University, University of Miami, University of Rochester, University of Missouri, University of Michigan, Duke University, Stanford University.

- » This may include situations where both the university and hospital are distinct 501c3 not for profit organizations, but the university is the sole corporate member of the hospital. In other cases, the hospital may be an operating division of the university.
- » University and hospital campuses are likely physically intertwined or within close proximity.
- » Audited financial statements present a consolidated view of university and hospital (hospital may or may not produce separate audited financial information).
- » Overlap in senior leadership and board composition between university and hospital.
- » History of financial support, including recurring cash transfers from the hospital to university.
- » In some cases, specific examples of financial or other support, from university to hospital, such as fundraising, debt guarantees, or provision of liquidity.
- » Hospital operating and capital budgets subject to university board approval.
- » Independent or consolidated revenue stream as legal security for bonds (for example, hospital revenues support hospital debt, and university resources support university debt).

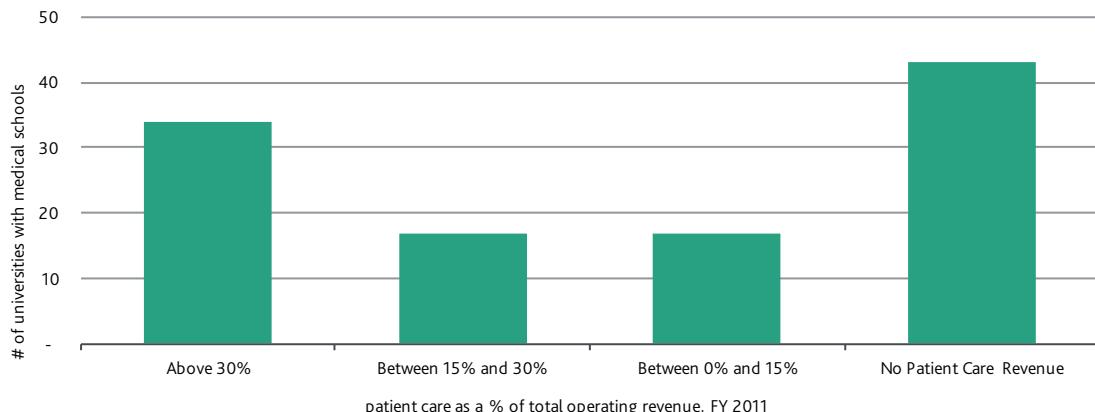
Affiliation

Examples: Columbia University, Cornell University, Harvard University, Washington University in St. Louis.

- » Legally separate university and hospital that operate independently; no “ownership”.
- » Separately secured debt.
- » Separate audited financial statements.
- » Typically no history of extraordinary financial support above and beyond payment for services provided and those payments outlined in affiliation agreement.
- » Hospital budgets and capital projects not likely subject to university oversight or approval.
- » University and hospital campuses may be physically intertwined or completely separate.

As we highlight in our 2011 updated rating methodology for US not-for-profit private and public higher education, health care exposure is an important credit factor and incorporated into university bond ratings. Depending on the organizational structure of the academic medical center, the patient care revenue may or may not directly flow through the university's audited financial statements. In a university's audit, patient care revenue can represent a variety of revenue streams, including a hospital, faculty practice plan, patient care at clinics, or transfers from the hospital to the university. Exhibit 2 highlights that over 60% of universities with medical schools have patient care-related operating revenue. In order to incorporate healthcare exposure into a university's bond rating, we assess the financial performance and market positions of the hospital(s) and faculty practice plans.

EXHIBIT 2

Patient care revenue is an important revenue stream for most universities with medical schools
(patient care as a % of total operating revenue, FY 2011)

Source: Moody's MFRA, AAMC

A hospital's relationship with a university may impact its standalone bond rating. Direct ownership by a higher rated university may positively influence a hospital's bond rating. Key credit considerations include the historical relationship between the university and hospital, the flow of funds between the two entities, the governance and management overlap, fundraising support from the university, and any incentives to help each other if a period of fiscal distress is encountered.



INDUSTRY OUTLOOK

US Higher Education Outlook Negative in 2013

Revenue Pressure on All Fronts Intensifies Need to Grapple with Traditional Cost Structure

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This outlook expresses our expectations for the fundamental credit conditions in the sector over the next 12 to 18 months. It does not speak to expectations for individual rating changes and is not a prediction of the expected balance of rating changes during this time frame.

Summary

For 2013, Moody's revises its outlook for the entire US higher education sector to negative, marking a shift to negative from stable for even the sector's market leading diversified colleges and universities. The outlook for the remaining majority of the sector remains negative, as it has been since 2009. The new sector-wide negative outlook reflects mounting pressure on all key university revenue sources, requiring bolder actions by university leaders to reduce costs and increase operating efficiency. As the economic growth languishes below previous benchmarks and the federal government seeks to reduce spending in key areas, even market leading universities with diversified revenues are facing diminished prospects for revenue growth. Universities have been restraining costs in response to the weak economic conditions since the 2008-09 financial crisis, but they have only recently begun examining the cost structure of their traditional business model.

Macroeconomic conditions and anticipated federal budget reductions have weakened or created considerable uncertainty around the prospect for growth of household income and wealth, philanthropic support, investment returns, state appropriations, and federal funding. In addition to recent tax code changes, the resolution of the federal fiscal deficit will likely involve flat to diminished research funding, cuts to Medicare and Medicaid as well as possible changes to federal student aid programs such as Pell Grants – all of which would impact important revenue streams for higher education.

The underlying value proposition of higher education persists, lending inherent credit strength and support for ongoing demand for the sector's services. However, the sector will need to adjust to the prospect of prolonged muted revenue growth. Strong governance and management leadership will be needed by most universities as they navigate through this period of intensified change and challenge.

We continue to watch the impact of several emerging trends in higher education which have already shown some destabilizing effects on colleges and universities, including the growth of on-line learning technology initiatives such as Massive Online Open Courses (MOOC); rising student debt burdens and defaults; greater government focus on cost and value of college education degrees and increased activity by accrediting agencies.

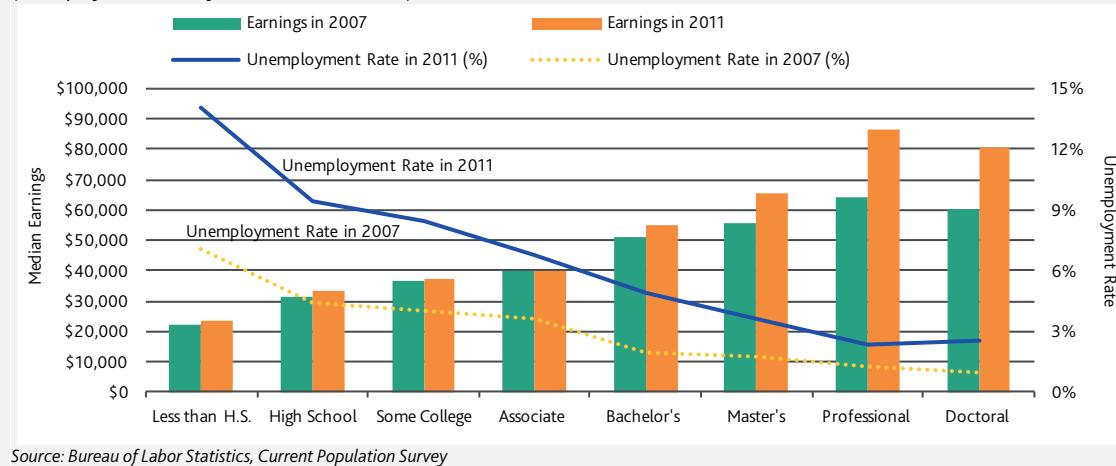
Critical factors contributing to the negative outlook:

1. Price sensitivity continues to suppress net tuition revenue growth
2. All non-tuition revenue sources are also strained; diversity no longer offers a safe haven
3. Rising student loan burden and defaults taint perception of value of a college degree
4. Increased public scrutiny drives escalated risk of more regulation and accreditation sanctions
5. Prospects for long-term sustainability depend upon strong leadership through better governance and management

Demand for higher education remains strong, but pricing power nearly exhausted

Overall, postsecondary education remains a valuable long-term investment. College graduates still have much higher income and lower unemployment rates than those without college degrees as highlighted in Exhibit 1. While there is still no substitute for a higher education degree on the immediate horizon, education providers are experimenting with alternative forms of recognition/certifications for online courses. Families remain willing to pay for college, but their capacity to pay higher prices has been largely tapped and has dramatically dampened the sector's capacity to grow tuition revenue. The culmination of persistent economic pressure, heightened political focus, and major technological shifts in course delivery are forcing a reevaluation of the traditional higher education cost structure, mainly high cost of instruction due to guaranteed employment through tenure and continual investments in student services and capital facilities.

EXHIBIT 1
The value of higher education persists
 (unemployment rate by education attainment)



Why is Diversity Vital for Innovation?

By: Steve Denning, Contributor, Forbes

January 16, 2012

The recent Stoos gathering identified diversity as one of the pillars of the organization of the future. Why?

It's an appropriate question to ask on the holiday honoring Martin Luther King Jr. at a time when the country has come a long way towards becoming color blind and realizing his dream that his "four little children will one day live in a nation where they will not be judged by the color of their skin but by the content of their character."

At the same time, the Stoos gathering recognized that it's also good to celebrate difference. Why? In his wonderful book, *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies*, (Princeton, 2007) Scott Page shows in detail and with considerable intellectual rigor when diversity does lead to better outcomes and how and why, as well as when it doesn't.

His short answer is that in some circumstances diversity doesn't lead to better outcomes:

"... if a loved one requires open-heart surgery, we do not want a collection of butchers, bakers and candlestick makers carving open the chest cavity. We'd much prefer a trained heart surgeon, and for good reason."

But in other circumstances, particularly complex problems, such as constructing a welfare policy, cracking a secret code or evaluating post-heart attack treatment, diversity not only merits equal standing with ability.

Diversity Trumps Ability?

Page goes beyond the conventional wisdom that other things being equal, diversity trumps like-mindedness. Page makes the startling claim that diversity often trumps ability. In some situations, a group of ordinary people who are diverse can defeat a group of like-minded experts. Page backs up his claim with detailed arguments and evidence.

The prediction markets also show the power of diversity in their ability to make better predictions about the outcome of presidential elections than the experts.

When are two heads better than one? When do too many cooks spoil the broth? Clearly all great restaurants have many cooks. So having lots of cooks won't spoil the broth, if they are all following the same recipes. The chaos comes if they start to follow different recipes at the same time. In fact, having lots of cooks is essential to running a great restaurant. And when it comes to solving a difficult problem, like coming up with a better way to make coq au vin, having cooks with different points of view will usually help.

Unpacking the idea of diversity

One of the useful things Page does in *The Difference* is to unpack the notion of diversity. He focuses on cognitive differences between people, not identity differences like race, gender, ethnicity or religion. He suggests that cognitive diversity has four dimensions: perspectives, interpretations, heuristics, predictive models.

Scott E. Page



- **Diverse perspectives:** people have different ways of representing situations and problems; they who see or envision the set of possibilities confronting them differently.
- **Diverse interpretations:** people put things into different categories and classifications. To some people, I might be someone who worked at the World Bank. To others, I might be an leadership storyteller. To others, I might be an author about radical management. All are true. They are different interpretations of the world.
- **Diverse heuristics:** People have different ways of generating solutions to problems. Some people like to talk through their thinking about problems; others prefer to write out his solutions first and then talk
- **Diverse predictive models:** Some people analyze the situation. Others may look for the story.

This enables Page to explore exactly how these kinds of diversity might help to solve difficult problems or make better predictions.

Why is diversity vital for innovation?

A second thing about the book is the simile that he uses in comparing the solving of problems with climbing rugged landscapes. If our object is to climb as high as possible, our chances of accomplishing that depend on which mountain we decide to climb. If we climb a local hill, we might consider ourselves doing well, because we have never seen the Rockies, let alone Mount Everest. While we're climbing up one mountain, often we can't really see how high it is, or how it compares with other neighboring mountains, until we've already climbed it. Climbing the highest mountain may entail descending the mountain we are on, and moving to a completely different mountain range.

The image of what it's like to solve a difficult problem is illuminating in showing how and why having people with different perspectives might enable a group of diverse people to do better than a group of like-minded experts who think they know they are on climbing the highest mountain.

Cognitive vs identity diversity

A third virtue of the book is his summary of the evidence as to whether diversity leads to benefits, including comparisons of **cognitive diversity** and **identity diversity**. Cognitive diversity doesn't improve performance when it comes to routine tasks, like flipping burgers. But when we are dealing with complex tasks like engineering problems, or tasks requiring creativity and innovation, or managerial issues, cognitive diversity is a key explanatory variable in levels of performance.

By comparison, the impact of identity diversity is mixed. One part of this is due to the fact that routine tasks are better done by individuals. A second part of it is due to the fact that identity diversity doesn't necessarily lead to cognitive diversity. The whole idea of medical training, for instance, is to get medical students thinking alike, i.e. like doctors. It shouldn't be surprising, then, that doctors who are diverse in identity terms are cognitively alike, and hence may do no better than doctors who are not diverse in identity terms. A third part is due to the fact that getting the benefits of diversity depends on people being able to work together. We would expect that some people who are diverse in identity terms find it difficult to work together effectively.

Diversity offers “super-additivity”

The fourth good quality of the book is when Page goes on the offensive and addresses the question of: so what? Given what we have learned, what should we do differently? Page points out that diversity offers not merely the advantage of a diverse stock portfolio where different stocks do better in different conditions, adding up to an overall average that does reasonably in all conditions.

Diversity in teams offers what he calls **super-additivity**. When a collection of people work together, and one person makes an improvement, the others can often improve on this new solution even further: improvements build on improvements. Diverse perspectives and diverse heuristics apply sequentially: one gets applied after the other and in combination. As a result, one plus one often exceeds two.

What does this imply? Page has several suggestions that bear on the issue of creating high-performance teams:

- **Bring in outsiders with different, relevant perspectives.** But be careful! Outsiders don't stay outsiders for long. If outsiders become insiders, they will cease to think differently. And be careful of bringing in "highly paid consultants in fancy suits to add credibility to decisions that directors have already made—'Look, McKinsey agrees with me!'" And the diversity must be relevant to the task at hand: you don't ask villagers from Papua New Guinea to advise on the implementation of Sarbanes-Oxley.
- **Encourage inter-disciplinary efforts:** When faced with difficult problems, requiring innovation and creativity, the advantages of having cognitively diverse people working on them are overwhelming.
- **Diverse preferences can be beneficial:** If we agree on the goal then disagreements about different ways to reach the goal can be helpful in expanding the array of solutions. But diversity in terms of fundamental preferences can also help. Although solving problems of fundamental differences will often require compromise, diversity in terms of fundamental differences may lead to improvements: Gwen and Tess may disagree on goals, but if Gwen and Tess are cognitively diverse, Gwen may find a solution that Tess improves on, which they both like better.
- **Diversity needs to be a factor in recruiting:** If the work is mainly done by individuals or is routine, cognitive diversity is unlikely to lead to improved performance, although it might be pursued for other reasons. But where people have to work together on difficult problems, cognitive diversity should be very important in hiring. Page praises Google [GOOG] for trying to hire people with diverse interests and skills while also requiring that the recruits have basic skills in fields relevant to Google, i.e. computer science and mathematics.
- **Recruiters should assess the cognitive aspects of diversity:** Identity diversity correlates to a certain degree with cognitive diversity. Since it is easier to assess identity diversity, that may be a first rough approximation of cognitive diversity. But it is also possible to test for cognitive diversity directly, and Page encourages firms to do so.

Overall, this is a terrific book—one of the best management books I've read. It takes a complex subject, moves beyond metaphor and mysticism and politics and places the claims of diversity's benefits on a solid intellectual foundation. Using precise definitions, rigorous analysis and clear conclusions, Page tells you everything you need to know about this subject. His book is well-written and has many interesting aperçus and examples, although, given the effort to be rigorously, it's not always an easy read. Yet it's a book that tries hard to make us think clearly and what more can we ask than that?