



The Doric Column

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Professor Porter Goes to Washington

"There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things."

Niccolò Machiavelli
[The Prince](#) (1532)

The pavilion of the new Ronald Reagan Building and International Trade Center in Washington, DC is a fine spot for a reception.

Second only to the Pentagon in size among federal buildings, the [Reagan Building](#) dominates space called the Federal Triangle along Pennsylvania Avenue. Its circular pavilion, on the second floor, features maple hardwood walls and oak board floors with gray center stone medallion inlay -- under a glass dome.

Add to the space subdued lighting, white-gloved waiters, and a harpist and you have an excellent environment for people to get acquainted in advance of a conference.

The conference was "[National Clusters of Innovation](#)." It was being put on by the [Council on Competitiveness](#), a leadership group of business executives, academics, and government officials, and the [National Governors Association](#).

The conference was yet more evidence of the expanding universe of the ideas of Michael Porter, the Bishop William Lawrence University Professor at the Harvard Business School, the founder of Harvard's [Institute for Strategy and Competitiveness](#), and co-author of the annual "[Global Competitiveness Report](#)."



Michael Porter, the Bishop William Lawrence University Professor at the Harvard Business School and one of the leading strategic thinkers in the world today. His ideas on clusters of innovation and competitiveness look to transform national and international economies. Photo by Rose Lincoln, the Harvard University [Gazette](#), December 7, 2000.



Niccolò Machiavelli, 1469-1527, author of [The Prince](#), the master strategist of his day -- and perhaps ours, too.

No one is in greater demand than Porter, here or abroad, on the theme of competition and strategy, whether the playing field is the global marketplace, states and regions, the inner city, or rural communities looking for a new role in the economic order.

Governments and regional development organizations on all continents except Antarctica have come calling. Cross-regional initiatives naturally look to him, initiatives such as the [Baltic Development Forum](#), an organization of Scandinavian and Baltic states and Russia which pitches itself as the "Hanseatic League for the New Millennium."

In Minnesota, Porter's ideas have influenced key studies by the [State and Local Policy Program](#) at the Hubert H. Humphrey Institute of Public Affairs, the [Metropolitan Council](#), the [McKnight Foundation](#), and the [Citizens League of Minnesota](#).

They have influenced the annual benchmarking survey by the [Great North Alliance](#), a civic leadership organization looking to enhance regional competitiveness. They were also at the heart of recommendations by University of Minnesota President Mark Yudof's [Working Group](#) on the Minnesota Economy, which were released a year ago this month.

I got to know about Porter in 1987 while doing some free-lance work for a longtime friend, then working for [Wilson Learning](#). Porter was coming into his own in management consulting circles. A few years earlier Ronald Reagan had appointed him to his Presidential Commission on Industrial Competitiveness. About that time Porter co-authored "How Information Gives You Competitive Advantage," an influential paper in the nascent years of the PC revolution. It was that paper that got me thinking about the business world for the first time.

Porter's star soared with publication of [The Competitive Advantage of Nations](#) in 1990, which, according to the Cambridge, Massachusetts-based [Monitor Group](#), a strategic consulting group he co-founded, "develops a new theory of how nations, states, and regions compete and their sources of economic prosperity." It is in this book that Porter laid out his ideas on [economic geography](#) and the role of clusters -- geographically concentrated groups of interconnected companies and associated institutions in a particular field linked by common technologies and skills. These ideas have guided economic policy throughout the world.

Last December, Porter was appointed "University

Professor," the highest professional distinction for a Harvard faculty member. His professorship is only the 20th in a line of such endowed positions since 1936, when the professorship was established by President James B. Conant to give distinguished faculty "roving commissions" so that their "teaching and creative work shall not be hampered by departmental considerations." He is just the fourth University Professor in the 93-year history of the Harvard Business School.

Unlike Jefferson Smith of the movie classic "Mr. Smith Goes to Washington" fame [Frank Capra, 1939, starring Jimmy Stewart], Professor Porter's appearance in Washington was nothing new at all. He was on familiar turf as an advisor in the highest government circles. But like Smith he has an interest in change. This time his pull reached out across the country, bringing governors, academic and business leaders, and economic development and technology professionals together for a specific purpose -- to look at how regions of innovation contribute to the nation's economic growth.

Porter's championing of regional innovation may seem harmless enough, but in the grand economic order it is nothing less than the Vandals appearing in force at the city gates. It is microeconomics asserting itself in the face of the dominant macroeconomics. It is economic regionalism taking aim at political borders. It is Machiavelli, the grand strategist, coaching the democratically elected and the highly elevated and their associates into a reconsideration of what generates wealth, where it is located, and the role of knowledge in how it comes about.

So, naturally, I was poised to find an opportunity to corner him.

Cornering a Guru

Porter is 54 years old, of medium height with wispy blond hair, piercing blue eyes and other features of aquiline intensity. He is not an imposing presence just standing there. But get him going on strategy and he is an engaging dynamo at the top of his game.

I had heard him speak before, at the [Biotechnology Industry Organization](#)'s annual meeting and trade show in Boston in March 2000. I had seen how his energy and enthusiasm conspire to transfuse his ideas into his audience. Listeners may have an advantage on some specifics but they are poorly equipped to challenge him on synthesis, on the "big picture," on how markets work globally, within regions, among regions, and on the street.

I was preparing myself for an encore.

The buzz in the pavilion tailed off when Duane Ackerman took the podium and the program commenced. Ackerman is vice chairman of the Council on Competitiveness and chairman and CEO of [BellSouth Corporation](#). After the standard welcome he introduced John Engler, governor of Michigan who was also representing the National Governors Association, the co-sponsor of the conference.

During Engler's remarks Porter made his way along the wall toward the podium. I thought he was next to speak. When I turned out to be wrong and the program wrapped up in short order, I walked over to him and introduced myself.

I've heard that Porter's speaking fee these days can range upwards of \$75K. If that's true, for an hour's talk, then I figure I got several K's worth free of charge.

I explained that the [University of Minnesota](#) had developed a Web portal to more than a thousand organizations in the state's life sciences and healthcare clusters [[MBBNet](#)] and that I thought this approach was a good strategy for clusters with close ties to universities. He liked the idea right off. He said he would take it to his colleagues in Massachusetts, which has big clusters in medical devices, biotech/pharma, advanced materials and other fields, and a wealth of university-based brainpower.

A short time later Paul Duncan got more money's worth of Porter's time than I did. Duncan is an entrepreneur and vice president of the [Minnesota High Technology Association](#) [MHTA]. His main job at MHTA is to help organize the state's existing and emerging technology clusters. Two of his initiatives, wireless and e-learning, are well along, and others, including a medtech/biotech cluster initiative, are underway. He came away from his visit with Porter stimulated and...what else?...with ideas to pursue.

Our chats while milling about the room confirmed that Porter's ideas are democratically dispersed across the land. They are operating in high income states, like Connecticut, and the lowest, like Mississippi which is forming a communications technology cluster around [WorldCom, Inc.](#) headquartered there.

It isn't all high-tech, either. That day [December 12], as a lead-in to the conference, the [Wall Street Journal](#) ran a story "Should Cities Always Pursue High-Tech? The Guru of Industry 'Clusters' Says No." According to the article, Porter stressed that "regions shouldn't ignore

traditional, even mature local industries that may have equally good if not better growth prospects."

Angeline Dvorak of the [Mississippi Technology Alliance](#), who Duncan and I visited with, told the [WSJ](#) reporter that her state isn't ignoring its traditional industries, such as furniture making. But its communications technology sector has grown 21 percent in the past four years, with the number of companies up 35 percent.

That a state like Mississippi is catching notice for innovation tells astute observers that something new is afoot in the economic order of things, something worth looking into.

Gearing Up for Innovation

The conference was held in the Grand Hyatt Hotel in downtown Washington, away from the concrete Jersey barriers that ring federal buildings along Pennsylvania Avenue and the Capitol Mall -- grim reminders of the anthrax scares last fall.

Barriers are a big problem in regional development, too. No clear boundaries should exist between universities, government and business when the task is regional innovation, Porter stressed in his talk.

To make the point, he showed a slide of Minnesota's medical device cluster and how his famous diamond model for public-private cooperation works to upgrade clusters.

The focus was not on Minnesota, however, but on [five regions](#) that Porter's Monitor Group has studied in detail for the council's Regional Clusters of Innovation Project: San Diego, Wichita, Pittsburgh, the Research Triangle in North Carolina, and Atlanta. The results of these studies were presented in a glossy booklet entitled "Clusters of Innovation: Regional Foundations of U.S. Competitiveness" published by the council.

Porter discussed the studies in the context of Harvard's ["Cluster Mapping Project"](#), an analysis of cluster activity in regional economies. He made the poignant observation that innovation often occurs "at the intersection of existing clusters" where a culture of collaboration, shared leadership and organizational flexibility exists. He also noted that universities have played a fundamental role in regional prosperity, especially in recent decades.

Porter's high-energy presentation was followed by a panel of governors charged with exploring the role of

state government in cluster-based development. They included Governors Engler of Michigan, Huckabee of Arkansas, Leavitt of Utah, McCallum of Wisconsin, Minner of Delaware, and Musgrove of Mississippi. Massachusetts Institute of Technology President Charles Vest provided the perspective of academia and Merck Chairman and CEO Raymond Gilmartin that of business.

As might be expected, each governor touted his or her own state's economic development initiatives, especially those that cooperatively engage higher education. Engler was typical, describing Michigan's "[Smart Zones](#)," its Technical Education Centers [[M-TEC](#)] and new [Life Sciences Corridor](#), all helped along by funds from the state's tobacco settlement.

"We're also working on our information infrastructure, how to get more rapid broadband deployment," Engler said.

Vest, a council official as well as MIT president, said a lot of MIT's outreach efforts are channeled through its "centers of excellence." He cited the importance of a "loose matrix" of relationships between faculty and entrepreneurs, the "people-to-people contact" and "sharing among institutions" that can be facilitated today by business-to-business e-commerce models.

The panel was moderated by [Washington Post](#) business writer Peter Behr. Behr has covered the fast-growing technology cluster in Washington, DC and Northern Virginia and economic geography in general.

After a time Behr put the matter to the governors squarely: "How do you balance a need to build a critical mass around clusters and centers of excellence that have a narrow geographic focus and get that through legislatures that obviously have their own regional interests and priorities and really want to split the pie politically evenly throughout the whole state?"

No one had an answer that was convincing to me, though several governors tried.

Engler's response was at least a beginning. In his role as chairman of the National Governors Association [NGA], which is looking for ways to create high quality jobs, he affirmed that the council's work on "the 21st century economy for America" needs to be "at the center of everybody's agenda -- current governors and those running for governor."

The NGA has set up a [task force](#) to help guide its joint initiatives with the council to implement changes in state workforce systems; highlight current state best

practices; enhance state cooperation with leading-edge and traditional industry clusters; and address economic opportunities and challenges brought about by globalization.

That will have to suffice for the time being. Porter himself counseled, as did Machiavelli to "the Magnificent Lorenzo Di Piero De' Medici" in [The Prince](#), that good ideas often have long lead times before they come to pass. Plus a lot of follow-up is needed.

"The nature of people is variable," Machiavelli wrote, "and whilst it is easy to persuade them, it is difficult to fix them in that persuasion."

Clusters, Ants, and "Butterfly Economics"

Everybody wants clusters these days. The problem is how to get them.

Russell Gold
[The Wall Street Journal](#)
June 6, 2001

Economic clusters are believed to arise naturally, as naturally as trees and grasses on a prairie. They are part and parcel of the historic, cultural and economic experience of the inhabitants of a region.

Here I was, in a city where conscious planning is the lifeblood of human endeavor, near a maze of Jersey barriers protecting federal buildings, with a group of people who want policymakers to take naturally occurring things into account in ways perhaps they never have before.

They want the human and material assets that characterize a geographical space to be recognized for the contribution these assets make to the nation's prosperity.

Whether that will happen is anybody's guess. It is a reasonable hope if you consider what we are learning about the common ground of economics, biology, technology, and human behavior.

"It's about time economists discovered geography," wrote Princeton economist and [New York Times](#) columnist Paul Krugman some years ago. Krugman is also among those looking at biological patterns of emergence to explain economic behavior, as I wrote about in a previous column [["Neighborhood Outposts on the Economic Frontier](#)," April 5, 1999]

Biological emergence has become a hot topic recently, and the heat has been focused on the ant.

British economist Paul Ormerod brought the ant into the economic spotlight with his book [Butterfly Economics: A New General Theory of Social and Economic Behavior](#) [Pantheon, 1999]. Conventional economics refuses to consider the influence the behavior of an individual has on other individuals. Ants, for example, leave chemical secretions in their wake. These secretions, called pheromones, influence the decisions of other ants in pursuing a food source.

"So an ant emerging from the nest for the first time would be influenced in its decision by the trails of the ants it encounters on its journey," Ormerod writes. "In economic terms this means the behaviour of agents is influenced directly by the behaviour of others.... The signals left by the creatures mean that the random choices of the first few ants to leave the nest could exercise a decisive influence on the behaviour of the whole colony."

It is a system in which positive feedback predominates. "It predicts that, once a few more ants, for whatever reason, start to visit one of the sites rather than the other there will be a strong tendency for that site to become the favoured destination for more and more ants."

Substitute "cluster" for "colony" and "people" for "ants" and you have a plausible explanation for the regional basis of innovation. A change in behavior can occur, of course, even a dramatic one [the theoretical "butterfly effect" in which the air turbulence from a butterfly's wings sets off a dynamic that later yields a hurricane]. But the underlying conditions must change first. In clusters, that means the condition of economic opportunity.

Steven Johnson also takes up ant behavior in his new book [Emergence: The Connected Lives of Ants, Brains, Cities, and Software](#) [Scribner, 2001]. Johnson takes a broader sweep than just economics, but his description of ant behavior serves as the metaphor for other self-organizing, decentralized complex systems, including some aspects of the World Wide Web.

Asked "What is the connection between ants, cities, brains and software?" by [Salon.com](#) in "[The Emergent New Order](#)" [Nov. 28, 2001], Johnson cited the ant colony "where you have this system of 10,000 ants, none of which are actually in charge but somehow they manage to do these very complex engineering tasks and social organization and resource management things that are mesmerizing feats.

"They look like they should be planned from above, but in fact they are entirely organized by local rules and local interactions. The catchphrase is that the whole is sometimes smarter than the sum of its parts. And when you look at something like an ant colony, the question that you ask is who makes this happen? Who makes this collective intelligence happen? And the answer is everybody and nobody at the same time."

So it is with regional innovation centers like Silicon Valley. Efforts to create silicon prairies, forests, fjords and countless other sound-alikes have not fared well.

So it is with cities, cities like Manchester, England and Florence, Italy. Manchester emerged chaotically, responding to the demands of the new industrial age which separated the working class from the rest of the city. Machiavelli's Florence began taking shape organically centuries before his time -- around the silk weaver's guild along the Via Por Santa Maria, where the trade is still at work. Self-organized neighborhood clusters in downtown Manhattan, Johnson contends, helped New York City deal with the aftermath of the September 11th terrorist attacks.

Washington, DC, in stark contrast, is the work of human intervention at the highest levels. No better example exists than the Ronald Reagan Building, a product of the [Federal Triangle Development Act](#) of 1987 designed to cap a century long effort to transform one of the city's most run-down areas.

But can regions innovate through conscious design and concerted effort rather than through the independent decisions of their "ants?"

To Porter, the answer is clear: Regions should build on existing strengths rather than try to create clusters from scratch. They should foster a culture of collaboration and self-awareness to ensure their capacity to innovate into the future. Their goal should be to raise the productivity of all their industries, not just those in the high technology field.

For their part, the governors and academics, while acknowledging the new economic landscape, concurred that the best possible education of their "ants" was an essential first step to long-term growth of any region. Well-educated people, however complex and mysterious their interactions in clusters, are still key to regional competitive advantage.

It should come as no surprise. After all, we humans are the ultimate in self-organized entities -- whether it be the clustering of highly expressed genes along our chromosomes, the amazing feat of cellular self-

assembly into our organs and tissues, or the indefatigable drive of people, the finished product, to create something new.

It is we who innovate.

--William Hoffman hoffm003@umn.edu

Disclaimer: The opinions expressed herein are the writer's own.

Comment Box

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