COMMUNITY NEWS & VIEWS

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THEME: Ideas and Dollars: Cultural Economic Development

The Dollars and Sense of Cultural Economic Development

Rex L. LaMore

The global economy in which Michigan must compete presents a unique set of challenges and opportunities for distressed communities. Our ability to create, retain and attract high-skilled, well-paid employment for Michigan residents is contingent on a number of factors: the skills of our workforce, the ingenuity of our problem-solving, the quality of our local advanced information infrastructure, and the quality of life of our communities. All of these factors, depending on their level of development, will improve or diminish our capacity to enjoy and sustain a high standard of living. Community and economic development practitioners are called upon to address each of these factors and – where necessary – to bring about positive change.

Cultural Economic Development

In recent months there has been a growing urgency for community and economic developers to facilitate cultural economic development. State and local officials, leaders of cultural organizations and institutions, and analysts from a variety of disciplines are seeking to identify the impacts and implications of arts and culture on economic development.

Cultural economic development, as defined by Dr. William Anderson, Director of the Michigan Department of History, Arts and Libraries, is "using creative and cultural assets to cause economic growth and community prosperity." The creative and cultural assets of a community may be seen as having three primary effects on a local economy in a globally competitive environment.

Direct Economic Benefits: The first and most obvious effect of the creative and cultural assets of a community is that of a job generator through direct employment, and a revenue generator through sales of products and services. According to the 1997 U.S. Economic Census, there are nearly 6,000 performing, visual, applied, literary, institutional and other creative/cultural establishments in Michigan, employing approximately 67,000 people. These industries account for a total annual payroll of nearly two billion dollars in Michigan.

Talent Attractor: The second effect of a strong community cultural economy is that of an improved quality of life for residents and visitors. Communities that have a dynamic, diverse set of cultural and creative assets enjoy a stronger capacity to attract and retain high skilled and high paid workers. Author Richard Florida in his book *The Rise of the Creative Class* (2002) suggests that creative workers in the new economy are attracted to places that offer an interesting lifestyle, authenticity and identity, provide for social interaction and diversity.

Creative Capacity Generator: The third effect of a culturally rich community is perhaps more subtle but certainly no less significant, and that is the effect that a culturally diverse community has on the creative capacity of individuals. There is a body of evidence in child development that suggests that the exposure of children to arts and cultural materials are important to the development of creative processes within children (Western Michigan University Foundation, 2005). These creative processes are related to the problem-solving, critical thinking techniques that develop later in life.

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A critical element of our success in a knowledge-based global economy is our *ingenuity*. Our ability to invent new products, processes and services will affect the quality of our lives in the global economy. To enjoy a high quality of life we must invent our way to prosperity; our communities' cultural assets – and our own commitment to the creative education of children – will enhance or hinder our ability to accomplish this.

In This Issue

This edition of *Community News & Views* was prepared in conjunction with the planning of the Eighteenth Annual Summer Institute conference, "Ideas and Dollars: How Cultural Economic Development 'makes cents' for Michigan." As a result, many of the articles and features focus on key dimensions of the relationship between culture and economy.

Reports on Cultural Impacts: As I indicate above, interest in the impacts of arts and culture on community and economic development is rapidly increasing. Beginning on the next page is a sampling from several recent analyses of these connections. Each report, whether on a national, regional, statewide or local scale, provide a window of insight into different ways to measure, compare, and communicate what is important about the impacts of arts and culture. The brief overviews include information to assist readers in obtaining the complete reports.

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Reminder: CN&V is Going Electronic!

The MSU CEDP will soon begin producing occasional "electronic-only" editions of Community News and Views. In addition, we intend to reduce our resource use by offering electronic, rather than printed, versions of each newsletter.

If you haven't already done so, we invite you to sign up for electronic distribution: send your email address to cedp@msu.edu .

Creativity and Knowledge: Also essential for translating ideas into dollars is the application of creativity and knowledge in the "new economy." To that end, we have included articles (beginning on page seven) from invited presenters at the Ideas and Dollars conference – Professor Venturelli's comparative analysis of global regions, the Root-Bernsteins' plea for educators to recognize the essence of creativity in scientific thought, and a brief announcement of the CEDP's new report on Michigan's metropolitan scale knowledge economy indicators.

The issue also includes a Bette Downs' profile of a true East Lansing "patriarch," and the announcement of the 2005 Community and Economic Development awards, which will be presented at the Ideas and Dollars luncheon.

As the economic landscape of Michigan is transformed from a manufacturing to a knowledge economy, we are changing our understanding of the role of arts and culture in that process. Community and economic development professionals committed to revitalizing distressed areas must add to their professional skill sets a capacity to facilitate the cultural economic development of a community as well. We hope that this newsletter will assist withthe swift and effective developmetn of these community and economic development capacities.

References:

Florida, R. (2004). *The Rise of the Creative Class: And how it's changing the way we live, work and play*. New York: Basic Books.

Western Michigan University Foundation. (2005). *New Economy Progress Report*. Conducted by EPIC-MRA, Lansing, MI.

Rex L. LaMore is State Director of the Michigan State University Community and Economic Development Program, and is a member of the Michigan Department of History, Arts and Libraries Cultural Economic Development Task Force.

He may be reached via email at lamore@msu.edu.

Measuring the Impacts of Arts and Culture

Interest in establishing and understanding the connections between cultural activities and economic development is strong and growing.

In recent years, researchers have undertaken a number of research efforts in support of governments, business leaders, and broad community partnerships.

In order to help citizens and community leaders consider approaches that might be used in local planning efforts for cultural development, several such reports are summarized on the following pages. Each is accompanied by contact information and a source for the full reports.

Arts and Culture Issue Briefs

Center for Best Practices

National Governors Association

In recent years the National Governors Association and its Center for Best Practices has recognized the economic impacts of cultural development on a national scale. In June 2001 the Center released an Issue Brief, *The Role of the Arts in Economic Development,* which detailed the significance of the arts and culture. The report explicitly addressed the role of the nonprofit arts industry, to which it attributed $36.8 billion in annual revenue.

Subsequent reports have focused on other aspects of the relationship between arts and culture and the economy. In 2002, *The Impact of Arts Education on Workforce Preparation* described the value of arts-based education in building skills and creativity. *How States Are Using Arts and Culture to Strengthen Their Global Trade Development,* released in May 2003, described strategies for promoting arts-related business to an international market.

For more information:

The Center for Best Practices is online at:

www.nga.org/center

Or contact:

NGA Center for Best Practices
Hall of States
444 N. Capitol St.
Washington, D.C. 20001-1512

Telephone (202) 624-5300

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New England's Creative Economy

Creative Economy Council

In 1998 the New England Council , a regional business alliance serving the six New England States, formed a partnership with the New England Foundation for the Arts to examine the economic impacts of the "creative economy." By 2003 the partnership had resulted in formation of the Creative Economy Council to continue the initiative.

In June 2000, Mount Auburn Associates prepared the first of several reports for the Council, *The Creative Economy Initiative: The Role of the Arts and Cutture in New England's Economic Competitiveness.* The 2000 report described three categories for measuring the creative sector: "Creative Clusters" (businesses and organizations), "Creative Workforce" (people), and "Creative Communities" (places). More recent reports continue to describe the regional creative economy and advocate for support and investment into its continued development.

For more information:

New England Creative Economy reports are available at the Creative Economy Council website:

www.creativeeconomy.org

Or contact:

Creative Economy Council
98 North Washington St.
Suite 201
Boston, MA 02114

Telephone: (802) 578-6551

The Michigan Arts and Culture Industry

Center for Arts and Public Policy

College of Fine, Performing and Communication Arts
Wayne State University

Since 1994, the nonpartisan Center for Arts and Public Policy (CAPP) at Wayne State University, in partnership with the Michigan Council for Arts and Cultural Affairs, has conducted research into arts and cultural issues and policies in Michigan.

In 2001 CAPP released *The Michigan Arts and Culture Industry: A Demographic and Economic Profile*, in which it identified arts and cultural activity as an industry in its own right, and documented the nature and size of the arts sector to demonstrate its economic impact. Subsequent reports explore other public policy issues related to arts and culture. The Center's most recent report is the October 2003 white paper, *The Rebirth of Arts and Culture*.

For more information:

The Center for Arts and Public Policy's Michigan Arts and Culture Industry reports are available online at the CAPP website:

www.capp-wsu.org

Or contact:

Center for Arts and Public Policy
Wayne State University
192 Manoogian Hall
Detroit MI 48202

Creative Industries 2005: The Congressional Report

Americans for the Arts

In March 2005 the national nonprofit organization Americans for the Arts released *Creative Industries 2005: The Congressional Report.* The report documents the number and distribution of arts-related businesses and employees in the United States.

According to *Creative Industries 2005,* there are over 578,000 "arts-centric" businesses in the United States, employing about three million people. Its analysis compares favorably the growth rates of the arts-related sector to the economy in general, and concludes the arts are a "robust and formidable" growth sector of the economy.

For more information:

The *Creative Industries* report is available online at the Americans for the Arts website, as are related resources including detailed reports and maps of every U.S. Congressional District:

www.AmericansForTheArts.org/CreativeIndustries

To contact Americans for the Arts:

1000 Vermont Avenue NW
6th Floor
Washington, DC 20005

Telephone: (202) 371-2830

Economic Benefits of Michigan's Arts and Cultural Activities

Michigan Nonprofit Research Program

The Michigan Nonprofit Research Program recently released an analysis, conducted by researchers at the W.E. Upjohn Institute for Employment Research, which provides information about the "economic benefits of Michigan's arts and cultural activities."

The report presents survey data from households, artists, and arts and cultural organziatons, and economic analysis of the direct and indirect economic impacts of cultural activities. Among the findings of the analysis are that arts and culture are responsible for more than 108,000 jobs, and generate at least two billion dollars annually for Michigan's economy.

For more information:

The *Economic Benefits* report is available online a tthe Michigan Nonprofit Association (MNA) website:

www.mnaonline.org

or call MNA at (888) 242-7075 (Michigan only)

or (517) 492-2400

Economic Impacts of Michigan's Museums

D. J. Stynes, G. A Vander Stoep, and Y. Sun
Department of Park, Recreation and Tourism Resources
Michigan State University

In October 2003 researchers at Michigan State University released a report prepared for the Michigan Economic Development Corporation/Travel Michigan documenting the economic contribution of museums to the State of Michigan.

The report includes both an "economic significance" analysis (all spending associated with museum visits) and an "economic impact" analysis (limited to the jobs and spending that would be lost to the state in the absence of museums. Based on a sample of trip spending reports of museum visitors in 2002, the report concluded that, without museums, approximately 15,000 jobs and 331 million dollars would be lost to the Michigan economy.

For more information:

The Michigan Museum Economic Impact Study is available from MEDC/Travel Michigan:

Travel Michigan
300 N. Washington Sq.
Lansing, MI 48913

Michigan New Economy Report

Community & Economic Development Program
School of Planning, Design, and Construction
Michigan State University

In June 2005 the MSU Community and Economic Development Program issued a report on Michigan's creative economy. The *Michigan New Economy* report examines the role of creativity in the knowledge-based economy, and presents an industry and occupation based analysis, patterned after the New England Creative Economy Initiative (see page 4), detailing Michigan's Creative Clusters and Creative Workforce.

The *New Economy Report* compares Michigan's share of employment in the creative economy to the nation as a whole. finds that while Michigan has approximately its expected share of businesses and jobs, wages in creative industries are somewhat higher in Michigan than the nation as a whole.

For more information:

The MSU CEDP Creative Economy Report is available on the CEDP website:

www.cedp.msu.edu

Or contact:

MSU CEDP
1801 W. Main St.
Lansing, MI 48915

Telephone: (517) 353-9555

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Learning to Think with Emotion

Robert S. Root-Bernstein and Michele Root-Bernstein

Nobel Laureate Barbara McClintock used to talk about developing a "feeling for the organism" so profound that she felt she had become the genes inside the corn plants she studied: "I found that the more I worked with them the bigger and bigger [they] got, and when I was really working with them I wasn't outside, I was down there. I was part of the system." Joshua Lederberg, another Nobel laureate, stressed the importance of learning how "to become an actor in a biological process, to know how [to] behave as if I were a chromosome." Albert Einstein wrote about mental experiments involving visual images and muscular feelings. And the mathematician Stanislaw M. Ulam said that he used mental images and tactile sensations to perform calculations, replacing numerical values with the weights and sizes of imagined objects.

Those descriptions of scientific thinking may surprise you. Many people are unaware of the secret hiding in the cognitive closet – that, as Einstein repeatedly stated, "No scientist thinks in equations." In addition, as we discovered in the research for our book *Sparks of Genius*, no scientist thinks in words. Nor, it turns out, do most creative people in any discipline.

For many authors, writing comes not from verbal formulations but, as Isabel Allende says, from "somewhere in my belly." Gary Snyder says writing starts with "visualizing and revisualizing," and Stephen Spender speaks of manipulating the "logic of images." The novelist and painter Wyndham Lewis noted that his art got him in the "habit of thinking of things in plastic and pictorial terms" when he wrote. Vladimir Nabokov credited his drawing teachers with developing his ability to meet the "camera-lucida needs of literary composition."

Such statements make writers sound like visual artists. Yet, the painter Susan Rothenberg describes her process of painting not as visual but as "really visceral. ... A lot of my work is about body orientation, both in the making of the work and in the sensing of space." Similarly, Henry Moore's sculptural ideas emerged not from what he saw, but from "try[ing] the positions oneself" so as to imagine "the form pressing from the inside trying to burst."

The imaginative processes of those writers and artists bear an uncanny resemblance to the way McClintock, Einstein, and other scientists solve problems. Indeed, they all use the same mental tools.

Creative thinking

Creative thinking – the kind of thinking in every discipline that generates and conceptualizes new insights – relies on what the philosopher Michael Polanyi has called "personal knowledge": images, patterns, sensual and muscular feelings, play-acting, empathizing, emotions, and intuitions. Those forms of knowledge have almost no place in our universities, where thinking is almost universally presented as if formal logic were its basis, and words and mathematics its languages of choice. New ideas, however, originate in nonlogical and nonverbal modes that are translated only later into symbolic languages. By slighting those preverbal forms of thinking, we stifle the inventive capacities of many students.

> *Creative thinking relies on forms of knowledge that have almost no place in our universities.*

Students should practice and master different kinds of thinking, and some innovative professors have come up with ways to teach them how to use mental tools that are new to them. For instance, to enhance understanding of the mathematics of physics, the physicist and amateur actor Jacob Shaham suggested having students treat equations as if they were the text of a play, and learn how to act them out. Just as Shakespeare's or Brecht's lines are cryptic abstractions of actions and events that can be brought to life only by staging them, equations and natural processes also can be dramatized.

The entomologist Catherine Bristow teaches by means of classroom theater how DNA produces proteins, allowing students access to the interior worlds frequented by McClintock and Lederberg. Bristow assigns her students roles as DNA bases, transfer RNA'S, and amino acids, and asks them to figure out how they must act in the drama of gene expression. The students embody their formal knowledge, developing a feel for the system from the inside out. Historians and anthropologists have staged similar re-creations, gaining new insights by acting out parts rather than passively reading about them.

Both artists and scientists learn imaginative skills by building things with blocks and making models, and students can do the same. Such exercises develop an awareness of form and of the relationship among shapes that is useful whether one needs to imagine the interactions of molecules or the structural stresses of an architectural design. Visual thinking can also be taught, as Woodie Flowers at the Massachusetts Institute of Technology and Robert McKim at Stanford University have done for years, by giving students simple exercises that involve making objects and drawing them from memory.

All forms of nonsymbolic thought require an awareness of sensual and emotional feelings. Even people who

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express themselves in words recognize, as the poet E. E. Cummings said, that "[t]he artist is not a man who describes but a man who FEELS." Thus, the methods of the great director Stanislavsky are of great educational value. His cultivation of attention to inner as well as outer experience is as important to the sciences and humanities as it is to acting or other arts.

We owe it to our students, and the world, to teach them to recognize and use creative mental tools.

Historians, sociologists, and even biologists develop an understanding of the people or animals they study through empathy. Mathematicians and physical scientists achieve visual, muscular, and tactile intuitions by paying attention to the feelings that problems and patterns evoke. The philosopher and mathematician Bertrand Russell stated that problems always emerge into consciousness through a feeling of discomfort, and the cyberneticist Norbert Wiener suggested that "[i]f there is one quality which marks the competent mathematician ... I think it is the power to 'operate' with temporary emotional [and sensual] symbols and to organize out of them a semipermanent, recallable language.

In Paris, a group of physicists choreographed and performed a dance to explore how it felt to interact as electrons – a truly physical form of research. Conversely, the dance group Pilobolus is famous for transforming basic principles of balance, torque, and centripetal force into novel movements. The dancers' knowledge of physics allows them to meld visceral with intellectual insight.

If the skills of playwrights and actors can help mathematicians and biologists to empathize with their subjects, then clearly those disciplines should speak to one another. If both poets and chemists need to be able to imagine a series of events that they will transform into emotional or chemical reactions, then obviously they would benefit from similar – perhaps shared – exercises in sensual imaging or visual thinking, or even drawing classes. If physicists can dance their understanding of electrons and dancers can embody basic physical principles, then those disciplines can be explored in unison.

Exploring ideas in nonverbal forms is only the first step, however. Students also need to practice translating between imaginative tools for thinking and the formal languages of communication. Einstein wrote that after he had solved his problems visually and kinesthetically, "conventional words or other signs have to be sought for laboriously... in a secondary stage." The sculptor Louise Bourgeois says, "I try to translate my problem into stone." Georgia O'Keeffe described her paintings as the "equivalents" of her ideas, just as T. S. Eliot said that, in his poems, "I now have the equivalent in words for much of what I have felt." Things discovered sensually, emotionally, intuitively, and privately must be transformed into public expressions using the language of one's discipline.

Implications for Educators

Logic, numbers, and words are ends, not means. If we want to educate students capable of invention within their chosen fields, we must do two things: first, provide them with a rich repertoire of creative mental tools, such as imaging, abstracting, empathizing or play-acting, kinesthetic thinking, analogizing, and modeling; and second, train them in the skills needed to translate what they learn through those tools into formal, symbolic languages such as words, dance, music, or mathematics.

We are not calling for a revolution in education. The inclusion of nonsymbolic mental tools within the curriculum requires only minor changes. One is to emphasize the processes of thinking, along with their results. Every class in every subject could explain not only what we know, but how that knowledge was imagined or invented. Every teacher can draw on his or her own experiences, or those of exemplary individuals within the field, to describe nonsymbolic ways of thinking about the subject. The translation process into a symbolic language could be described explicitly and practiced through appropriate exercises. For instance, a professor could have students transform an image into words, or act out an equation.

Specialists in each discipline should agree to use a common language for describing thinking, pointing out where they use various mental tools in their work. Using terms such as "empathizing" or "imaging" in every class would automatically build transdisciplinary bridges. Such bridges could be broadened if, in addition, teachers explicitly stated that those imaginative thinking tools can be used to understand anything. As a century of research has shown, material that students learn in one disciplinary context tends to be used exclusively in that context. whereas material that is described as having broader applications is often used in other contexts.

The most successful people in every field share an ability to think in ways that we seldom teach in the classroom. We owe it to our students, and to the world that can benefit from their creativity, to teach them how to recognize and use those mental tools.

Robert S. Root-Bernstein is a professor of physiology and medical humanities at Michigan State University. Michele Root-Bernstein is a writer and historian. They are the authors of Sparks of Genius: The Thirteen Thinking Tools of the World's Most Creative People *(Houghton Mifflin, 1999).*

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The Global Knowledge Map:
Defining the International Knowledge Race
Shalini Venturelli

For quite some time, attention has been focused on best methods to compete in an industrial economy, while there was little comparative analysis on exactly how the winning formula might shift for a knowledge-based economy. During the past decade, I have roamed the world trying to understand how societies gain a knowledge advantage, how they build on that lead, or lose it to others, and the policy frameworks most likely to promote knowledge growth and not just industrial preeminence. In short, I have found that the core asset of the knowledge-based economy is the creative human mind, enhanced by appropriate structures, dynamic institutions, and an adaptive policy framework.

If the goal is to promote cascading benefits to all sectors of economy and levels of society, we must fundamentally rethink the challenges of knowledge-based development.

Dimensions of the Knowledge Race

By investigating four of the world's most important knowledge systems, I was able to pinpoint certain defining dimensions of the global knowledge race that are seldom addressed in the current debate on outsourcing and international competitiveness. These include:

- Core characteristics or properties of a dynamic knowledge environment;
- Essential cultural and economic preconditions that determine prospects for knowledge development, or factors that explain knowledge growth differences; and
- Most effective policy frameworks for promoting knowledge-based growth, including current gaps in thinking about these issues in policy decision-making.

Comparing Global Regions

The first step in understanding the demands of the knowledge economy and devising effective strategies is to compare the principal regional knowledge systems that compete with each other globally, setting standards for the rest of the world. These are: the European Union (EU), East Asia, India, and the United States. Approaches adopted by the four are neither identical nor compatible, and reflect profoundly competing conceptions of the information age. Each region and society is engaged in internal debates over social and economic priorities for conversion from industrial to information production, conflicts over what a knowledge economy means, and struggles over the appropriate role of government. These divergences are instructive, for they reflect contradictory traditions of regulation, information policy, social models, and political constraints. My long-term study of the models vying for influence in public policy in major regions of the world demonstrates that the form in which information technologies and knowledge systems evolve are not intrinsically determined by technology or tradition, but are in fact politically and culturally shaped by prevailing institutions and social forces. My research has revealed defining policy characteristics and a distinctive mix of good and bad cultural and economic choices. While some regions emerge ahead of others, most reveal significant shortcomings in conceptualizing and implementing the core set of cultural, social and economic preconditions essential to a dynamic knowledge economy.

European Union: European nations and the EU show relative strengths but also considerable weaknesses as a regional knowledge marketplace. Although variations in approach and emphasis from country to country do exist, the entire European continent – stretching from the UK to the eastern borders of Poland – has historically followed a combined public-service, nationalist and cultural model for organizing the structure of communications. The primary determinant of the European knowledge system remains firmly ensconced within the regulatory arms of states (or the EU itself, to which even further net power is transferred to determine knowledge outcomes), instead of ceding information exploitation to the market or to civil society.

This points to a separate and distinctive European path to the information age, which has a number of core attributes. Among these is the continued resilience and persistence of the European social model and political tradition of public service subsidies for information production, with top-down state-directed orchestration of the design and function of knowledge institutions such as universities and research entities, and of information markets and networks. Allied to this is a regulatory tradition that constitutionally privileges the state's interest and universal access guarantees over entrepreneurial incentives, proprietary rights and contractual freedoms, despite timid attempts at the EU level to apply liberal market principles to the information system.

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There are historically few examples of societies with extensive speech or content codes and weak protections for the public domain that have successfully competed in the production of ideas against others enjoying relatively fewer codes. The grounds for intervention in the information sector might be entirely rational, fair and democratic, but historical evidence shows the price to knowledge growth is immense, since content codes inhibit the inherently chaotic and unpredictable character of ideas as they unwind throughout the social fabric. This phenomenon can be observed both in societies that are democratic and humane as well as societies that are autocratic, authoritarian and tyrannical. The inhibitive effect on low-risk idea experimentation is the same; only the degree varies. As a result, the EU model of the information society indicates relatively weaker conditions for knowledge growth and innovation.

East Asia: Since the 1990s the Asia-Pacific region – which includes East Asian economies of Japan, South Korea, Taiwan, Hong Kong, Malaysia, Indonesia, Singapore and indeed China – has experienced rapid growth in the adoption and use of new information technologies and networks. With tens of millions of Internet users today in a region representing half the world's population, the rapid growth forecast of additional hundreds of millions of users by the first decade of the twenty-first century should far exceed usage rates in North America and Europe. Two frameworks are shaping the knowledge economy in this region: the state-led development approach and the liberal corporatist model, neither of which can be found in precisely the same form in Europe or the United States. East Asia thus has an historic opportunity to evolve its own separate paradigm and international standard of a knowledge system. Could East Asia's policies deliver a greater advantage in the global economy? As in the case of Europe, when considering the presence or absence of key factors, the answer is "not likely."

The prevalence of a centralized and excessively managed information sector points to slow and controlled development of knowledge resources in the foreseeable future. Governmental decision-making authority over what counts as 'good' and 'bad' information structures precludes the possibility for entrepreneurial risk-taking and requisite perpetual disruption of technologies necessary to promote both a competitive information marketplace and the needs of citizens for outward momentum in production of content, not just devices and infrastructure. Even with the more liberalized economies of the region, such as Japan, South Korea and Singapore, which enjoy diffusion of technologies at an energetic page, it would be difficult to construct self-sustaining and self-accelerating knowledge systems relative to other regions of the world because of inherent structural flaws in the information system. The primary cause of this deficit is the region's cultural and political resistance to substantive decentralization of information space, resulting in the sluggish growth deeply embedded social networks that can only be fueled by vigorous exploitation of ideas.

The United States must take the creative capacities of its labor force as seriously as considerations of national security and defense.

India: India's information marketplace exhibits a hybrid of American and Asian characteristics. As a pluralistic democracy composed of a rich and differentiated speech system, India's strength in indigenous content production across all forms of cultural and information classes tracks closely with that of the United States, giving it a significant advantage over other Asian nations. Preexisting strengths in diverse modes of publishing and audio-visual production, coupled with a profusion of creative labor, explains why India is not only a global supplier of new information products such as software, but also a leader in every other information category, including film, music, books, research and intellectual capital. India also profits from a competitive wage advantage in the knowledge sector.

On the other hand, and very like other Asian societies, India's social networks are exceedingly stratified and resistant to alterations in the internal social structure. For India to maintain its current momentum, fundamental social restructuring is imperative. Inefficient, inconsistent and often incoherent policy design inhibits entrepreneurial risk-taking, while rigidities of deep social divisions generated from an intractable caste system and extreme economic polarization continue to tether India's real creative potential. Barring any radical changes in direction, India's knowledge economy, which has attracted foreign investment because of its lower wage rates, should peak very rapidly as the supply of the conceptually skilled labor force from existing knowledge institutions cannot keep pace, ultimately yielding diminishing returns and rising wage scales.

United States: This brings us to the fourth significant global region in the race for leadership of the knowledge economy. The information revolution of the late twentieth century originated and was shaped in the United States. The notion of individuals and societies linked together through networks of communications

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Metropolitan Michigan Knowledge Economy Indicators

Community & Economic Development Program
School of Planning, Design, and Construction
Michigan State University

The Knowledge Economy Research Team of the MSU Community and Economic Development Program recently released a report presenting knowledge economy indicators for eight metropolitan regions of Michigan. Building upon the CEDP's 2004 county-level analysis, the *Metropolitan Indicators* report includes measures of physical infrastructure, human capital, and creative capacity in four categories: Knowledge Jobs, Innovation, Digital Economy, and Globalization. The report is intended to support the efforts of local economic development practitioners to improve communities' competitiveness in the highly competitive global knowledge economy.

For more information:

The Metropolitan Michigan Knowledge Indicators report is available on the CEDP and SmartMichigan websites:

www.cedp.msu.edu

www.smartmichigan.org

Or contact:

MSU CEDP
1801 W. Main St.
Lansing, MI 48915

Telephone: (517) 353-9555

technologies, thereby unleashing the untapped potential of the human mind, is a unique American vision. One may even argue this vision is indigenous to the American identity, articulated by the founders who conceived of a republic of ideas. "Ideas," Thomas Jefferson wrote, "should freely spread from one to another over the globe . . . like fire, expansible over all space . . . and like the air in which we breathe." No better description of the information revolution in the new millennium could possibly be offered by a scientist, citizen, entrepreneur or politician today. The knowledge explosion generated by this country during the past century is not due to the genius of the U.S. government, but primarily resulted from the unmanaged and ungovernable exploitation of ideas by social and entrepreneurial networks and institutions, deeply embedded within a civil society and an information marketplace.

Historians and economists often measure societies by a 'genius meter' exhibited by the number of inventors and creators, but that mistakes the symptom for the cause. Instead, by clicking 'up' one or two levels, and by systematically examining the structural pattern of information revolutions over three millennia, it becomes evident that the condition of uncontainable information manipulation radiating outward through social and market networks comprises the single most important historically-proven method for assuring *continual delivery of a knowledge premium*. The United States fits all these parameters. The substantive knowledge advantage is vast in comparison with societies primarily dependent upon the state to tend and manage their information order, or where civil society is simply unable to cultivate social networks and knowledge institutions with active and vigorous information-sharing and production.

Even if if the country maintains or enhances its overall global lead, how can it ensure that most regions and communities within the United States are rapidly converted to higher order knowledge growth?

But the status quo cannot last. We are already seeing a fierce and intense effort by the EU, China and India to erase America's advantage in conceptual creative output – the growth of global communications networks practically guarantees a fast-paced engagement on all fronts. The outcome of this competition will determine every dimension of dominance for the entire twenty-first century: economic, cultural and geopolitical. So the stakes are by no means marginal. From the American standpoint, three pressing questions thus arise: First, is the gap closing rapidly or can the U.S. maintain and grow its lead in idea mutation, creativity, imagination, inventiveness and technological innovation on an upwardly spiraling scale of complexity? Second, what principal soft and blind spots in the American knowledge system can be identified and addressed effectively, including through public policy? And third, even if the country maintains or enhances its overall global lead, how can it ensure that most regions, localities and communities *within* the U.S. are rapidly converted to higher-order knowledge growth so huge disparities caused by erosion of the industrial model of development can be effectively mitigated?

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Jack Patriarche: A Man in Motion

Bette Downs

If you happen to meet Jack Patriarche in the dining room at the Burcham Hills Retirement Community in East Lansing, Michigan, you will see a man in motion. Tall and energetic, he is a cheerful presence in the spacious area.

A Burcham Hills resident since 1996, Patriarche greets friends in a daily ritual of conviviality. Asked whether he prefers Jack or John, he responds in his typical easygoing manner, "It doesn't matter." An East Lansing resident since age five, he can name the City's past and present leaders and discuss their history.

Patriarche began working for the City of East Lansing in 1939 as an operator and then superintendent of a new sewage treatment plant. Thirty-seven years later, on September 16, 1976, his retirement triggered John Patriarche Day, a gala event with several components. At a ceremony at the East Lansing Public Library, a group of community leaders presented to Patriarche and his wife the first copy of "At the Campus Gate, a History of East Lansing." The book bears the inscription "To…a remarkable couple." Patriarche wrote a segment of the book covering East Lansing's "middle years."

Dedication of Patriarche Park followed, with the unveiling of a large sign designed by City landscape architect Bruce Mitchell. The sign identifies an extensive recreation area at Saginaw Highway and Alton Street. A reception at City Hall, a banquet at the Kellogg Center, with former Mayor Gordon Thomas as master of ceremonies, and a presentation of gifts and awards completed the festivities.

Speaking at the park dedication, Mayor Gordon Griffiths said, "It is most fitting that the park bear the name of John Patriarche because its very existence stems from the city manager's foresight in purchasing the land outside the city limits. He has done much to make the whole city and enjoyable place."

Patriarche's father, who graduated from Michigan Agricultural College (changed to Michigan State Agriculture and Applied Science, then to Michigan State University) in 1902, moved his family from Waltham, Massachusetts to East Lansing to accept a position as assistant librarian at the College. He died of pneumonia six months later.

To support her four young children, his widow opened a lending library and gift shop. Soon after, Jack Patriarche began his career as a man in motion. He became a multi-tasker years before adoption of the term. He ran a popcorn machine at a local drug store, maintained a magazine and newspaper route with his brother, and managed his high school basketball team at today's Hannah Community Center, at the time, a new high school located in a swamp at Abbott Road and Burcham Drive.

Patriarche graduated from Michigan State College in 1938 with a degree in civil engineering. Brief employment with the Abrams Aerial Survey and with Great Lakes Steel as a scarfer preceded his City of East Lansing career. He says, "Work as a scarfer had little appeal. It involved a lot of heat." In choosing employment with the City of East Lansing, Patriarche followed a path established by his mother who served as City treasurer.

While continuing his job as superintendent of the sewage treatment plant, Patriarche became superintendent of public works, then City Assessor, then City Engineer, then City Clerk, and finally City Manager. He held all these jobs simultaneously for a short time but as City Manager, he was able to hire staff to handle the enormous workload.

As East Lansing's City Manager, Patriarche pursued a relationship with MSU, which had begun in 1926 when the City began providing sewage treatment services for the school. Through contractual arrangements, the City continued to offer critical services for the school and also for the Board of Education.

In 1945, the City assumed responsibility for MSU fire protection. Later, MSU President John Hannah saw the need for a bridge on Bogue Street to provide easy access to the campus as it expanded eastward. Under Patriarche's guidance, the City built that bridge.

In keeping with his penchant for multiple tasks, Patriarche became a leader in both the Michigan and International Association of City Managers. He served as president of the Michigan Association in 1954 and of the International in 1967 and 1968. Both positions led to extensive travel and, as president of the International, Patriarche left his East Lansing post for a month and, accompanied

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by his wife, he met with city managers in Ireland, England, Germany, and Italy.

In retirement, Patriarche has continued his relationship with MSU. At the request of Dr. Rex LaMore, director of MSU's Community and Economic Development Program, Patriarche recently took a position as consultant to the city manager of Benton Harbor. At the time, Dr. LaMore and his staff had embarked on a program to address the troubled city's grave problems.

With his engineering background and years of experience as an East Lansing administrator, Patriarche could offer assistance on maintenance, finances, social issues, and local governance. His response to the Benton Harbor challenge: "I enjoyed it."

Despite occasional town and gown turmoil, sometimes fueled by student opposition to the Vietnam War, Patriarche describes his relationship with the University as "always cordial."

George Griffiths, who served on the East Lansing City Council before becoming mayor in 1975, worked closely with Patriarche. During this period, Michigan Supreme Court gave students the right to vote at their school location. Also, Congress lowered the voting age to 18. Griffiths points out, "Students were empowered to have a significant part in deciding the future of the City. The Vietnam War was still raging and so were students' attitudes."

With these changes, the number of registered voters increased from 14,000 to 36,000. At the same time, East Lansing and the University cooperated to address critical housing and civil rights issues. All this occurred during periods of dramatic population growth for the City and the University, concurrent with annexation of sizeable portions of land.

Despite these complications, Griffith says, "I never saw Jack in a complaining mood. He is a spectacular man in many ways. He was most helpful in explaining the basis of council responsibilities to me and spent a good deal of time patiently showing me such things as how to read the budget sheet forms. He did not have to do that."

Later, as president of the American Society for Public Administration, Michigan Capital Area Chapter, Griffiths and others named Patriarche outstanding public administrator of the year for his dedication and service.

Not yet ready for total leisure following his 1976 retirement, Patriarche became executive director of the Michigan Municipal League, a position he held for seven years. In this new role, he managed an organization formed in 1899 to aid the State's cities and villages. The new position led to residence in Ann Arbor after which Patriarch and his wife returned to East Lansing for 12 years of condominium living. A move to Burcham followed. Still not ready for sedentary life, Patriarche became president of the Burcham Hills Retirement Association, a position he has held for more than eight years.

Presiding over monthly meetings of the executive committee, Patriarche requests reports from seven committees. He also works with recreation staff on program planning. Copies of executive committee meeting minutes go to various locations in the building for easy access.

As president of the resident group, Patriarche attends meetings of the non-profit retirement corporation which operates Burcham, although he does not have a vote. Recently, his son Dennis has accepted membership on the Burcham board.

Patriarche has encountered awe among his friends and colleagues because of his prodigious memory. "I hold him in high regard," says Grace Hill, a Burcham resident and member of the Resident Association executive committee. "He's a gentleman who knows everything."

Patriarche has solved financial problems, managed the construction of a bridge, and handled student demonstrations. As a leader at Burcham Hills, he remains a man in motion. Asked to name the most interesting part of his many jobs, Patriarche replied, "Dealing with people."

Bette Downs is a regular contributor to Community News & Views. She lives in East Lansing.

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Competition among the four global knowledge systems requires America to take the creative capacities of its labor force as seriously as considerations of national security and defense. Indeed, the latter is but a product of the former. To achieve first-rank position in the global marketplace will require a shift in thinking about critical resources. The usual resource categories of metals, minerals, agricultural and industrial goods, and even fossil fuels, are receding in their importance. Not even financial capital counts as the critical resource in the new economy. These are all quantifiable and relatively finite resources, subject to the reality of limits and scarcity. Instead, the critical resource of the new century and into the foreseeable future is the *magnification of creative and intellectual capacities* by building higher-order knowledge skill-sets, and by clustering, networking, and interweaving the minds of the entire labor force. I call this the construction of a '*common innovation platform,*' a strategy I propose for increasing 'social bandwidths' and the likelihood of producing useful knowledge through exponential rates of idea-exploitation. Among all knowledge systems, America is uniquely equipped for this adjustment.

Building 'Knowledge Engines'

In short, the core asset of a knowledge-based economy is the human mind and its enhanced qualities as boosted by appropriate cultural and economic structures, dynamic knowledge institutions, and a flexible policy framework with built-in mechanisms to change with circumstances. To be winners in the coming age, societies must succeed as 'knowledge engines.'

How do we identify the properties of such a knowledge engine? I conclude this article with insights from my comparative study of dominant world knowledge systems. I believe there are eight indispensable properties of a real – rather than a rhetorical – knowledge-generating system, or 'knowledge-engine':

1. 'Knowledge' and 'information' are quite different forms of idea templates so that abundance of information does not necessarily imply the presence of knowledge dynamics.
2. A dynamic knowledge system must build out and continually expand upon the knowledge foundation—transmission of the existing knowledge base, no matter how efficiently conducted, is acutely inadequate to knowledge growth.
3. Unlike information, knowledge implies an active rather than passive relation to ideas, suggesting that knowledge-transfer or distribution through information networks on their own could not catalyze a knowledge system.
4. Unlike ideas in their generic sense, ideas linked to knowledge arise primarily from independent, non-coerced, non-conformist judgment and creativity, and not from regurgitation of conventional thought. Thus technological advancement constructed on adaptation, imitation or replication alone will not lead to knowledge development. The capacity of a society and economy for original conceptualizations in all fields is not proven by mere skills of reproduction.

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To be winners in the coming age, societies must succeed as 'knowledge engines.'

5. Knowledge environments require not just idea production—generally spun from the educational base—but also manipulation, modification and disruption of the canon in order to leap discontinuously to the successive planes on the knowledge spiral.
6. Dynamic knowledge trajectories radiating in every direction arise only within an institutionally and culturally unconstrained environment that is relatively safe for risk-takers.
7. Knowledge systems are constituted in participation not just information access, arising from associational exchange, sharing, and random as well as chaotic network pathways.
8. Ideas must be exploited not just for commercial purposes but also for social development through multiple branches of cross-fertilization. Economies that restrict information usage for market applications only will set artificial limits on vertical, horizontal and oblique directions of knowledge expansion.

Conclusion

There is a great deal more we need to learn about designing self-sustaining, virtuously expanding and dynamic knowledge systems that generate micro and macro innovations across every sector of economy and society. Historical transformation of the international order has not delivered to either the U.S. or any other major economy the luxury of time. Waiting for events to catch up with us means permanently losing ground since the pace of the knowledge economy is so much more rapid than that of the industrially-tethered economy. For this reason, every region and community in America will need integration into a 'common innovation platform' on which diverse and competing forms of knowledge production and creativity can be launched.

Shalini Venturelli is Professor of International Communication, Knowledge Development and International Relations at American Univeristy in Washington, DC.

CEDP UPDATES

2005 Community and Economic Development Awards

At its 18th annual Summer Institute on June 15, the Michigan State University Community and Economic Development Program (CEDP) and the MSU-EDA University Center will recognize the 2005 recipients of the Community and Economic Development Awards. Awards are presented annually in two categories: Outstanding Scholarship and Best Practice. Awardees receive a complimentary registration for the Summer Institute and are invited to present summaries of their work via the CEDP web page, in a newsletter article, or as part of a seminar series hosted by the CEDP, during the coming academic year.

This year's award recipients embody the ideals and principles of effective community development; each represents a localized response to a need or issue identified from within the community. Recipients for 2005 include The Writing Center at MSU (for Outstanding Scholarship), the Garden Project of the Greater Lansing Food Bank (Best Practice), and Jane French of Miller Manor in Ann Arbor.

Janet Swenson, director of the MSU Writing Center, is scheduled to accept the award for scholarship at the presentation ceremony. Under Swenson's leadership, and that of founding director Patricia Stock, the Writing Center has engaged students in community writing consultancies and other engaged learning opportunities that contribute to improved literacy in distressed communities while providing exceptional educational experiences for students.

The Garden Project, a program of the Greater Lansing Food Bank, is being honored in the category of Best Practice for its sustained program of community gardens and fresh produce 'gleaning' in the Lansing area. Such programs, with broad-based support from throughout the community, have succeeded in building neighborhood social capital while providing wholesome locally grown food for area residents.

Jane French of Ann Arbor will also receive a 2005 Best Practice award, for kindling the artistic energies of her friends and neighbors in the public housing development in which she lives. With support from the Ann Arbor Housing Commission, which took a residential unit 'offline' to provide space for an art studio, French not only filled the studio itself with art, but soon produced wall murals throughout the building's public space.

More information about the 2005 Community and Economic Development award winners will be available soon on the CEDP website, www.cedp.msu.edu.

2005 Summer Institute Is Going Digital!

The 2005 Summer Institute, "Ideas and Dollars: How Cultural Economic Development 'makes cents' for Michigan," will be digitally recorded and stored online for viewing on your computer.

Find it in the archives at
www.wmsu.org
or visit the CEDP website at
www.cedp.msu.edu for a link.

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