Extreme Competition

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The Meaning of 21st Century Business: Unleashing the Power Within Using Social Networks

Prelude

Before we begin, most Columns written about business innovation are prescriptive, providing readers with advice on what they *should* be doing. Please be forewarned that this Column is not such. It's not at all about "how," but about "what." If we don't know the what, the how is irrelevant. The "what" I'm going to introduce is the "Big What," the "what the heck is going on in our world," the bigger world outside the business world. It's high time we look up from our day-to-day grind in these uncertain times to really think about what's going on in the bigger world. I sent an early draft of this Column to some pretty deep thinkers at the intersection of business and technology, and a few responded that it's great material, but takes a bit too long to get to "the point." But that is indeed the point of this Column; I don't want to get to a point, certainly not a point of prescription. I want to set out a framework for thinking about the world as it is now, a world that has changed, changed utterly. In short, I want to do some reporting, not pontificating.

The feedback I received from Maria José Moreira, CSC's Business Architecture Manager in Brazil is especially telling, "I believe the unbalanced world we see is a result of the loss of connection. We are essentially made to connect – with nature and with each other. We were made to exchange, to discuss, to interact, to dialogue, and to transmit. Therefore, technology development in social networking is extremely important as it allows us to connect, to interact. This tool can be a competitive advantage for companies if well employed. Teams can extrapolate the limits of the organization and interact in an unlimited universe of knowledge.

"Organizations that function as closed systems, according to the laws of thermodynamics, are in the final state of evolution [*entropy*], a point in which the system has exhausted its capacity to change. Their sub-systems do not interact and such organizations do not interact with the environment, therefore losing flexibility and the ability to adapt. Realizing the value of connections, therefore, becomes one of the most valuable capabilities for organizations. Once we understand that, a virtual team enters the stage - unlimited and with infinite innovative power [*extropy*]."

As The World Turns

The blockbuster soap opera, *As The World Turns,* aired on CBS from April 2, 1956 to September 17, 2010. But the world didn't stop turning last September. If anything it's turning at an ever-faster rate, and the people and companies that inhabit the third rock form the sun are living in the midst of unprecedented, unexpected, *exponential* change. Indeed, the very significance of what it means to be a business in the 21st century has changed, changed forever.

Companies that want to survive in the dizzying world we now live in had better become keen observers and position themselves to adapt to the current megatrends. You see, it's the bigger

change in the outside world that businesses must adapt to, not extrapolation of the business world as we've come to know it over the past 200 years—*business as usual* is gone forever; *business as unusual* is here now.

Want to chart your company's future? Jump waist deep into understanding the real changes going on outside of the business world, for it's indeed that world that the business world serves.

"The real voyage of discovery consists not in seeking new landscapes, but in having new eyes." —Marcel Proust.

I know, I know, like me you don't have the time, but before you even start reading this Column, please invest 4 minutes to help us both set the stage by watching:

Open the Youtube link: http://www.youtube.com/watch?v=jbkSRLYSojo

Though unfortunately mixing correlation with causation, e.g., health with wealth, Prof. Hans Rosling's stats present an animated time-lapse chart summarized by David Brooks in the *New York Times*, "Beginning in 1810, many nations were clumped on the bottom left-hand side of the chart indicating low income and low life expectancy. Then the industrial revolution kicks in and the nations of the West surge upward and to the right as they get richer and healthier. By 1948, it's like a race, with the United States out front and the other nations of the world stretched in a long tail behind. Then, over the last few decades, the social structure of the world changes. The Asian and Latin American countries begin to catch up. With the exception of the African nations, living standards start to converge. Now most countries are clumped toward the top end of the chart, thanks to the incredible reductions in global poverty and improvements in health." [1]

According to a special report in *Reuters*, "Chinese consumption has grown by more than 9 percent a year, after adjustment for inflation, over the past decade. China overtook the United States in 2009 as the world's leading automobile market. The real-estate market is on fire, swelling demand for appliances and furniture. China is No. 2 in sales of luxury goods." [2] And don't forget that China produces 90% of the rare earth elements needed to power industrial societies, and currently wants to restrict the export of such. Available economic, educational, and military data indicate that, when it comes to U.S. global power, negative trends will aggregate rapidly by 2020 and are likely to reach a critical mass no later than 2030.

The American Century, proclaimed so triumphantly at the start of World War II, will be tattered and fading by 2025, its eighth decade, and could be history by 2030. Significantly, in 2008, the

U.S. National Intelligence Council admitted for the first time that America's global power was indeed on a declining trajectory. In one of its periodic futuristic reports, *Global Trends 2025*, the Council cited "the transfer of global wealth and economic power now under way, roughly from West to East" and "without precedent in modern history," as the primary factor in the decline of the United States' relative strength—even in the military realm."

But wait. There's more under the covers of Rosling's stats that reveal the real world, especially now that many of earth's 6.8+ billion humans have growing access to a whole new world of communication. Just consider this map that is actually a visualization of millions of Facebook friendships between cities around the world:

http://www.dailymail.co.uk/sciencetech/article-1338538/Facebook-connected-world-Map-created-using-friendships-cities.html.

Creator of the image, Paul Butler, writes: "After a few minutes of rendering, the new plot appeared, and I was a bit taken aback by what I saw. What really struck me was knowing that the lines didn't represent coasts or rivers or political borders, but real human relationships. It's not just a pretty picture, it's a reaffirmation of the impact we have in connecting people, even across oceans and borders." [3]

> *The earth to be spann'd, connected by network,*
> *The oceans to be cross'd, the distant brought near,*
> *The lands to be welded together.*
> *—Walt Whitman, Passage to India!*

In the past, information technology was about productivity; now, in the Cloud, it's about collaboration, a shared information base, and collective intelligence (the wisdom of crowds and global social networking).

Beyond inventions that led to the Industrial Age of mass consumption, historians have pointed to the printing press as the precursor and enabler of democratic societies. Oh my, what will World Wide Web do to the future of societies, to the future of the firm, when the entire world shares One computer, One information base and One town hall—in short, when the entire world shares what *Wired* magazine's Kevin Kelly calls "The One?"

If mankind survives, the world population is forecast to grow by the equivalent of adding three new Chinas by the year 2050. That future is fully dependent on mankind's relationship with technology. As James Martin writes in *The Meaning of the 21st Century,* "We are at an extraordinary crossroads of human history. Our actions, or failure to act, during the next 20 years will determine the fate of the Earth and human civilization for centuries to come. This is a make-or-break century. Humanity's demands for affluence are growing rapidly. If we are able to make the planet work, we face a magnificent future. If we fail, we could be headed for a new Dark Age. Our actions, or failure to act, during the next 20 years will determine the fate of the Earth and human civilization for centuries to come." I know, you don't have time, but if you can squeeze in 11 minutes, watch the trailer to Martin's film narrated by Michael Douglas:

http://www.jamesmartin.com/film
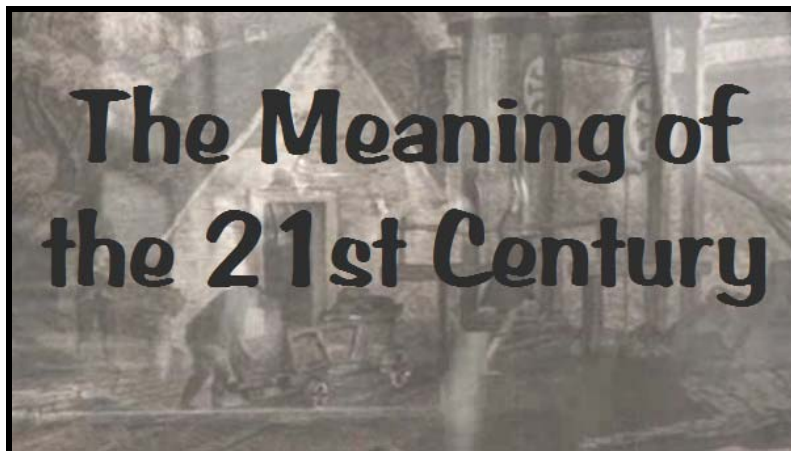
What the Heck is Technology?

Okay, let's agree for a moment that the future is fully dependent on mankind's relationship with technology. Some (e.g., Ray Kurzweil in *The Singularity Is Near*) postulate that the fusion of mankind and technology will reach the point of "singularity." Most readers of this column might consider themselves to be "technologists." But wait. What the heck is technology, technology of any sort, including Information Technology (IT)? Actually that's a HUGE question, and one that we can turn to two people who have studied this question in great depth:
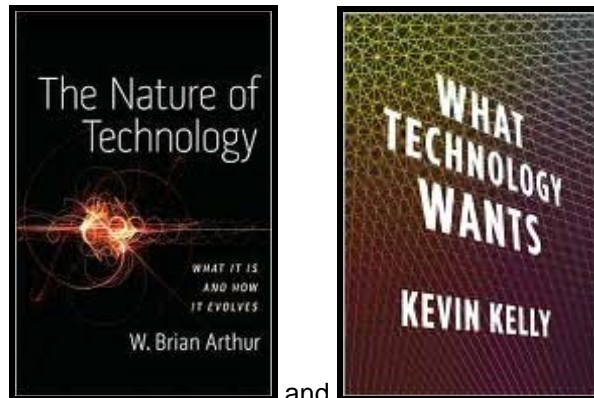
 and
Visit their Web sites ...
http://tuvalu.santafe.edu/~wbarthur
http://www.kk.org

Get back to me after you have digested their remarkable insights! But for our current discussion, let's just say that the relationship of technology (whatever that *is*) and society is huge. More powerful than religion or politics, it's technology that shapes societies and humankind in general. Consider the harnessing of fire, the invention of the wheel, the steam engine, mass production, the airplane and the Internet.

What is Technology and How Does it Evolve?

Brian Arthur's *Nature of Technology* is an elegant and powerful theory of the origins and evolution of technology. It accomplishes for the progress of technology what Thomas Kuhn's *The Structure of Scientific Revolutions* did for scientific progress. Arthur explains how transformative new technologies arise and how innovation really works. Conventional thinking ascribes the invention of technologies to "thinking outside the box," or vaguely to genius or creativity, but Arthur shows that such explanations are inadequate. Rather, technologies are put together from pieces— themselves technologies—that already exist. Technologies therefore share common ancestries, and combine, morph, and combine again, to create further technologies. Technology evolves much as a coral reef builds itself from activities of small organisms—it creates itself from itself (autopoiesis); and all technologies are descended from earlier technologies. Arthur postulates that all future technologies will derive from those that now exist (perhaps in no obvious way) because these are the elements that will form further elements that will eventually make these future technologies possible.

When it comes to the modern enterprise, Vinnie Merchadani encapsulates the notion of combinatorial innovation in his book, *The New Polymath*, "A Polymath—the Greek word for Renaissance Man—is one who excels in many disciplines. From Leonardo da Vinci to Benjamin Franklin, we have relied on Polymaths to innovate and find creative solutions to the problems of the day. How would these Renaissance men and women manage our current technology bounty? Which disciplines would they choose to focus on? Would they work on the architecture of next-generation green cities, or focus on nanotechnology? As our challenges have grown exponentially we need to bring together da Vinci, Franklin, and many more. The New Polymath is an enterprise that excels in multiple technologies—infotech, cleantech, healthtech, and other

tech—and leverages multiple talent pools to create new medicine, new energy, and new algorithms. Merchandani categorizes eleven "building blocks" for the New Polymaths to leverage, including next-generation analytics, cloud computing, sustainability, and social networks.

Kevin Kelly takes it a step further, defining technology as *part* of our thought process, as a natural extension of evolution and a natural, living system. In fact, technology is not a sufficient word for what Kelly is trying to grasp, so he's coined a new word—the *technium* to mean a whole system (as in "technology accelerates"). He reserves the term technology to mean a specific technology, such as radar or plastic polymers. For example, he would say, "The technium accelerates the invention of technologies." In other words, technologies can be patented, while the *technium* includes the patent system itself. He then traces the technium back to our hunter-gatherer past to document how it evolved to its current state.

The technium gains immense power not only from its scale but from its self-amplifying nature. One breakthrough invention, such as the alphabet, the steam-pump, or electricity, can lead to further breakthrough inventions, such as books, coal mines, and telephones. These advances in turn lead to other breakthrough inventions, such as libraries, power generators, and the Internet.

The technium is "human extended," something we've been building and evolving since we have been building and evolving. It is the "extended body for ideas." And to be in business today, to truly innovate, it is important to have a grasp on that "extended body for ideas"—to know that the answer to your business's troubles isn't to get on Twitter, but to understand the changing environment that bred it. You won't find any immediately applicable business solutions in *What Technology Wants*, but you will find something that could be much more important to your business—a new way of looking at the world.

What Does All This Mean?

"When the facts change, I change my mind. What do you do, sir?"
 —John Maynard Keynes

To keep abreast of the dramatic change going on in the world, smart companies are increasingly turning to social networks to:
  ▪   Tap the wisdom of crowds
  ▪   Harness the power of weak connections
  ▪   Form work groups inside and outside the firm
  ▪   Manage knowledge via wikis
  ▪   Tweet on real-time activities
  ▪   Incorporate social computing into Business Process Management (BPM)
  ▪   Search profiles to find needed human resources
  ▪   Retain and transfer the knowledge of experienced workers leaving the workforce

What do companies seek from social networks? In a word, innovation—today's Holy Grail in business. Social networks can provide new means for acquiring and managing knowledge.

All this sounds wonderful. But is it, really? What about knowledge *work* versus knowledge *management*? Ouch. When it comes to accomplishing knowledge work, social networks have an awful signal-to-noise ratio. Getting involved in some social media is the equivalent of jumping into a barrel marketing folks created to shoot their messages at you.

In his book, *You Are Not a Gadget*, Jaron Lanier writes, "There are some cases where a group of people can do a better job of solving certain kinds of problems than individuals. One example is setting a price in a marketplace. Another example is an election process to choose a politician. All such examples involve what can be called optimization, where the concerns of many individuals are reconciled. There are other cases that involve creativity and imagination. A crowd process generally fails in these cases. The phrase 'Design by Committee' is treated as derogatory for

good reason. That is why a collective of Linux programmers can copy UNIX but cannot invent the iPhone. Creativity requires periodic, temporary "encapsulation" as opposed to the kind of constant global openness suggested by the slogan "information wants to be free." Biological cells have walls, academics employ temporary secrecy before they publish, and real authors with real voices might want to polish a text before releasing it. In all these cases, encapsulation is what allows for the possibility of testing and feedback that enables a quest for excellence. To be constantly diffused in a global mush is to embrace *mundanity*."

In his feedback to an early draft of this Column, Vint Cerf, one of the fathers of the Internet, wrote, "The popular social networking tools such as facebook and twitter are confining. They allow only certain kinds of interaction. The reason email has stayed popular is that it is a very general form of interaction that does not constrain very much how we choose to interact. Facebook, on the other hand has a limited collection of 'kinds' of interaction available and I believe this makes it vulnerable to becoming stale. These 'new' social interaction tools have that general problem – the potential to become stale. I would be cautious about building companies around these vulnerabilities."

Technology trend watcher, James Eilers, wrote, "I have tried to plunge into Facebook but will need someone to instruct me how to function on the Facebook page. For me what seems to be true is that Facebook is only interested in instructing as many people as possible on how to link with as many people as possible, but has no interest in facilitating a meaningful space for meaningful communication. The sound of a zillion Facebook voices sounding at once will be a large echoing of Zero."

Fresh new ideas may be sought from employees, from people outside the organization, or from a combination of internal and external sources. But as we write in *Enterprise Cloud Computing*, "*Crowdsourcing* doesn't in any way replace the individual in the process of innovation. The idea that a mob is smarter than an individual or a focused team does not compute. Crowdsourcing is perhaps better named as *crowdsearching* for it's not the crowd that proposes innovative ideas; it's individuals found in the crowd, especially those discovered through weak ties."
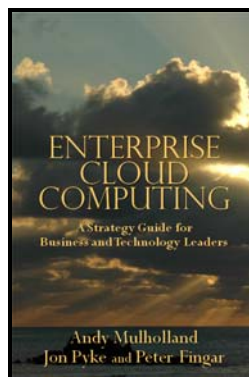
As Andy Mulholland, Global CTO of the 90,000 person strong IT services firm, Capgemini, and coauthor of *Enterprise Cloud Computing,* wrote in his blog, "Let me first start by describing my problem: I don't need more communications, or even more formats. What I need is <u>focus</u>. As a part operational and part knowledge worker, I want to know the issues and questions that matter operationally, and the information updates on the topics that matter." [4] Mind you, Andy does indeed focus, but he also maintains convenient access to a vast array of information that allows him to tap "the power of weak ties." Here's a snippet from the book, "The interactions with previous IT collaboration tools have focused on 'strong ties,' building the capabilities for relationships between known people around known topics in a manner that provides a structure to deliver value. This remains an important aspect of workflow, but if we consider the emerging Social Networks, then it becomes clear that something different, something unstructured, something unknown is needed to gain common-sense clarity to an otherwise complex business world. It's all too easy to lose such clarity in the day-to-day grind of the real world of work. But

considering all the big business issues—innovation, globalization, profitable growth, increased efficiency, market planning, and increased productivity—a common thread for achieving clarity is to look from the outside-in."

Indeed, cast a wide net to mine the power of weak ties available in unstructured social networks, but balance that with the systematic encapsulation and deep thought needed to turn discovery into business innovation. There no substitute for deep thought and innovation methods such as TRIZ (see http://bptrends.com/publicationfiles/09-07-COL-InnovationsChild-V1-Fingar-final.pdf). We'll talk a bit more about that idea later. In his *Harvard Business Review* blog, Tom Davenport reinforces the balanced approach, "Purely social applications are too social, and purely structured applications provide too much structure. Combinations of the two are where the work gets done fastest and most effectively. I'm betting we'll see a lot more of them." [5]

As an example of crowdsourcing, then encapsulating and transforming ideas into business innovation, there's IBM's Global Innovation Jams. In 2006, IBM issued an online brainstorming invitation to its 350,000 employees worldwide, and its clients and business partners. IBM was seeking the wisdom of crowds. The company exposed its emerging technologies, from supercomputing to avatars. IBM managers then used automation to winnow the 37,000 ideas they received down to 300 well-defined ideas. Finally, more than 50 employees spent a week at IBM's Watson Research Center in New York further combining and trimming these top ideas down to 30. And now the company is spending $100 million to develop the ideas that came from the Jam.

Keith Swenson, author of *Mastering the Unpredictable*, elaborates on the need for goal orientation in enterprise social software, "In general, social software systems record what is happening now and in the past, but for the most part completely lack any representation of the future. Enterprise Social Software will succeed only if it has some representation of goals or other future activities. You need to be able to represent and track goals. You need to be able to talk about what you want to do, how this is broken down into finer detailed goals, and to track progress against those goals. You want to be able to ask others to do things, which when accepted form goals for those other people. This is the essence of planning, which is an important part of any work."

"Social" is all the craze in enterprise-class software these days. Enterprise software providers are in a rush to provide social networking capabilities in their offerings: salesforce.com's Chatter, Cisco's Quad are but two examples. These are very cool upgrades to existing enterprise software. They allow workers to Tweet, to discover people with appropriate knowledge or skills, share knowledge, and control who can participate. But let's repeat Swenson's observation, "Enterprise Social Software will succeed only if it has some representation of goals or other future activities." That's precisely where human interaction management (HIM) comes in.

Based on speech acts, conversations for action, role activity theory and other underpinning computer science elements (which users should never see), the human interaction management system (HIMS) provides a very powerful and flexible representation of goals, tasks, and tracking of such. Would you rather attempt to do your work via flowcharts and Twitter, or via flexible, collaborative plans defined, executed and managed in a Web browser? A HIMS is the top layer of a new IT stack that provides access to the enterprise backbone (including Adaptive Case Management and Business Process Management systems)—and Social Networking. I wrote earlier how technology evolves by combing pre-existing technologies into something new, and that also can be said for the HIMS (more info: http://www.human-interaction-management.info).

Takeaway

When we reflect on the subtitle of this Column, "Unleashing the Power Within Using Social Networks," it's clear that the rise of social networking is becoming an integral part in what it means to be a successful enterprise in the 21st century. It's time to get beyond the hype curves

and harness the power *within* your company, *within* your trading partners, and *within* your customer communities. But it's also time to do so in a way that brings *order* to the *chaos* (chaordic) from both public and private communities.

It's time to go beyond *business intelligence* that tells us what has happened in the past. It's time to move on to next-generation *business analytics* that can tell us what *may* happen in the future and thus better inform decision making. It's time to go to the outliers, to the edge, to crowdsource ideas for innovation; then unleash the power within, within your business communities (trusted employees, trusted trading partners, and trusted customers) and encapsulate your own creativity, deep thought and imagination to chase the Holy Grail of innovation. While business innovation will continue to be shaped by the variables of the *people-process-technology* triad, each strategic variable will be influenced by "The One"—the One shared computer, the One shared information base and the One shared conversation.

Timing is the key to business innovation. In these times where exponential change = globalization + combinatorial technology innovation + the entropy stage of the Industrial Age of hydrocarbons + the scarcity of rare earth elements [forget Peak Oil, Neodymium anyone?] + multi-polar economic and military power shifts, what's a business to do? That is indeed the question. You might even go so far as to ask, as James Eilers asked, "How could the decline of U.S. global economic dominance, the U.S. empire, affect your business?"

Don't look to me to pontificate the answers, but I can say that what business leaders now demand is that overused phrase, "business agility." Annual business plans are dead. Strategy planning gives way to sense and respond. It's now all about operational agility and how fast businesses can seize opportunities or fend off threats. If strategies and forecasts have to change daily or weekly, then so be it. Getting beyond business agility as a platitude, it's *process* that's at the heart of agility enablement.

But business process management (BPM) as currently practiced in most organizations doesn't cut it, and we are seeing less and less press about the wonders of BPM as companies that have adopted BPM software have become disillusioned. They've been disappointed because many BPM implementations are little more that back-office substitutes for yesteryear's workflow and application integration solutions. What businesses need is the kind of BPM Howard Smith and I wrote about nine years ago in *Business Process Management: The Third Wave*, the kind that puts *process back into the hands of business people* and takes IT coding off the critical path of change. As we wrote way back then, "Don't bridge the Business-IT divide, Obliterate it!" The typical cycle of business requirements being lost in translation as they are thrown over the wall to IT for implementaion simply won't cut it any more.

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> What's needed is the capability for business people to have forward-looking real-time business analytics, informed by both business activity monitoring and enterprise social networks, to make fully informed decisions. Okay, that's the needed dashboard. They will also need and accelerator and steering wheel so they can directly manipulate end-to-end, multi-company collaborative and transactional processes at the speed of business without IT intervention!
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That's what captains of warships have when engaged in battle. They don't go back to IT for implementing software changes for course corrections in the heat of battle.

Tall order? Indeed, but that's the stuff of business agility in today's world of unexpected change. Companies need this kind of Business Technology (BT), not more of the same Information Technology (IT) or BPM systems as currently implemented, to adapt to the huge changes going on in the world today. Just as I proffered earlier that the future is fully dependent on mankind's relationship with evolving technology, we can take another step and postulate that the fusion of business and technology will reach the point of "singularity." We have the gene pool of

technologies in our grasp, so now is the time to make the combinatorial innovations needed to take the next step toward Business Technology to enable business agility and adapt to the new normal—*business as unusual*. Remember that technologies are put together from pieces—themselves technologies—that already exist.

All this Business Technology innovation may not change the big picture of the dramatic changes and global power shifts we are experiencing, but it will go a long way to giving us the eyes and ears needed to know what's going on beneath the macro data where day-to-day life and business operations happen. It can help us discover the most important questions of our times, helping us to know what we don't know. It can help us formulate the right questions to ask about the meaning of 21st Century business. Of course, the answers to those questions are in *your* hands.

Good luck, and good night.

References

[1] http://www.nytimes.com/2010/12/14/opinion/14brooks.html?hp=&pagewanted=print
[2] http://www.reuters.com/article/idUSTRE6B95XD20101210
[3] http://www.dailymail.co.uk/sciencetech/article-1338538/Facebook-connected-world-Map-created-using-friendships-cities.html
[4] http://www.capgemini.com/ctoblog/2009/03/yammer_social_networking_micro.php
   www.mkpress.com/ECC
[5] http://blogs.hbr.org/davenport/2010/11/want_value_from_social_add_str.html

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