OptimizationGroup

Our Take:

OG's Point-of-View On Best-Seller Business Books

June 2008

In This Edition We Review

Smart World

Breakthrough Creativity and the New Science of Ideas

Richard Ogle
Harvard Business School Press, 2007

A Little Background

Smart World is a compelling, but seemingly obscure business book. There are only 11 customer comments about it on amazon.com. The average rating is a 4.5 (out of five), with eight customers giving it a five star rating.

One of the Amazon customer comments we agree with wholeheartedly is that *Smart World* is not an "easy read". In fact, it is one of the more difficult business books we've ever encountered. It is definitely not written for people who are used to (and prefer) executive summary-like business reading.

To be sure, Richard Ogle is an extremely smart man, or as he describes himself, an "independent scholar". But his writing style is often dense. Take for example, his definition of the law of small-world networks:

> *"In a large scale-free (hub-dominated) network, the distance between any two nodes is small, typically less than six. While each additional hub potentially increases the total size of the network exponentially, increasing fitness (in the form of reciprocal relationships) will lead to the emergence of narrow, even uniquely defined worlds, thereby concretely specifying navigation pathways. Conversely, such worlds, once configured, expand rapidly as the law of the fit get rich is accelerated by closely linked hubs."*

Whew. One law, which encompasses three sentences and 76 words.

To his credit, Ogle also includes relevant stories to illustrate each of the nine laws of the new science of ideas. But in several instances they suffered from TMI (too much information), such as the 26 pages devoted to the discovery of DNA by Watson and Crick or the 14 pages devoted to the artist J. M. W. Turner. We admit we tended to skim through several of the illustrations, while working to learn the truths and conclusions they provided.

Please understand, however, that we found this book quite worthwhile. It **absolutely** fulfills the promise of the back flap cover copy, which says "Insightful and compelling, *Smart World* will forever transform the way we think about creativity and innovation." Just expect to devote a considerable amount of time reading (and re-reading) the 263 pages in *Smart World*.

The Basic Premise

The front jacket flap describes the scope of *Smart World* as follows:

"Clearly, not all brilliant innovations originate only from the minds of individual geniuses. On the contrary, our world is made up of intelligent networked spaces that, if we navigate them skillfully, can lead us to generate unprecedented ideas.

Welcome to *Smart World*. In this provocative book, Richard Ogle argues that creative breakthroughs are born when individuals and groups access new idea-spaces and exploit the principles that govern them."

Most of us grew up believing the 99% persperation/1% inspiration quote from Thomas Edison. That breakthrough ideas in science, the arts, technology and business are the result of highly focused and extensive work by creative geniuses. And as marketing measurement entrepreneurs, we've certainly 'lived' that belief for the past seven years. However, *Smart World* demonstrates without a shadow of doubt that this mindset is as archaic as the Flat Earth Society.

Richard Ogle presents a series of laws which form the new science of ideas. Here are our summarized version of the three key principles behind the laws, the central claim of *Smart World*, the nine laws themselves and how they interconnect.

The three key principles:

1. Recognition that the mind extends beyond the brain into what Ogle calls idea-spaces, which are embedded in the extended mind. The extended mind includes business models, scientific paradigms, social conventions, institutions and even computer chips.
2. Alongside analytical reasoning, the mind processes a second and very different mode of thinking, analogical reasoning. This includes imagination, intuition and insight, and the ability to transfer knowledge from one domain (idea-space) to another domain which is less well defined.
3. The new science of ideas is a result of the emergence of network science, which seeks to establish universal laws and principles of networks, ranging from links between brain cells to the structure of the Internet. In the case of the extended mind, it is self-organizing network which drives its own transformation.

These three principles form Ogle's central claim that "Creative leaps arise not from exclusively internal operations of the individual mind (genius or otherwise), but from navigating the idea-spaces of the smart world we have built for ourselves; locating the powerful, structured forms of intelligence embedded in them; and analogically transferring these to new places. That is what Brubeck, Picasso, and Apple Computers did, with radically transformative effect."

The nine laws of the new science of ideas:

1. The law of tipping points. In an open, dynamic network, at some point change produces a self-organizing process, which leads to a disruptive, qualitatively different shift. Such as the expansion of PCs to the global mass market.
2. The law of the fit get rich. The breakthrough ideas which succeed are ones that can best 'fit together' the links between network hubs to become the dominant player. Which is why Apple II succeeded and Xerox's PARC personal computer failed, even though the latter machine was clearly superior.
3. The law of the fit get fitter. When that player also succeeds in developing positive feedback loops between network hubs, they solidify their dominance. Such as Apple's iPod, which links technology and the music industry, due in large part to Steve Job's Hollywood (Pixar) connections.
4. The law of spontaneous generation. In an open, dynamic network, the creation of meaningful relationships is spontaneous and self-transforming. Such as Napster, that gained 38 million users in just eighteen months.
5. The law of navigation. In an open, dynamic network, the ability to identify useful patterns becomes increasingly difficult as the idea-space expands. That's why Barbie not only permanently changed the doll market, but has been successful for almost 50 years.
6. The law of hotspots. Hotspots are highly energized, interconnected idea-spaces, such as modern art, CAD/CAM technology and architecture. The convergence of these hotspots is best personified in Frank Gehry's revolutionary Guggenheim Museum Bilbao.
7. The law of small-world networks. This law states that despite the difficulty of navigating between idea-spaces, there is the countervailing effect of fitness, which naturally brings the best ideas together. For example, Guttenberg's printing press needed the convergence of capitalism, the church and a need for mass literacy to succeed.
8. The law of integration. Creative breakthroughs are driven by 'fit' idea-spaces, which become hotspots, leading to tipping points and integration into the mainstream. Ogle cites the emerging wave of the digital (machines) and physical (organisms) worlds as current proof of this law.
9. The law of minimal effort. This is the culmination of the prior eight laws, reiterating Ogle's central thesis that creative leaps come from imaginatively harnessing the power of networked intelligence in the extended mind.

Where We Agree

At its core, *Smart World* has a very clear and inarguable premise: creative breakthroughs come from linking different idea-spaces that already exist in the extended mind of the world.

One of Richard Ogle's most salient arguments is that this linking of idea-spaces cannot occur through analytical reasoning alone. Only though the concurrent use of imagination, insight and intuition can we analogically identify the new ideas and discover the new creative breakthroug*hs.*

Where We Disagree

As mentioned earlier, *Smart World* is a difficult book read. As marketing and communications veterans, we think this is not a very smart strategy by the author. Especially if he wants *Smart World* to be read by time-starved, "get to the point" c-suite business leaders.

That notwithstanding, our biggest disappointment with *Smart World* is the glaring imbalance of theory versus practice. Ogle waits until the final 14 pages of his book to introduce some direct applications to the new science of ideas. And unfortunately, his brief guidelines do not feel all that breakthrough:

- Sharpen your capacity to sense heat.
- Learn to recognize early emergent alignments manifesting high levels of fitness.
- Look for cold – low-energy spaces ripe for transformation through long-distance linkage.
- Identify and prepare for potential tipping points.
- Read the world.
- Trust your imaginative facilities as they surf the webs of the global mindspace.

Our Top 20 Quotes from *Smart World*

- "Intelligence is not the measure of how much we know how to do, but of how we behave when we don't know what to do." – John Holt
- Creative leaps? Ah, we say that's genius. Which is just another way of saying we don't have the foggiest idea how to talk about them.
- What Brubeck's musical breakthrough reveals is that we have the capacity to transfer whole patterns of significant form (gestalts) from one world to another, with powerful creative effect.
- We use intelligence to structure our environment so we can succeed with less intelligence. Our brains make the world smart so that we can be dumb in peace.
- Beyond the level of 115, there is no observable correlation between IQ and creativity.
- Flying in the face of a 2,500 year-old tradition, it implies that some of our deepest and most creative ideas and patterns of thought are actively shaped by highly structured forms of intelligence that exist outside of us: the space of ideas thinks for you.
- "There were always nagging doubts that one or more…assumptions might be dangerously misleading. In research, the front line is almost always in a fog." – Francis Crick
- "Our complicated ideas are built out of simpler ones, and the meaning of the whole is determined by the meanings of the parts and the meanings of the relationships that connect the." – Steven Pinker
- Fauconnier and Turner claim that "we are now entering an age in which the key intellectual goal is not to celebrate imagination but to make a science of it."

- ...breakthrough creativity is inherently an emergent process governed by laws of network dynamics. Analytical reasoning, because by definition it looks back to established facts and premises, is blind to such situations. One the other hand, the intelligent imagination – that is, imagination intuitively attuned to sensing emerging fitness – is capable of producing adaptive intelligence, new thinking that grasps the direction in which the future is unfolding.
- "The acts of finding and creating are exactly identical; there is no conceptual difference." – Kevin Kelly
- "I didn't have to invent anything…It's out there some where if I can just find it and integrate it…Inventing is frustrating, it's dangerous, it's expensive, and inventors should avoid it whenever possible. Be a systems integrator." – Dean Kamen, inventor of the Segway
- "Communication – which in the end is what digital technology and media are all about – is not just a sector of the economy. Communication is the economy…That is why networks are such a big deal. Communication is so close to culture and society itself that the effects of technologizing it are beyond the scale of a mere industrial-sector cycle." – Kevin Kelly, New Rules for the New Economy
- In order to survive and prosper, breakthrough innovations must be integrated into the mainstream (i.e., achieve external fitness).
- As we've seen, the reverse process is also true: failure to reach out to an external hotspot in a field where strong reciprocity has served to inhibit reach can lead to stagnation and even blindness.
- Great artists, scientists, and entrepreneurs have always had deeper faith than most businesspeople, economists, and sociologists in the power of the mind's imaginative faculties to create radically new worlds of possibility. As we have seen, they have much to teach us.
- "Companies fail to create the future not because they fail to predict it but because they fail to imagine it…So it is vitally important that you understand the distinction between 'the future' and the 'unimagined,' between knowing what's next and imagining what's next." – Gary Hamel
- To turn Marx on his head, if you want to change the world, you'd first better interpret it.
- Executives love to talk about thinking outside the box. We all know what this means, and it's misleading. You're never outside the box, though you can jump to another one.
- Mapping interlinked spaces of embedded intelligence is so novel that it's hard to give detailed advice for how to go about it. The most effective technique is probably to map out major hubs that are connected to your business, no matter how distantly, paying special attention to those that appear to be heating up.

OG's 1-9 Rating

With IdeaMap® research, we ask respondents to rate concepts on a 1 to 9 scale, where 9 is the most positive ranking.

Using this 1 to 9 measurement scale, OG gives *Smart World* a 7.

We do not deny the power of the new science of ideas, or doubt that Richard Ogle has produced an exceptional, perhaps revolutionary work. We simply wish it were written for a larger business audience, and the author had worked harder to demonstrate its applicability for business leaders.

For those who enjoy a heady, cerebral read, we definitely recommend buying a copy of *Smart World*. But for the rest of us, we recommend waiting for the CliffsNotes version.