

Welcome to the August edition of What's Emerging. This month we have a book review along with the usual tips and links.

We hope you enjoy this edition.

Cheers

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Business Tips

Fuel Saving Suggestion

Most people run their cars on too low a tyre pressure. Car club people talk generally about an increase of tyre pressure by 5psi or 15% compared to the car handbook. Apart from getting better fuel economy you will also have better braking and longer tyre life for no extra cost. This tip is from one of our newsletter subscribers – thanks Philip!

Eight pitfalls of predictive markets

Prediction markets are one of the new buzz processes around at the moment. They can be useful but there are pitfalls and these are very similar to the traps that people fall into when thinking about the future in general. This link goes to a blog which describes the pitfalls. If you want even more information then Brian Solis has an e-book guide to Social Media you can read or download [HERE](#).

Twelve best practices for online customer communities

Another buzz process in corporate circles is the use of social media and online communities to collaborate and look at customer opinions. This post based on a study by Deloitte gives some very good advice if you are considering using social media and online communities for your organisation.



What's Emerging

Semantic web explained

We have all heard the term semantic web bandied about but have trouble understanding (and explaining!) what it means. To quickly get the idea, watch this simple video demonstration of Parallax, a novel browsing interface designed by David Huynh, which shows how connections can easily be made with data to provide a much richer results set which in turn can spawn fascinating visual representations and more.

As travel costs rise, more meetings go virtual

"10 minutes into it, you forget you are not in the room with them."

New miracle concrete...A carbon storage solution?

Carbon Sense Solutions has created an accelerated curing process for the creation of precast concrete, which it claims will suck up as much as 1% of all CO2 emissions in the atmosphere annually.

Street-Embedded sensors monitor parking availability in San Francisco

San Francisco will implement the largest mesh network for monitoring parking to date with around 6,000 wireless sensors fixed alongside as many parking spots, monitoring both parking availability and the volume and speed of passing traffic. The city hopes that displaying information from the sensors on Web maps, smart phones, and signs on the street will reduce the traffic and pollution caused by circling cars.

The future of babies: Artificial wombs and pregnant grandmas

Artificial wombs and experiments on human embryos grown in the lab will be commonplace and no big deal ethically in 30 years, several scientists predict. That is one of many predictions about the future of assisted reproduction and other baby-related medical advances in a special news report, "Making Babies: The Next 30 Years," in the July 16 issue of the journal Nature.

Scientist wants houses made of chicken feathers

A Filipino scientist says he has created a new composite building board made of chicken feathers that could be a major breakthrough for the construction industry in Asia and provide a way to dispose of millions of kilos of waste feathers each year.

Quarter of the planet to be online by 2012

Researchers are predicting that one quarter of the world's population will be connected to the internet within the next four years. Asia will not only have the highest online growth rate compared to other regions in the world, but will also present a substantially large pool of sophisticated online users as a market to tap into.

Invisible nanotube cable could support a human

Circus acts and movie special effects may never be the same again, if an idea for an invisible cable made of carbon nanotubes works out.

Top 5 apps from iPhone Dev Camp 2

Here are five applications for the iPhone coming out of the design ecosystem that has formed around the technology. Some of them are silly but some are great ideas and they demonstrate the huge volume of development that is occurring.

Biodegradable insulation and packaging

Ecovatedesign is producing an eco friendly insulation by infecting panels of rice hulls with fungi.

Shipping costs start to crimp globalization

When Tesla Motors, a pioneer in electric-powered cars, set out to make a luxury roadster for the American market, it had the global supply chain in mind. Tesla planned to manufacture 1,000-pound battery packs in Thailand, ship them to Britain for installation, then bring the mostly assembled cars back to the United States. But when it began production this spring, the company decided to make the batteries and assemble the cars near its home base in California, cutting more than 5,000 miles from the shipping bill for each vehicle.

Georgia conflict may mean the birth of modern cyber-warfare

As widely reported, Georgia government websites were attacked in just about the time frame as Russia's Prague 1968-style attack of the country. The question is, who's responsible? As one commentator notes "We are witnessing in this crisis the birth of true, operational cyber warfare."

Experts find 'scaredy-cat' gene

Variations in a gene may help explain why horror movies shock some people and entertain others, say German scientists. See our book review for further information on the issues of genetics and thinking and emotion.

If you have a problem, ask everyone

InnoCentive, is a company that links organizations (seekers) with problems (challenges) to people all over the world (solvers) who win cash prizes for resolving them. The company gets a posting fee and, if the problem is solved, a "finders fee" equal to about 40 percent of the prize.

Is aging an accident of evolution? Stanford scientists say "Yes"

Everyone has assumed we age by rust. But how do you explain animals that don't age? Some tortoises lay eggs at the age of 100, there are whales that live to be 200 and clams that make it past 400 years.

More links

We have many more links than we can fit in the newsletter – this month's 'Additional Links' are available on our website.



What We Are Writing About

Book Review - On Being Certain: Believing You Are Right Even When You're Not, by Richard A Burton

The central theme of this book is that certainty is not biologically possible and why it is that we remain certain about so much despite this. One of the key areas a futurist must work in is how people deal with uncertainty because the future is inherently unknowable. Time and time again we have noticed people experience great discomfort in trying to assimilate uncertainty into their thinking. This is because we have brains that generally seek out and are comfortable with certainty, even if it is false. Therefore exploration of why and how people are certain about things is extremely useful in helping them work with uncertainty.

The book sets out to answer the question "how do we know we know" and uses several approaches to explore the question from different angles. For example, a patient who has his visual cortex destroyed cannot receive visual signals from his eyes but his retina still functions. The patient cannot see but when asked which part of the visual quadrant a flashing light has come from he can accurately state which quadrant it is although he feels like he is guessing. This is because some of the neural pathways involved in sensing light are still active but the ones that govern sight are not – ie. there are other ways of sensing visual signals than just seeing. Similar findings can be seen in experiments with the auditory system.

Another example used is that of pain from or the feeling of the presence of a phantom limb where the limb has been amputated. The individual concerned knows that the limb is not there but cannot rationally or consciously will away the sensations.

We have all heard of how eyewitness descriptions of the same event can differ markedly. On pages 10 and 11 the author describes a study where students were asked to write down what they knew of the Challenger Space Shuttle

explosion within 24 hours of it happening. They were asked to include where they were, what they were doing and how they felt. Two and a half years later they were interviewed about their recollections and 25% of them had remarkably different recollections from their written accounts, including one student who said after being shown his written journal from the day after the event: "That's my handwriting, but that's not what happened."

The point of these examples and others in the book is that there are processes in our brains and nervous systems that go on below the level of conscious mind and yet we insist on believing that we are rational thinking beings. The reality is that our brains and neural processes are incredibly complex - we have one hundred billion neurons in our brains and a typical neuron has interactions with 10 thousand other neurons - and we are only really just scraping the surface in understanding them. Much of what goes on in our neural processing goes on below the level of rational thought. The author describes this process as analogous to a committee of neuronal networks with only the majority decisions of the committee being visible to us at a conscious level. The voting process is described as being influenced by our experiences, which ties in with our views on pattern entrainment which we have written on and spoken about previously.

The author's conclusion is that "*feelings of knowing, correctness, conviction and certainty* aren't deliberate conclusions and conscious choices. They are mental sensations that happen to us" (author's italics). Part of his reasoning as to why this is so is that these feelings of knowing and certainty must have conferred some sort of evolutionary advantage in terms of functioning successfully in the real world.

All of this is a bit disconcerting for most of us. If what we know to be true is determined by the subconscious actions of a hundred billion cells, and their actions are shaped by our experiences, where lies real certainty and free will? The author explores some of these concerns in depth in the middle of the book.

In the end the author quotes F Scott Fitzgerald who said "The test of a first rate mind is the ability to hold two diametrically opposed ideas at the same time and still function." If we fall to the level of believing that all our decisions are made by a series of chemical reactions that are shaped and modulated by forces outside of our control then life is essentially meaningless. However, we must integrate the knowledge that this is at least partly true into our everyday life.

The author advises that the best way to do this is to make this knowledge real in our lives and adopt the attitude of saying "I believe" rather than "I know" which leaves open the opportunity for doubt and examining evidence that is contrary to our views. This subtle difference is based in part on the scientific method which proposes that nothing can ever be actually proven, just that the evidence is overwhelmingly in its favour.

The book is well worth reading if you are interested in how the mind works, although I found the section on philosophy in the middle a little out of line with the central theme and a bit hard to read, though it needed to be examined. The systems that provide feelings of knowing and certainty may well have provided evolutionary advantage in the past but in a complex and rapidly changing world they may not always be helpful and need to be understood in order that we can override them when we need to.

Paul Higgins