The Boisot Blog

In 2007 Max Boisot was the guest blogger on the Cognitive Edge web site. His posts were among the most popular in a line of distinguished guests. Many commented that he took to the medium like a duck to water, but this remains the only example of his use of that medium.

This compendium of those posts is published by way of tribute on what would have been his 68th birthday if he had not died prematurely and unexpectedly on the 7th September 2011.

The photograph, by his wife Dorota, shows Max relaxing in a Starbucks in Dublin. Ironically his 13th September posting was on Starbucks. All who knew him will remember that look, it would be followed by questions and commentary dispensed with humour which would not only make you think, but would send you on multiple new and fascinating journeys of discovery.

In addition to Max's post some of the responses have been included along with a summary of Max's various appointments & educational achievements

On being what I am not

I am a novice blogger. Dave Snowden invited me to blog for a couple of weeks on this website and I decided that I would try it out for fun. However, I feel a bit like a country cousin from Iowa gate crashing a New York fancy dress party. I am hoping that people will not see through the fact that I am not disguised and will actually mistake me for a country cousin from Iowa.

So what's with country cousins? Well, numerous academic studies reveal that country cousins are rather simple people who speak their minds without malice aforethought. Here, simplicity = absence of malice aforethought, country = not New York, and cousins = relatives that you can't expect to inherit much from. Now speaking your mind without malice aforethought is code for self-expression. Whatever is on the inside get's displayed on the outside with little awareness or regard for the sensitivities or opinions of those who are exposed to it. Compare this with communication, the art of saying something so well aligned with what the hearer wants to hear that she doesn't even realize that she has also swallowed something that she didn't want to hear. Self-expression is what country cousins practice unwittingly and artists practice deliberately. Communication, on the other hand, is what advertising agencies and politicians specialize in. One of the greatest of communication skills is to be able to fake self-expression. And that, of course, is exactly what I am hoping to achieve by masquerading as the country cousin that I really am at the fancy dress party.

How might this affect my blogging strategy? From the little that I know of blogging, it offers all of the advantages of publication – a large admiring or hostile audience - with little or none of the attendant responsibilities – ie, to either entertain or to apologise for failing to do so. In other words it allows me to pass off what is really an exercise in self-expression as an act of communication – exactly the opposite of what I have defined as a communication skill.

So blogging allows a nested process in which the country cousin wants you to believe that he is skillfully disguised as a country cousin so that he can go on being a country cousin without actually having to pretend that he is so. If you've got that, then you've got my blogging strategy.

Posted by Boisot on September 30, 2007 2:41 PM

> *Hi Max*
>
> *My own take is that the blogosphere is a country where communicators learn how to become country cousins - or rather that's the evolutionary pressure.*
>
> *Posted by Patrick Lambe | October 1, 2007 3:53 AM*
>
> *Dear Max,*
>
> *I have seen this statement attributed to you: "War are in an information race with the terrorists. We are losing."*
>
> *Was this you? I want to use this comment in the context of working with the intelligence community. The intelligence folks (of which I was one for about 20 years) want to classify everything and tell nothing. On the other hand, terrorist groups such as AQ and their insprired followers post and broadcast as much of their information as they possibly can. This includes technical info and "lessons learned."*

The single greatest problem, IMHO, is that most terrorists are better informed about what is going on than most intelligence and police organizations. Secrecy is the enemy of knowledge! And knowledge is what is needed to prevail in the face of an asymmetric threat such as terrorism.

tom

Posted by tom quiggin | October 1, 2007 12:15 PM

Max Boisot:

Patrick,
Evolutionary theory has also taught us that sooner or later country cousins get 'selected out' if they get too close - ie, incestuous. I myself have cross-eyed country cousins that could do with some selecting out. I'm sure that the feeling is mutual. Such feelings initiate a process of speciation - one reason, perhaps why I tend to think that my country cousins are from another planet.

Tom,
I tend to agree. In my book, Knowledge Assets, I distinguish between hoarding and sharing strategies when dealing with the information economy. Intelligence services have been socialized into thinking that only hoarding strategies work and they have been culturally and organizationally committed to deliver this one strategy. I believe that they actually need a mixture of both and that the critical skill consists in knowing what to share and what to hoard. To take hoarding as a default assumption deprives intelligence services of some important choices. Unfortunately, they have not begun to think of what sharing involves.

Posted by Max Boisot | October 2, 2007 8:46 AM

When is a queue not a queue?

The other day I found myself being reprimanded – ever so nicely – for queue jumping. I was heading for a specialized department in a London hospital. At the entrance to the building five people were standing around in no particular spatial configuration and clearly de-coupled from each other. The door was already open so clearly, they were not waiting to get through the door. Without thinking, I went through the door to look for the department that I had been referred to. One of the five people that had been hanging around outside came in after me and pointed out with some indignation that there was a queue and that he was first in line. I looked around. What line? I concluded that I was dealing with one of those metaphysical kinds of queue, one whose existence has to be inferred from a limited number of subtle and indirect signs, most of which are culture-specific - raised eyebrows, pursed lips, shouting, running at the queue jumper with a meat cleaver, etc. – rather than from direct observation. In such queues, one needs inside knowledge to figure out whether one is in or outside the line. Naïve empiricism has no purchase on this process.

Waiting for a London bus during rush hour separates the pros from the amateurs when it comes to queueing. With two or three people standing under the bus shelter on a dry day one can still get a sense of how the priority claims are distributed. But when it is raining hard and the number seeking the shelter rapidly increases, the priority claims get swept away in the downpour. The buses make their own unacknowledged contribution to this entropic process by typically stopping some fifteen yards away from the bus stop, thus precipitating an undignified zero-sum rush and upsetting whatever precariously balanced social arrangement had so far kept the peace between rival claimants. In this way bus drivers, in a bloody-minded demonstration of their negative power, helpfully get queues past the tipping point from civilized forms of waiting to chaos. You might have felt somewhat secure about your place in the queue while waiting for the bus, but hey, that was one minute ago and your social context has just undergone a phase transition.

In a fast-moving and globalizing world, a minute is becoming a long time in queuing.

Posted by Boisot on October 1, 2007 1:12 PM

What is maturity, anyway?

My 19-year old son tells me that I am immature. At his age, my eldest daughter – now 38 - said the same thing. That was nineteen years ago. I have had nineteen years to mature and now appear to have passed up the opportunity. So either my kids misunderstand me or I am an incorrigibly immature 63-year old.

Let's look at the first option: misunderstanding. I tend to be somewhat playful by nature – you know, fooling around and more than occasionally being childish. Is that really a sign of immaturity? Perhaps, but didn't Jesus tell us that unless we come to him as children….? Unfortunately, this does not readily translate into 'unless we come to him as immature…'. So nice try! 'Immature' cannot readily be upgraded to 'child-like'. OK, so on to the second option: simultaneously mature (63 years old) and immature. But what is immaturity anyway? The word has a teleological feel to it that measures one's distance from some desired end-state that we all strive for called maturity. The question immediately comes to mind: desired and striven for by whom? By me? By my friends? By society? Maturity is clearly a social construct. You may be viewed as irretrievably mature in one culture – ie, as good as dead – and, with exactly the same symptoms of mortal decay, thought to be fast regressing towards your second childhood in another. Same data, different construals.

One construal that would salvage some of my self-respect would have immaturity as a pre-condition for creativity, the positive spin that is put on the phenomenon of non-predictability. Mature people go for the obvious, socially agreed upon and predictable behavioural and cognitive strategies. Immature people, by contrast, in their naivety, go for the non-obvious ones. Most of the time they either look ridiculous or misguided and will deliver little more than comic relief – my kids clearly have me in that category. But occasionally, some will stumble across useful new insights. To be sure, the hit rate is low; this comes with the territory.

Conclusion? Society needs immature people and I proudly volunteer my services.

Posted by Boisot on October 2, 2007 8:22 PM

Codifying sheep in your sleep

I have always been interested in the nature of codification, the process in which phenomena are assigned to socially agreed upon categories. Codification is typically presented as a quintessentially soporific activity. Under the tyranny of codification, the habitual insomniac, instead of just counting the sheep jumping over fences to get herself to sleep, is required to classify them as they jump. White sheep versus black sheep, fat sheep versus anorexic ones, sheep chewing gum versus sheep wearing make-up, etc. As the complexity of the classification system grows, the excitement that accompanies the power of classifying (esp. of sheep wearing make-up) helpfully begins to dim. The process is guaranteed to halve the time-to-REM that simple sheep counting can deliver.

I have come to suspect, however, that codifiers are keeping the fun bits of their craft to themselves. An article in the Technology Quarterly section of The Economist, this week, (September 8th, 2007 p9), 'A plane that thinks it's a boat', nicely illustrates my point. The article is about a sleek white machine with two propellers, two wings and a 'distinctly un-bird-like' tail: the SeaFalcon. It flies only two meters over water, the air beneath its wings being compressed to give it additional lift. The SeaFalcon is what is known as a ground-effect vehicle (GEV). An earlier (GEV) the hovercraft, relied on creating its own cushion of air rather than having one provided naturally. Unfortunately, as a technological species, the hovercraft has been nearly driven to extinction. A major reason was that it was classified as an aircraft and subject to fairly stringent regulations. In the eyes of the International Marine Organization, however, the SeaFalcon is classified as a ship and, as such, subjected to much lighter regulations than the hovercraft ever was. Its future prospects, therefore, seem promising.

As every bureaucrat knows, classification is power. Putin, no foreigner to the advantages of being able to classify – or reclassify – discovered that many of his potential rivals among the oligarchs could suddenly be reclassified as 'tax delinquent' and relieved of their money. It could be worse. In the former Soviet Union these people would have been classified as insane – didn't you have to be insane to question the charms and benefits of the system? - and committed to a psychiatric hospital.

Posted by Boisot on October 3, 2007 11:57 AM

How to make rows more creative

I often write papers with my friend Bill McKelvey, professor of strategic organizing at UCLA. It works like this. He flies into Barcelona and stays with my wife and me for a few days. He admires the view of the sea from my terrace and we go for frequent walks. The view from my terrace has a calming effect on Bill, and as you will presently see, this is important to our collaboration.

The need for calm is explained by the fact that Bill and I often end up rowing over some issue related to the paper. A row is a violent disagreement that, for reasons of timidity, laziness, or inertia, fails to lead to violence – its cathartic resolution. Often, it does not even lead to verbal abuse, just to episodic glares.

Now here is the thing. We would be much worse off without rows than with them. We have recently discovered that rowing is often a source of new creative new insights and often radically improves what we write. Why? We don't yet know. We need a statistically respectable sample of rows to see a clear patter emerge. When that happens, we have been thinking of patenting our rowing technique since we could then model it. But, since we are scientists and not very commercially minded - we are making it available to you for free in a spirit of Beta testing. We will make our money later, on the back of those who are not reading this blog. So for amateur intellectual gladiators here are a few tips:

A good row needs an 'ontological gap' between the rowing parties. Things must exist for me, for example, that do not exist for Bill and vice-versa. For example, Bill lives in L.A. and so naturally, an actor like Tom Cruise has a certain reality for him. For me, on the other hand, he is just Ron Hubbard's avatar.

A good row also needs an 'epistemic gap' between the rowing parties. I must know things that Bill doesn't know and vice versa. But for the row to keep going, I must undervalue what Bill knows and vice versa. It is important that the epistemic gap remain reasonably balanced. If the information asymmetries grow too large, an authority relationship emerges to deflate the row and reduce one of the parties to a state of passive acquiescence.

Ontological and epistemological gaps must be discovered only once the paper has reached the stage of a first draft. Before that neither of you will have sunk enough time in the venture to find your position worth defending and you will just drop the collaboration

It is important that you don't try and win. The best ideas come when both sides have argued themselves into an intellectual stalemate and are absolutely exhausted by the experience. Neither side can coerce the other into changing his or her views. This relaxes the mind and leaves it open to absurd ideas – like boiling the opponent.

Make sure that you only row when sitting down at the terrace rather than when walking up or down the hill to the house. In this way you channel your intellectual energy into the row rather than in watching where you put your feet as you climb down or up the hill. Moreover a seating position makes it more difficult for either party to hit the other spontaneously, thus ensuring that the row does not end prematurely.

Posted by Boisot on October 4, 2007 3:37 PM

How Real is the Real Thing?

I often drop in at the Gran Sitges Hotel for a drink. The hotel is conveniently located at the foot of the hill on which my house is located. Three days ago, I went into the bar and asked for Diet Coke. I was told that there was none and was offered a Diet Pepsi instead. Now I happened to know that the hotel stocks Diet Coke but that since the margins are juicier, hotel staff are under strict instructions to push Diet Pepsi instead. When I pointed out to the waiter that I was an 'insider' who knew what the game was, he sighed and went off to get me a Diet Coke. But, provocatively, he brought it ready-poured in a glass, with no bottle in sight. Determined not to be taken for a ride, I asked to see the bottle. The waiter, by now feeling homicidal, went and fetched the bottle.

At this point, I began to realize that what I had just done was really dumb. If Diet Coke is really that different from Diet Pepsi, why do you need to see the bottle? Won't the difference in taste immediately give the game away? By asking to see the bottle, what I was really communicating to the waiter was my inability to distinguish the taste of Diet Coke from that of Diet Pepsi. There may well be Coke/Pepsi connoisseurs who can not only discriminate between the tastes of the two drinks, but can also tell you in what region they were bottled, and in what year. I am not one of them. If so, why was I making such a fuss?

The answer, of course, is branding. I may lack the powers of discrimination that allow me to directly experience the difference, if any, between Coke and Pepsi, but, hey, I can read labels, and knowledge of the label partly dictates what I experience. My hotel experience got me thinking about brands. We think of brands as validating the knowledge that we gain through experience, which if positive, directs us to further experiences of the same kind. What I was beginning to realize, is that brands can also shape that experience. So when people buy a US $ 400 commodified T-shirt that is only distinguishable from other commodified T-shirts by the word 'Versace' spread across its front, they are not the fools I have been taking them for. No. The words 'Versace' transform their experience of the T-shirt – and, more importantly, that of those that are looking at them - into something else. We are effectively dealing here with something akin to the trans-substantiation of a piece of textile.

Branding as a religious experience. Now there's a thought.

Posted by Boisot on October 5, 2007 6:10 PM

Knowledge for it's own sake?

I have been helping to prepare a workshop that will be held at CERN just outside Geneva in mid November. CERN, you will recall, is where the Large Hadron Collider (LHC), a particle accelerator that is 27-kilometer in circumference, is being built in order to test for the existence of a tiny and elusive particle, the Higgs Boson. Two research teams are competing to find the elusive particle, one called ATLAS, the other called CMS. ATLAS is one of the largest high-energy physics experiments ever undertaken.

And also one of the most expensive. With the costs of experimentation in high-energy physics now running into the billions of dollars, ATLAS-CERN needs to justify its existence to its stakeholders - the governments of the 34 countries which jointly fund its operations. How does it do this? By emphasizing the value of knowledge for its own sake, of man's understanding of the universe and of his place in it. By smashing particles into each other at speeds close to that of light, scientists at CERN, probe the innermost nature of matter, the origins of the universe, etc. If we can find the Higgs Boson, so the argument goes, then the last – and still missing – piece of the so-called Standard Model in physics will fall into place. The US abandoned the search for the Higgs Boson because it was too expensive. Europe enthusiastically took up the reins.

The culture of science has always stressed the intrinsic value of knowledge – knowledge for its own sake. And there is plenty of evidence that natural curiosity rather than greed or ambition drives many scientists to outstanding efforts. But why would outsiders buy into this argument? Why would outsiders fund scientists pursuing 'knowledge for its own sake', either through patronage or – now more commonly - through taxation? It seems to me that even at the time of the scientific revolution in the sixtheenth century, the crowned heads of Europe who acted as the patrons of science weren't buying any of that. No. What they were after was better fortifications, more accurate cannons, more reliable signaling devices, etc. In short, they were indulging scientists because they believed that in doing so there would eventually be technological payoffs that they could benefit from. In the knowledge-for-its-own-sake discourse, the subtext has always been that good science produces good technology. In effect, we have here a variant of the distinction between what Chris Argyris and Don Shön called Espoused theory and Theory-in-use – ie, between what you preach and what you do. In recent years, the preaching/doing gap in basic research has narrowed somewhat as the pragmatic orientation in science funding has come to the fore. Everyone is now looking for quicker and more frequent payoffs. Knowledge for its own sake, go hang.

Do we pay a price for this change in orientation? You bet! The first paper on the quantum theory appeared in 1900. The first practical application of the theory appeared in the mid-1940s. And, although today the technological applications of that theory have been estimated to account for up to 25% of the US's GDP, such a return, of course, was never guaranteed.

CERN now partly justifies its existence by citing the technological spin-offs that it has generated over the years, the World Wide Web being the most notable. But in doing this, it runs the danger of adopting the discourse of its critics. Yet what high-energy physics buys you is not the oft-cited returns on investment so beloved of accountants, but options on the future. And options thinking requires a rather different discourse that covers a rather different time frame.

Posted by Boisot on October 6, 2007 5:54 AM

The Unprincipled Principle of Least Effort.

In 1949 George Zipf, a Harvard linguistics professor, published Human Behaviour and the Principle of Least Effort: An Introduction to Human Ecology. What became known as Zipf's law inversely relates the 'size' of an occurrence of an event to it's 'rank'. For example, he sought to determine the 'size' of the 3rd or 8th or 100th most common word. Size here does not denotes the length of the word itself, but the frequency of use of the word in some English language text. Zipf's law states that the size of the r'th largest occurrence of the event is inversely proportional to it's rank

Zipf coined the expression, 'principle of least effort' to describe this relationship.

I have always been deeply attracted to the principle of least effort. I believe it to be related in some deep sense to Maupertuis' principle of least action which states that in attaining a given state, any physical system seeks to minimize the 'action' involved – ie, the consumption of energy, time, and space. I sense here that we are being offered some metaphysical justification for the laziness that afflicts us. How does laziness manifest itself in language to minimize the need to make an effort in line with Zifp's law? Consider the following:

- "Hi" say the Americans vastly economizing on the time-consuming, insincere and inefficient "how do you do?" of the British.
- "Ciao" say the Italians rather than the circumlocutional "it was so nice seeing you" of the British.
- A labour-saving "unh-hunh" now replaces "thank you so much" by those who sense an opportunity cost looming.
- In writing, the Americans sign off "sincerely" thus beating the British time-wasting "yours sincerely" and the profligate French "Veuillez agreer cher monsieur l'expression de mes meilleurs sentiment".

But I have to ask myself, where has aristocracy gone in all this? Efficiency, after all is a lowly bourgeois concept, whether expressed in money or in the coin of words Aristocracy has always been built on waste, conspicuous consumption, potlash, etc. Louix the Fourteenth of France clearly understood this, an judiciously exploited the aristocratic urge to waste to bring his own under control. He also encouraged French aristocrats to express themselves in excessively long-winded ways, a habit that, being ignorant of Zipf's law, they have proudly kept to this day.

The ultimate proletarization of the written discourse, however, comes to us in the form of text messaging. Zipf failed to understand that in communication, the effort involved is divvied up between speaker and hearer. It's effectively a zero-sum game. When the effort is successfully minimized by the speaker (or writer) it is only because it has been successfully inflicted on the hearer – and probably amplified. Since, with text messaging you cannot see the hearer, you can opportunistically do away with the vowels and let the destination go figure. The result? Soliloquies masquerading as dialogues. Moral? The principle of least effort is, well, unprincipled.

Posted by Boisot on October 7, 2007 5:17 AM

Trading in Atoms for Bits

We face an environmental crisis. Average per capita energy consumption is too high and growing. Neither current levels nor projected trends are sustainable. Mother Earth is having none of it. Some have concluded that sooner or later we will either all have to learn to eat our evening meals in the dark – steering our forks towards our mouth by drawing on what is left of our echolocation skills – or we will have to vastly expand the US space program so as to export those who are surplus to requirement towards some currently under-developed exo-planet suffering from labor shortages, and hence in need of immigrants.

But, although it won't much appeal to either Dick Cheney or Vladimir Putin, there is a ready alternative. In Nicholas Negroponte's immortal words, we must learn to trade in atoms for bits, that is, replace energy-based material inputs with information-based knowledge inputs. Instead of heating or cooling the untenanted vastness of your house, on the speculative assumption that you will be occupying some part of it, for example, why not delegate the job to intelligent clothes that can sense exactly which parts of your anatomy need warming up and which parts could do with a spot of cooling? And instead of flying off to Hong Kong for that indispensable business meeting, leaving behind you a Godzilla-like carbon footprint in the sky, why not just surround your desk with ego-enhancing screens linked in to FaceBook ? Could this wrap-around video-conferencing fantasy also substitute for vacations in Malaysia? Wait a couple of Internet generations – ie, until next week – and it might, just. The screens would have to be bigger, of course, and the pixels would have to be smaller if you simultaneously wanted to capture with a single sweep of the camera the sunset over Penang and the tarantula that has just crept into your bed. And if you wanted your vacation to be more than just a fish-lens brochure, your other senses could also be brought into play without necessarily invoking advanced technology. You could achieve the sensation of sand on your feet, for example, by just keeping your floor unswept for a couple of weeks. And a passable simulation of a tropical downpour would only require you to neglect your roof repairs for a few years. Would Malaysia lose out from this substitution of software for sand? Not if they were writing the software, they wouldn't. In fact, as their beaches were gradually emptied of their latent couch potatoes, the place would go back to its early pristine state, thus offering through simulations a degree of authenticity that current offerings could never hope to match.

This omni-directional substitution of information for energy is already well under way. It will penetrate every nook and cranny of the new economy. As we gradually learn to replace direct experiences with simulated ones, we will revolutionize Hollywood's business models: instead of charging us to go to the movies, they will charge us to get out of them. At that point, reality itself will have become a scarce resource. Do I hear you asking me to 'get real'? I'm sorry, I can't afford to.

Posted by Boisot on October 8, 2007 4:58 AM

Profiting from neural congestion

Some years back, Ken Livingstone, the Mayor of London introduced congestion charging for road vehicles wanting to occupy Central London's road network during working hours. This makes sense since the supply of Central London roads is inherently limited and the demand for central London roads keeps increasing. Economics 101 suggests that congestion charging merely reflects Central London's overall scarcity value. And although there is some debate about how successful congestion charging has been, it has now been extended to the west of London. Viewed from the perspective of someone (ie, me) who spend on average a week a month in Central London and does not own a car, the congestion charge has been a godsend.

The experience got me thinking: Is the concept of congestion charging generalizable? Would it find any application, for example, in the information economy? Consider the following. I am experiencing a growing number of claims for my attention – from my wife, my creditors, my students, from pop-up ads on the screen of my laptop, etc - but as with London's road network, my ability to supply the required volume and quality of attention remains strictly fixed by the density of connections in my brain (my friends tend to stress the density rather than the connections). To cope with this imbalance, it would make sense for me to establish a schedule of neural congestion charges for those who aspire to enter my neural network. The schedule would be based on two criteria: 1) How far into the network does the intruder want to penetrate? 2) At what time? Taking each in turn:

1. My wife, my son, and cognitive neuroscientists all agree that getting through to me is a multi-layer process. Some of the messages don't get beyond the five senses, leaving my cognitive apparatus blessedly undisturbed. They represent purely experiential stuff – a fistful of Qualia. Benign titillations of my senses would be charged at a lower rate than those that require thought and mobilize those parts of my data processing apparatus currently mothballed. (If you are unsure which parts of your system are mothballed, try this test: look at a photo of Paris Hilton. Does it set you thinking?).
2. At what time? The highest congestion charges would be incurred between 11pm and 7am when I am likely to be fast asleep. In the world of Atoms, these correspond to the times in Central London when there is little or no traffic entering the road network and minor road repairs can be carried out. In the world of bits it is the time when dreams are repairing faulty neural connections, and when I also want no external traffic clogging up my brain. The lowest charges would apply to those messages received between 6pm and 9pm for which mental alertness is not required. Say hi to Paris.

I am not the first one to suggest that in the attention economy, you will be paid to pay attention. But I may be the first to suggest that in the attention economy you can calibrate the process of attention-giving so as to maximize the value of your neural processing. Between 6pm and 9pm Paris Hilton trumps George Soros.

Posted by Boisot on October 9, 2007 6:10 AM

Algorithms

According to an article in The Economist of September 15 ('Business by numbers') algorithms have become the instruction manuals for a host of routine consumer transactions. Amazon, for example, uses algorithms to help the company recommend further purchases 'in the neighborhood' of your new purchase. The logistics firm that will deliver the Amazon product to your door will then use an algorithm to identify the best delivery route. And the call centre in Mumbai dealing with your complaint to BT will use an algorithm to figure out from your voice which part of Yorkshire you come from before matching you up with a plausible Bangalorian. The latter, in turn, will be algorithmically instructed to fool you into believing that he lives just across the road from you and knows what school your kids go to.

Algorithms make sense of unstructured data, something apparently we are not short of. Given the vast increases in computing power now available, algorithms can extract unexpected information from your laundry tickets, your taxi receipts, and the X-rays of your dental cavities. By performing sophisticated correlations on these disparate bits of data, firms can now offer you product customized to make sense of… well, your laundry tickets, your taxi receipts and the X-rays of your dental cavities, what else? Algorithms allow firms to exploit what Chris Anderson has labelled the long tail – those micro-niches of the market that would have been ignored in earlier times.

As a market segment of one – the mother of all micro-niches - I look forward to algorithmically-derived products that can make sense of:

1. My choice of All bran for Breakfast cereal related to my preference for a room temperature of 22 degrees Celsius.
2. My tendency to drink Diet Coke when listening to Beethoven ("People who listened to Beethoven also drank….")
3. My preference for the seats 22c in wide-bodied aircraft and 35d in Boeing 737s.
4. My urge to scream when Amazon informs me of what other people have been reading.
5. All of the above correlated with all of the above.

Algorithms are designed to 'take a load off your mind'. But at what point to they begin to take all the load of your mind – ie, make you mindless? I guess that you'd have to be pretty mindless to be able to make sense of 1-5 above.

Posted by Boisot on October 10, 2007 8:35 PM

Confidence Tricks

Pragmatist like Charles Peirce and William James to knowledge to be beliefs that had cash value – ie, that you would be willing to act upon. Last week, account-holders in Britain's fifth largest mortgage lender, Northern Rock, brought to light a perverse way of looking at the Peirce-James definition of knowledge by acting on beliefs that had no-cash value, thus triggering the first bank run in Britain since 1866. This got me thinking of the relationship between individual and collective confidence, and by implication, on the relationship between knowledge individually held and knowledge collectively held. Money, for example – the stuff of bank runs – expresses a fiduciary relationship between citizens and the state. I know what I can currently buy for a pound sterling even though this knowledge ultimately depends in some mysterious way on what I believe I can buy for a pound sterling. Confused? There is worse to come. What I can buy for a pound sterling also depends on what you believe I can buy for a pound sterling, and on what your neighbour believes I can buy for that sum, and on what your neighbour's neighbour believes, so on. In a sense, then, knowing exactly what I have when I have a hundred pounds in my account – knowledge that I will act upon when I sign my next credit card slip – is dependent on a complex web of beliefs that link me up with the whole British social fabric as well as a number of Pushtun Tribesmen lost in the mountains of Waziristan whose minds is currently focused on poundings more than on pounds.

We are, of course, dealing here with the difference between the real and the nominal economy. In the real economy, when I buy a chair to sit one, as the purchaser, I am the only point of reference needed to judge whether the chair is strong enough to carry my weight. You may not believe that it will carry my weight, but this will not in itself alter the load-bearing disposition of the chair. My own belief on the matter may not be justified, but again, this will not alter the properties of the chair. How different the nominal economy in which what you believe constrains what I can legitimately believe. As Keynes once pointed out, those who make money in stock markets are not those who have some detached knowledge of whether prices will rise or fall in some abstract universe of their own making, but rather those who sense whether you will believe that prices will rise or fall and will act accordingly.

Should we treat the nominal economy as suis generis? I think not. Consider some other situations in which your beliefs are conditioned by the beliefs of those you interact with.

1. You are sitting close to the departure gate waiting to board your flight. Suddenly three people get into a line and everybody else follows. Has there been an announcement? No. The ground staff is still just sitting there joking, chewing gum and ignoring you. But, you argue, if some people are getting into line, they must know something that you don’t.
2. At some point in August 1991 in Moscow, Boris Yeltsin stood up on a tank and waved a flag. The TV cameras were trained upon him. Yeltsin may or may not have believed that his side had won the standoff with the communists, but by waving the flag he was proclaiming this to be his belief. Now those watching him on TV knew that others were also watching him on TV and that if everybody came to believe that Yeltsin had won, then this would actually help him win. All this make-believe delayed by more than a decade Russia’s return to its old Soviet habits under Putin
3. You live in a city where petty crime and street violence has increased. Streets now get deserted at night, which in itself increases the general sense of insecurity. The city authorities decide to increase the number of police patrolling the streets. Your belief that you may be safer in the streets at night will depend on whether other believe that they will be safer and become willing to walk the streets once more. Increasing police patrols is designed to induce a tipping point in the collective belief of the citizens in favour of going out at night.

In all the above cases, the confidence with which a belief is held – and hence acted upon - depends on how collectively it is held. And as last week’s bank run on Northern Rock demonstrated, confidence is a fragile thing delicately perched at the edge of chaos, but no less real in its effects for that.

Posted by Boisot on October 11, 2007 6:42 AM

On the value of irresponsibility

You have a public self and a private self. The public self is what you hold yourself out to be and are willing to take responsibility for; the private self, on the other hand, you may be able to do little about. Peel away the layers of the public self to get to the private self under the controlled supervision of a shrink and you finally reach those elusive Freudian entities, the ego, the superego and the id whose frenzied interplay often play havoc with the public image you are attempting to project. In the case of an onion, such peeling away will be enough in itself to make your shrink weep; in your case only a seriously repressed id would attract such sympathy from a professional.

The relationship between your pubic and your private self raises a deep and increasingly troubling question. When should you be held responsible for what you say? Your age comes into it, of course, and this at both ends of the range – you can take a tendency to dribble as a sure sign that you are currently located at one end of the range or the other. But circumstances also have a part to play. Public speaking and publication, for example, are clear-cut cases given that it is your conscious intention to be heard by others. Here it is your public self that is speaking. But what about what you have just scribbled in haste in your personal diary? Is this not the private self speaking? Can – and should - your private self ever be held accountable for what you write in your diary? Accountable to whom? To the addressee? You are the addressee! Your diary might constitute admissible evidence in a court of law - "the diary clearly stated that he was planning to get rid of her…" – but could you be sued by a third party for what, driven by unconscious Freudian impulses, you write about him or her? Of course, if you decide to put your diary on the internet it becomes a blog. But is not a blog just a diary that you allow us to peek at? Isn't that what you allow your shrink to do under conditions of professional confidentiality? Some diaries, of course, are a form of literary exhibitionism and designed as such. But this exhibitionism will itself be under the malevolent control of the Freudian trinity. So back to square one.

Madame de Staël famously said 'Tout comprendre, c'est tout pardonner' (To understand everything is to forgive everything). I suspect that the lady enjoyed peeling onions – or blogs.

Posted by Boisot on October 12, 2007 12:08 PM

Starbucks and Complexity

As a frequent consumer of its products, I have often pondered the Starbucks phenomenon. A 'Tall' tea at Starbucks cost one pound sterling and 45 pence. To get your tall tea, you may have to stand in line for anything between ten and fifteen minutes waiting to be served – often longer at airports. When this happens, being of an impatient nature, I start reflecting on the deeper structure of the experience. If I were to put a value on my time at say, six pounds an hour – approximately the minimum wage in the UK – I would conclude that the real cost to me of a 'Tall' tea at Starbucks was approximately two pounds and 45 pence, the extra pound being the cost to me in time lost in waiting in line. So why did I not go somewhere else where I could sit down and get a waiter to serve me? It would almost certainly cost me less.

I never managed to fathom my irrational willingness to stand in line at Starbucks until today when, while waiting in line, I picked up a leaflet entitled Starbucks Beverage Order Guide. Then the penny dropped. If you are willing to re-frame your experience of waiting in line, you discover that it has a value way beyond that of the time you think you are wasting. Properly considered, Starbucks is offering you some basic training in complexity theory. This is what I must unconsciously have intuited.

To see this, return for a moment to the leaflet. Open it up and on the first inside page you discover that you have a choice of beverage size: Venti (large), Grande (medium) and Tall (small). Why the specialized jargon? Clearly, to avoid confusion. An elephant can be 'large', for example, and so referring to your beverage as 'large' would incur a loss of precision that could lead to your tea being served in something the size of a bath. Alternatively, a bug can be small, and ordering a 'small' tea could then make it difficult for the bug to then fit in the cup. Better, then, stick to Starbucks' private language and just live with the resulting cognitive overload you incur as you struggle to relate it to something more familiar than an elephant. On the second inside page of the leaflet, you are introduced to the options: decaf, shots, syrup, milk, custom, drink, and ice. Each of these options is further subdivided so as to expand your choice – and further increase your cognitive overload. It is important to understand that these options are not all mutually exclusive so that you could, if you chose to, order a beverage that is extra hot and then ask to have ice added to it. Finally, on the back page of the leaflet, you are given the descriptions of the beverages to which all these sizes and options apply: caffe latte, cappuccino, caffe mocha, caramel macchiato, expresso, Americano, and filter coffee.

While perusing this leaflet, it finally dawned on me that what was being described here was a consumer's version of what mathematicians refer to as a combinatorial problem and that the whole of Starbucks' strategy consisted of expanding the choices available to you from the one or two traditional options – ie, coffee or decaf – to several hundred billion. Now if you think about it, with that number of choices available, you are more than likely to be ordering a drink that no one in the history of the universe has ever drunk before. Call this the mystery of mass customization. This is designed to confirm to you that you are a unique individual since, by confronting head-on the computational complexity of the choices that Starbucks puts before you, you succeed in creating for yourself a unique drink. Talk about differentiation!

If my intuition is correct, then all this standing in line is not designed to waste my time at all. Rather it is a subtle and non-obtrusive way of securing the time necessary for me to compute what my order is going to be – call it computational queuing. I have now realized that, once framed in this way, and given the plethora of choices available, the waiting lines at Starbucks are not nearly long enough since, if the service ever got efficient – and God preserve us from this - it could lead to unnecessarily hasty choices. It is now obvious to me that if one really wants to enjoy a truly unique Starbucks experience, then one should be queuing for at least an hour. This would mean the line spilling out of the shop and probably going round the block. Now, if Starbucks ever decided to expand their menu….

Posted by Boisot on October 13, 2007 8:09 AM

And so, Max, after standing in line do you then order a regular coffee?

Posted by Mary Boone | October 13, 2007 1:55 PM

Why managers of businesses make their customers queue, rather than providing more staff, is something of a mystery. Maybe the manager has confused the length of the queue with how busy he is. But there is no relationship here, because each staff member cannot process more business just because there is a queue, unless you count the way queues put both customers and staff under pressure to move more quickly. Perhaps the manager is saving one hour of staff time (£6), but because of it, making 100 people wait 10 mins each (total time stolen from customers 16 hours), he can see the £6 but he can't see the 16 hours. My conclusion is that any manager who makes his customers queue has an extremely high disregard for his customers, and so should be avoided at all costs.

Posted by karl jeffery | October 15, 2007 11:09 AM

I would like to say that I found your posts to be wonderful. I would check in each morning to see if you had added something to the blog. The other folks have been great to read in terms of learning about some of the methods and thinking, but your posts were literary pieces as well. I find this uncommon in the technical world, where data and bulletized arguments make for near nonreadability! Your posts were exceptional. Thank you.

The point regarding queuing is well taken. As a person who visits the same Starbuck's every morning at about the same time, I order the same thing, I sit in the same chair (if it is available), and I know at least a little bit about most of the people who work there and many of the regulars. As a friend says, Starbuck's is the modern day Cheer's, the neighborhood pub where everyone knows you. Except you go in the morning and drink caffeine! In this particular Starbuck's the queue can get very long some mornings and then shrinks to nothing. It is classic OR (OA in Britain) that queues behave this way and says essentially nothing about the attitude of management towards customers. Now if it were a chronic issue, that would be different. And if there were cash registers not being manned or positions at the espresso machine unoccupied, I would say they were not staffing well, but there is only so much capacity in a given store layout. (Sorry, my analytical side comes out once in a while!)

Posted by Wayne Zandbergen | October 18, 2007 3:09 AM

Posted on October 18, 2007 03:09

Max Boisot:

1. Mary, the answer is 'yes', I do indeed order a regular coffee. I consider this to be economically irrational since if I were to put a price on the value of my time, then, firstly, I have refused to engage in the computational opportunities that spending time in the waiting line would offer me - thus lowering my opportunity costs - if I ordered a more complex product. Secondly, I have now minimized the value of the purchase relative to the cost of waiting for it. Now, neoclassical economist keep telling us that we humans are 'rational' economic agents and that we maximise our marginal utilities. Perhaps, unconsciously, my own behaviour demonstrates that there is at least one economic agent for whom rationality is both episodic and transient - if he is not alone, we have the reason, perhaps, why Starbucks flourishes.

2. Karl, you overlook the possibility that some people actually enjoy queuing. Queuing for its own sake is something that older Britons got socialized to during the second world war. Now they can't kick the habit. Some don't even want to be served lest the experience of the service they have been waiting for undermines the experience of waiting for it - to travel hopefully (ie, to queue) is often better than to arrive (ie, to be served).

3. Wayne, the Starbucks queue becomes a problem at US airports when you have to catch a flight and you are waiting in line with 20 people before you. Starbucks is applying a fast-food business model to the delivery of complex products. As you point out, however, they cannot just expand the number of tills or servers spontaneously to cope with the peaks. My impression, though, is that they are not using information technology to good effect. They face what we might call a 'micrologistics' problem.

Posted by Max Boisot | October 18, 2007 8:01 AM

Education

1966	B.A. in Architecture University of Cambridge, UK
1968	Architectural Diploma University of Cambridge, UK
1971	Master of City Planning, U.S.A. Massachusetts Institute of Technology, U.S.A.
1971	Master of Science in Management Massachusetts Institute of Technology, U.S.A.
1973	M.A., University of Cambridge, UK
1982	Ph.D., Imperial College of Science & Technology University of London, Department of Social & Economic Studies, UK
1983	Diploma of Imperial College University of London, UK

Appointments Held

1971-72	General Manager, Ideal Building Corporation (Europe); European House building subsidiary of Trafalgar House Investment Ltd.
1972-75	Founding partner of the Boisot Waters Cohen Partnership, an architectural and planning firm based in London.
1975-78	Consulting activities for Petrus Management Services Ltd. on project appraisal and architectural design in Saudi Arabia, Oman, Egypt, and France.
1979-81	Research Associate, the EuroAsia Centre, INSEAD
1981	Visiting Professor, Institute for International Studies and Training, Fujinomiya, Japan
1981-86	Associate Professor, Ecole Superieure de Commerce de Paris (parttime between 1984 and 1986), teaching International Business, Business Policy, and Organisational Theory.
1981-86	Visiting Professor, University of ParisDauphine, teaching two doctoral seminars per year.
1982	Visiting Professor, College of Business Administration, University of Hawaii.
1984-88	Director and Dean, CHINAEEC Management Programme (CEMP). This is a fiveyear programme (the first in the PRC) financed by the EEC and run in the Training Centre for Economic Cadres of the State Economic Commission in Beijing, China. The programme was conceived, negotiated and set up by Max Boisot on behalf of the EEC Commission between 1981 and 1984 when he was aksed to take over its overall direction in Beijing. TheProgramme has since evolved into the ChinaEurope International Business School (CEIBS), located in Shanghai, now no. 50 in the Business School rankings.

1989	Director of Executive Programmes –China-EEC Management Institute Beijing - resigned June 1989.
1989-90	Senior Research Fellow, Ashridge Management Research Group, Ashridge Management College, UK.
1989-90	Visiting Professor -Aston Business School, Aston University, UK
1989-90	Visiting Professor -ESADE, Barcelona, Spain
1989-90	Visiting Professor University of Hong Kong Business School, Hong Kong
1991-2002	Professor - ESADE, Barcelona, Spain
1991	Visitor - The Judge Institute of Management Studies, University of Cambridge
1992 - 2001	Senior Associate - The Judge Institute of Management Studies University of Cambridge
1993	Citicorp Visiting Professor, Hong Kong University Business School, Hong Kong University
1993	Visiting Fellow, The Management School, Imperial College of Science and Technology, London University
1994-1995	Team Leader: Design and Implementation of a Euro-Arab Management School for the European Union in the City of Granada, Spain
1995-1996	Academic Coordinator. Master of Management Development Programme. The EuroArab Management School, Granada, Spain
1996-	Poh Seng Yeoh Senior Research Fellow at the Sol Snider Entrepreneurial Center, The Wharton School, University of Pennsylvania
	Associate and Academic Advisor, The Chinese Management Centre, Hong Kong University
	Associate Fellow, Templeton College, University of Oxford
2001-	Academic Associate, CIBAM, The Judge Institute of Management Studies, University of Cambridge,
2002-05	Professor, Universitat Oberta de Catalunya, Barcelona, Spain
2003-	Visiting Professor, Birmingham Business School
2005-6	Adjunct Professor, INSEAD, Fontainebleau, France
2005-6	Visiting Professor, The Management School, Xi’an Jiaotong University, Xi’an, China
2006-9	Chair of Strategic Management, Birmingham Business School, The University of Birmingham, UK
2009-	Visiting Professor. ESADE Business School. University of Ramon Llull