



## Commercial Philosophy: Science or Religion?

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Good evening Ladies and Gentlemen. Tonight is valedictory lecture night. After four years and 27 Commerce lectures we end on a question - is commercial philosophy a science or a religion?

As Gresham regulars know, it wouldn't be a Commerce lecture without a commercial. Delightfully for me, this is not my last lecture at Gresham so I'm pleased to announce a performance by John Harle, the brilliant saxophonist, and me, consisting of Benjamin Britten's 'Metamorphoses' combined with highlights of the past four years of Commerce lectures with graphics by Bill Joseph, 'Metamorphoses: The Terrible Beauty Of Change', here at Barnard's Inn Hall at 13:00 on Monday, 22 June 2009, part of the City of London Festival.

An aside to Securities and Investment Institute, Association of Chartered Certified Accountants and other Continuing Professional Development attendees, please be sure to see Geoff or Dawn at the end of the lecture to record your CPD points or obtain a Certificate of Attendance from Gresham College.

Well, as we say in Commerce - 'To Business'.

### The Way You Think

Tonight's lecture is about the way people think. It was billed as saying, 'there are two types of people in the world - those who believe in markets and those who don't'. I would like to explore that divide in thinking. To kick off, I'll relate an old joke which I cleaned up a bit for this evening. One day a teacher asks Johnny, 'Johnny, if there are two birds on a wire and I fire two barrels from a shotgun, how many birds will I hit?'. 'One, Miss'. 'Johnny, please listen, if there are two birds on a wire and I fire two barrels from a shotgun, how many birds will I hit?'. 'One, Miss'. 'Why Johnny?'. 'Well Miss, after you fire the first barrel the second bird will fly away.' 'Johnny, that's the wrong answer, but I like the way you think.'

The next day Johnny comes into the classroom. 'Miss, my Dad says that I must put my allowance money in a bank account. One bank offers me an educational booklet with a Young Savers pin. The other bank offers me a month's free ice cream. Which bank should get my account?' The teacher blushes, and says 'Well, perhaps the one that gives the free ice cream'. Johnny replies, 'No Miss, the one with the biggest government deposit guarantee, but I like the way you think!'.

My daughters pose delightful philosophical challenges too. For example, when we discussed religion recently they asked, 'what does Daddy believe?'. In some ways I hope that tonight's lecture gives them and you a flavour of what I do believe, or more importantly what I think we should all try and falsify. Now, the dedicated follower of Commerce lectures knows that this lecture comes at the end of a long series. We've ranged across topics from measurement to chaos theory, government, accounting, option theory, ethics, prospect theory, standards markets, globalisation, tax, innovation, risk, liquidity, corruption, regulation, prediction, positional goods and trust. What could possibly be said that might bring so much diversity together?

Further, over the four seasons of lectures we've continued to witness two big social changes. The first big social change is evident doubt about our own sustainability. Whether it's climate change, pollution, biodiversity or just the recognition that our own successes have led to population growth that may bring

about our downfall, people clearly have more and more concerns about sustainability, the long-term. 'Koyaanisqatsi' is a Hopi word for 'crazy life', and also the title of a prophetic, non-verbal 1982 film about our world being out of balance. In increasing waves since the 1960's we've been having more and more koyaanisqatsi moments.

The second big social change is evident doubt over the sensibleness of our governments and our economies. The drama of the Credit Crunch provides many opportunities for tragic heroes, from hedge funds to crooks to big bank chairmen to politicians to regulators. In 2006 criticism of our self-evidently brilliant financial markets was rare. When I heard a fund manager explain at an April 2006 lunch that 'hedge funds are intrinsically evil', I was surprised enough to write the comment down. From 2007 though there has been no end of statements about the absurdities of finance and economics and politics. An Allianz advertisement promised 'advanced financial solutions' that work. Instead we've had 'artificial financial solutions' that burst.

Both of these big social changes are about the long-term, about sustainability. How can we have a sustainable environment? How can we have a sustainable economy? A general definition of sustainability might be the capacity to maintain a certain process or state indefinitely. And that leads us to fish.

### Price Of Fish

There's a wonderful put down for many abstract ideas, 'what's that got to do with the price of eggs, bread, cheese, beans, tea in China, what-have-you?'. My favourite has always been, 'what's that got to do with the price of fish?'. The essence of the expression is that an abstract thought gains credibility when it relates to everyday matters, for example the cost of a basic commodity.

Fish is a good commodity to think about. A tin of tuna from the Southern Ocean is a marvel - delivered across half the world through a complex supply chain involving many thousands of people. And you put it in a sandwich. Fish constitute the main source of protein for over 1 billion people, so they are an important commodity. Fish are also luxury items, from high-priced restaurants to caviar. Further, fish are input to other products from other fish (fish-farm-food) to prepared foods to sports. Every seaside city and many seaside towns have fish markets. Fish markets mean fish trading. Fish prices on the markets represent the hopes and dreams of fishermen, their families, a second boat, the rescue service, lighthouses, cannery owners, freezing facilities, transportation firms, food companies, retailers, restaurants and consumers. The price of fish both encapsulates and affects all of these people. As with all complex supply chains, fishing shows the organising power of markets at work. Each participant in the chain is guided, as if by an invisible hand, to cooperate with others, yet there is no global mega-fish-corp. They also compete. Fishing shows the leverage effects of the division of labour. Each participant focuses on a part of the work, whether it's catching fish or breeding fish fingers or writing fish restaurant reviews; resulting in an economic, efficient and effective supply chain. Finally, fish are heavily traded both locally and globally. A few times a year I get over to Billingsgate fish market in the Docklands to buy fish fresh or frozen from as near as Dover to as distant as Chile.

Fish have featured in previous Commerce lectures. For example, 'Take My Profits Please: Volatility Reduction And Ethics' [13 March 2006] looked at how sustainable fishing could be valued by society. 'Standards Markets: The Free Market Response To Regulation' [16 October 2006] touched on audit markets for sustainable fishing. 'Stealing The Silver: How We Take From The Dispossessed, The Poor And Our Own Children' [12 November 2007] pointed out the absurdities that arise when discount rates are applied to social commons, 'taken to the extreme, eating a \$6 fish tonight can be calculated as worth more than consuming all the fish in the world a couple of millennia from now at a discount rate of 1%.' 'Save The World: A Commercial Break' [28 April 2008] looked at how intertwined mobile phones are with both development and exploitation of fish. 'Is The Party Over? Sustainable Hopes' [16 September 2008] touched on how fisheries' collapse seems inevitable by mid-century.

From Newfoundland's Grand Banks to Africa to Asia to Europe, fisheries have collapsed. Historically, fishing has been more akin to mining than to harvesting. Fishing fleets denude an area, then move on when the resource is exhausted. Charles Clover, the former environmental editor of The Daily Telegraph points an unwavering finger at many guilty parties, from dishonest fishermen to devastating trawlers, venal politicians, malingering government agencies, inept scientists, celebrity chefs and the general public, who care little about the true cost of what's on their plates.

A World Bank and Food & Agriculture Organization study this year, The Sunken Billions: The Economic

Justification for Fisheries Reform, concludes that the global recorded landed catch of about 100 million tonnes is worth about \$10 billion dollars less than the cost of fishing it. The difference is subsidies. If over-fished stocks were allowed to recover, a sustainable catch of around 80 million tonnes could be taken with about half the present fishing effort for a net profit of about \$50 billion/year. The renowned marine biologist, Sidney Holt, who spoke here at Gresham College last autumn on the subject 'Shall Future Generations Eat Fish Or Whales?', while critiquing the report, concludes: 'Whatever the dynamics of this great ecosystem, it is clear that returning to a more productive overall state will be painful, economically and socially?' [Holt, 2009, page 3]

Fishing is interesting, therefore, as much for market failure as for landed catch. We have spoken about three typical market failures. First lack of competition. In fishing, there seems to be intense competition, but this intense competition comes with public subsidy distortions and private fraud. Second, information asymmetry and agency problems. Fishermen know more than most, but not as much as they need to. The problems range from poor data to incomplete science to lying games. It's proved nearly impossible to be accurate about sustainable yield scientifically, while governments and fishermen dance a duet lying about catches and conditions. There are numerous agency problems, as the seas are a common resource being administered by governments, scientists and fisheries agencies as much as food producers and fishermen, supposedly on behalf of the public. Third, there are large externalities. Trawlers don't bear the cost of destroying the seabed. Commercial fishermen don't pay for the losses to sport diving and fishing users. The public loses beauty and biodiversity, yet no one seems in charge.

But fishing also exhibits a fourth failure, improperly using markets, as it's an industry founded on confused property rights. Despite wide recognition that individual transferable quotas for fish work better than common ownership, exploitation comes without ownership. [As an aside, one argument our firm, Z/Yen Group, made on UK fisheries policy in 2003 was to make insurance against damaging a quota's asset potential obligatory before activating a quota.] Fishermen take 'more than their fair share'.

For me, one of the most revealing statements was to hear a senior private equity head state that private equity firms had 'earned more than our fair share'. In an open, competitive economy, how can you earn more than your fair share? So let's go back to fish for a moment:

'There is the old story about the market craze in sardine trading when the sardines disappeared from their traditional waters in Monterey, California. The commodity traders bid them up and the price of a can of sardines soared. One day a buyer decided to treat himself to an expensive meal and actually opened a can and started eating. He immediately became ill and told the seller the sardines were no good. The seller said, 'You don't understand. These are not eating sardines, they are trading sardines.'

[Klarman, 1991, page 5 - in turn attributed to Sequoia Fund, Inc., annual report for 1986]

So the difference between trading sardines and eating sardines is unsustainability. We see that two things are unsustainable, fish and the price of fish. Fishing exemplifies two characteristics common to wicked problems:

“ the degree of uncertainty: in fisheries uncertainty stems from a large number of unknown quantities, difficulties with measurement and poor tools for handling uncertainty, for instance which fish eat what when and where? what is the investment profile of a fisherman? can we estimate predicted environmental changes? How do we model decisions under uncertainty?

“ the complexity and holistic nature of managing sustainable stocks: no part of the problem can be isolated and solved in isolation. Stocks affect economic returns affect investment affect politics affect communities affect compliance affect stocks, etc.

These two characteristics, uncertainty and complexity are equally applicable to the two big social changes I mentioned earlier, sustainable environments and sustainable economies. Now while Apocalypses come and go both environmental catastrophe and financial crises are perennial, just some times interrupted by wars. From before Malthus we could count on them. In fact we're accustomed to them. Jared Diamond points out that environmental catastrophe is a real risk in his book, Collapse. Yet 'A State of Fear', to pinch a title phrase from Michael Crichton, is neither achievable, because the vast bulk of us won't grasp it, nor desirable, because decision-making under fear becomes irrational.

Taxonomically, I'd now like to move from the classes of fish to the order of primates.

## Primate Matters

Homo sapiens, the knowing human. Commerce emerges from our behaviours. While it's nice to have theories about ideal politics or economics, real life is embedded in the needs, urges and behaviours of us, the naked apes, as individuals, families and groups. There are some indications that commercial behaviour is found in other primates, and perhaps other species. Our peculiar version of Commerce is affected by our primate nature. For example, we may be unable to have meaningful relationships with a number of people greater than a traditional primate group, perhaps somewhere between 50 and 300 people. That limit puts a new spin on global networks.

We apes choose Commerce to organise ourselves. So follow this circle. Society wants people to work. People need to be motivated to work - we let them anticipate profit. CP Snow remarked, 'Jam today, and men aren't at their most exciting: jam tomorrow, and one often sees them at their noblest'. [Snow, 1998 (originally 1959), page 44] When people compete appropriately in their work the results are economy, efficiency, effectiveness and innovation. Competition leads to growth, or gets out of control - leading to destruction outside the rules of the game. To control competition we control violence and firm size and cartels. Some people succeed or fail through luck or skill. As apes, we will favour our own offspring over others. Successful people acquire more wealth that gives them more power which they can hand on to their children. As apes, we value equality. To reduce inequality we try to stop the acquisition of power and redistribute through tools such as death duties or taxation. We either have punctuated returns to equality and much argument, or constant returns to equality and ruin the motivation to work. What to do?

## Commercial Philosophy

My original lecture in 2005 pointed out that the key theme of this series would be society's choices. I closed that lecture by pointing out that the physicist David Deutsch remembers the wonder of being told as a small child 'that in ancient times it was still possible for a very learned person to know everything that was known.' He points out that a good interpretation of everything was that the very learned person should have the right concepts, explanations and theories to understand and explain the fabric of reality. Deutsch contends that the four key theories for understanding the universe are quantum physics, epistemology, the theory of computation and the theory of evolution. Deutsch prompted an excellent, similar question for us, what should a learned person know in order to know everything that is known about Commerce?

So what is a commercial philosophy and how might it help us to handle our two wicked problems, environmental sustainability and economic sustainability? The philosophical part is to realise that Commerce needs 'a system of thought to examine beliefs and assumptions, as well as a system of enquiry to investigate questions and problems of existence, knowledge and ethics'. With such a philosophy we should be able to propose solutions to problems. The commercial part is more difficult.

As Professor Rodney Barker remarked here at Gresham College ['Tearing Up The Ideological Maps, And Squabbling Over The Compass', 3 March 2009] 'if ideology serves identity, identity is shaped and cultivated by ideology - the choice of what map to use, and how to draw it up, is one of the most important'. In 2005 I set out then four basic areas of knowledge, themes, that we must integrate in order to have a framework for understanding and explaining Commerce. Four years on there are a few tweaks to my thinking and terms (originally 'competitive selection', 'decision theory', 'economics with finance', 'stochastic systems theory'), but the four themes hold, and one is identical to Deutsch's, evolution.

- “ evolution: Commerce requires its own application of the theory of evolution acting at the level of families, firms, societies and governments. From innovation to 'creative destruction' there are numerous comparisons to be made between Commerce and evolution including the idea of fitness or what might constitute 'institutional' genes. Studying evolution requires a grounding in history and the hysteresis of systems;
- “ choice: understanding the complexity of human choice starts with epistemology, but adds physiology, psychology, anthropology and sociology. We need to understand how humans develop knowledge and biases, including from and with each other, and how these perceptions affect their behaviour individually and in groups;
- “ economics: with economics and finance we can work on the fundamental calculations of exchange between people, and if we take economics in the old sense of political economy we incorporate wider structures, equity and ethics;

complexity: systems theory encourages us to decompose complex systems into sub-systems, recognising interlinked feed-forward and feed-back loops. A stochastic view of the world develops our appreciation for the roles of chance. Complexity questions our ability to evaluate systems based on their predictive capacity. Small changes in inputs can result in large changes in outputs, while imperfect information both in planning forwards and evaluating backwards render scientific provability questionable.

We have explored each of these four themes before so I will only highlight some quick points from each. First, evolution - we explored how evolutionary structures help explain innovation and standards. Second, choice - we looked at irrationality in a number of areas, but particularly the idea of Prospect Theory. Third, economics - we examined networks, as well as lack of competition, agency problems and externalities. Fourth, complexity - we've repeatedly seen that human systems differ markedly from physical systems because humans can anticipate changes, i.e. human systems have feed-forward and feed-through, producing 'fat tails' in outcomes, whether they be investment bubbles or currency crises.

So do these four add up to a coherent religion? Professor Rodney Barker ['Ideological Weddings: Something Old, Something New, Something Borrowed, Something Blue', 2 February 2009] pointed out 'All ideologies are patchwork quilts rather than garments made from a single cloth with a single pattern.' When I asked one of my daughters a couple of years ago, 'do you believe religion is true?', the response was, 'Daddy, religion is only true if you believe in it'. So to answer directly one of tonight's questions, what do I believe in - well, my deity may help you remember these four items - the complex economic deity of evolving choice.

Interestingly, each of these four themes has a related great debate, or two or three. In the time available I shall pick out only a few. In the 19th century the evolutionary debate dominated, most memorable perhaps in the 1860 Huxley-Wilberforce debate in Oxford. Evolution remained controversial in the 20th century with the 1926 'Scopes Monkey' Trial (and even today with the Church of the Flying Spaghetti Monster). What we know and what we don't know doesn't get much more fundamental than physics, and the 20th century saw the great dialogues, epitomised by Bohr and Einstein, of how quantum mechanics informs our understanding of reality. The Copenhagen Interpretation was one camp, championed by Bohr, while Einstein countered with the illuminating Einstein-Podolsky-Rosen paradox. The debate continues today between the Copenhagen Interpretation and the Many Worlds Interpretation. In economics we have any number of debates, though perhaps the Monetarism-Keynesian debate, with Milton Friedman and his disciples believing inflation is a monetary phenomenon arrayed against John Maynard Keynes and his disciples believing government intervention works, has yet again come to the fore. Finally, complexity debates start with Bertrand Russell's and Alfred North Whitehead's Principia Mathematica running into the wall of Kurt Gödel's incompleteness theorem, followed by Mandelbrot's fractals and the Santa Fe Institute's complexity research. Complexity demonstrates that there are metaphors that aid understanding without being provable.

And provability is one debate of the last century I must single out. This debate affects all four themes of our complex economic deity of evolving choice, but particularly choice. This is the debate of the Positivists, Neo-Positivists and Rationalists versus Popper and Scientism. One result of this debate is that Karl Popper laid down an enduring challenge, falsification. Falsifiability or refutability is Popper's test of truth. No assertion is ever true, but an assertion of meaning must be falsifiable, that is there must be a test that can show the assertion is false, such as a physical experiment or observation. Cogito ergo dubito - I think, therefore I doubt. A true Popperian might paradoxically joke (as I sometimes do) 'no unfalsifiable belief is worth believing in'. Even Popper was spiritual about science, 'Science is most significant as one of the greatest spiritual adventures man has known' [Popper, 1961, page 56]

Until our deity is subject to falsification, it remains a deity. Part of the problem with my belief in the complex economic deity of evolving choice is that, so far, it is in large part unfalsifiable. There are few specific tests that could show either evolution, choice, economics or complexity are untrue. They remain metaphors, or ways of making the world comprehensible, without necessarily being scientific. Our challenge is to move from religion to science, and to do so requires finding ways over the years of turning our deity into a set of falsifiable assertions that endure. I contend that to journey with a bit of wonder and awe for our deity is worthwhile, or as Blaise Pascal remarked, 'Few men speak humbly of humility, chastely of chastity, skeptically of skepticism.'

Teleology

It might be worth explaining the purpose, or teleology, that a commercial philosophy might serve. Commerce is transaction or trade among homo sapiens, whether it be for money, for food, for safety, for sex, for the benefit of others or for ideas. We 'commerce' with family, friends, employees, employers, clients, strangers, goods and services. These days one could say we also commerce with computers. A commercial philosophy should help us to explore and explain these transactions so that they can be put to better use.

An old friend, Tony Dillof, frequently muttered Meckel-Serres Law, 'ontology recapitulates phylogeny', meaning that the end result repeatedly goes through similar formative phases. In *The Hitchhiker's Guide to the Galaxy*, Douglas Adams pointed out that:

'the History of every major Galactic Civilisation tends to pass through three distinct and recognizable phases, those of Survival, Inquiry and Sophistication, otherwise known as the How, Why and Where phases.' These phases are characterised by the three key questions:

- the desperate 'How can we eat?'
- the philosophical 'Why do we eat?'
- and the cosmopolitan 'Where shall we have lunch?'

Faced with a range of possible outcomes, I contend that the objectives of commercial arrangements fall into one of three categories we raised once before [*Take My Profits Please: Volatility Reduction & Ethics*, 13 March 2006].

• risk reduction: our wish to prevent catastrophe beforehand, which can be either prevented or mitigated through avoidance, reduction or pooling (e.g. insurance). These catastrophes can be the loss of fish, the loss of a home, environmental collapse or financial meltdown;

• reward enhancement: our wish to improve outcomes. These improved outcomes can be more landed fish, higher incomes, a better environment or more wealth for all;

• certainty: our wish to lock-in gains, which can be any number of actions designed to reduce volatility. Higher certainty can result from stopping overfishing, trading bonuses for salaries, reducing greenhouse gas emissions or investing in health promotion.

Survival, inquiry and sophistication. If you will oblige me with this oversimplification, you can see that the essence of the problem for us primates is trying to combine our animal natures with complex systems to prevent catastrophe, improve outcomes or lower volatility. Once we can eat, we invest in eating and indulge eating to the point that we then fret about losing what we have. This stage of somewhat self-indulgent worry about uncertainty may be temporary. As we discussed before, success has bred over-population and, in a somewhat circular way, threatens failure and a return to survival.

The third stage, improved certainty, is often the hardest to grasp. We may have moved into a post inquiry or post consumption society. Another way of expressing the third stage, improved certainty, is to think about the difference between brittle and robust. A piece of glass is brittle; a ball of rubber is robust. I sometimes think the mission of Commerce should be to turn society from a piece of glass into a rubber ball. I, and the people in our firm believe that society can be more robust if we can help people 'make better decisions every day'

So is commercial philosophy around a complex economic deity of evolving choice just trumped-up economics trying to be more important than it is? Strangely, until half a century ago people spoke of 'political economy', an implicit recognition that economics and politics were intertwined. Then economics, and later finance, came into their own, doing all the things that new studies do, laying down boundaries, entering into turf wars, fomenting schisms. Politics and economics were divided. Later economics and finance were divided. Macro-economics was invented to make micro-economics look good. But politics and economics were never divided in reality, just in study.

Today, the border between politics and economics has again broken down. Skirmishes and raids on both sides have become so frequent that people cannot determine where to draw the line between politics and economics. Central banks are lending and supporting without thought of repayment. Monetary policy is now a political debate, not a technical target. Politically, we're favouring hidden, untransparent policies because the political-economic debate is awkward. For example, we promote housing subsidies that encourage lending and mispricing, as well as not being the best investment strategy for many homeowners. We underprice insuring bank assets rather than overpaying for overvalued assets because

insurance is less transparent and raises less political furore.

At the moment, because of the credit crisis, economics and its practitioners, ranging from finance departments to accountants to actuaries fear irrelevance. Sure economics and theory might matter but what do real entrepreneurs and real businesspeople do? What use are economists who can't give stock tips? It's one thing to be hated, far worse is to be sidelined. Economists come in for criticism for developing their models too often around homo economicus, who turns out to differ from homo sapiens in a few key areas, such as not maximising utility, or having peculiar risk/reward profiles. Are they Newtonian financiers in a quantum mechanical world? Equally, political theorists are criticised for trying to develop theories based around the ideal of a homo nobilis efferatus ('noble savage'), liberatus ('libertarian') or potens ('authoritarian'). These constructs are sometimes essential simplifications, at others dangerous oversimplifications. A commercial philosophy ought to seek to get closer to real people than idealised theoretical constructs, but it's not easy.

Or is commercial philosophy just a recognition that the whole is greater than sum of the parts - romanticism, chaos, complexity, emergent, holistic, integrative, nice words. In a fascinating recent book, *The Romantic Economist*, Richard Bronk makes the case for considering economics in terms of Romantic themes, '...organic rather than mechanical metaphors ...; value pluralism...; - a fuller psychology of human motivation ...; and finally, key roles played by language, perspective, metaphor and imaginative intuition ...' [Bronk 2009, page 87] Bronk points out that 'imagination plays a role in science, and sentiment drives economic behaviour'. [Bronk 2009, page xv] Does it all just depend?

Bronk's or my ideas may smack of jumbling together a few bodies of established thought to form 'Commerce'. We smack of mutton dressed as lamb. Am I just a mentally lazy, professional eclecticist - knowing less and less about more and more - a Fox rather than a Hedgehog to use Isaiah Berlin's metaphor. I always caution myself when talking of new areas of study because of Harvard's President Lowell. At the arrival of the 20th century, presented with compelling arguments for a new department of political science President Lowell supposedly agreed but remarked, 'Gentlemen, there is no such thing as political science, we shall call it Government'. And it is the Government department to this day. Perhaps Commerce isn't such a bad term.

The advance of knowledge means that the leading edge is frayed and fractal. We are filling in from behind with many theories and bodies of knowledge. As I remarked in a previous lecture, 'one may start with economics and rationality, but at the end of all social science is contingency theory'. [Save The World: A Commercial Break', 28 April 2008] I anticipate that we may well experience 'scale changes' in the near future. Scale changes are my phrase for a Zen-like moment of enlightenment. You delight in changing scale when you move from believing that some carnival magician is just slight of hand to the idea that perhaps, just perhaps, he or she is deploying genuine magic. You delight in changing scale when you move from the wind-in-the-face exhilaration of a roller coaster at a fairground to the terrifying realisation that some overworked carnival employee bolted it all together last night.

## Philosophical Enlightenment

From tension springs enlightenment. Tension exists between the methodology and the very notion of creativity or insight. Yet Koestler suggests that there is a basic pattern underlying creativity [Koestler, 1967, pages 172-196]. He proposes three domains of creativity - artistic inspiration, scientific discovery and comic inventiveness. In each domain, the common pattern underlying creativity is the 'shaking together of already existing but previously separate areas of knowledge, frames of perception or universes of discourse' [Koestler, 1967, page 195]. Somewhat wryly, Koestler expresses the continuum from artistic inspiration, to scientific discovery to comic inventiveness by the reaction induced, respectively the AH reaction (art), the AHA reaction (science) and HAHA reaction (comic).

This trinity of artistic inspiration, scientific discovery and comic inventiveness is reminiscent of Zen Buddhism. 'Zen lives in humour. It is not humorous and it is not serious; it is Zen, but wit is born from the higher ranges of the mind, where the intuition tries its wings, and humour lies on the razor-edge of self and selflessness, where a man looks round at the back of his head and lifts himself up by his belt. Nonsense, in the sense of Lear's original Limericks, is ever on the verge of Zen...' [Humphreys, 1949, page 130]. Zen recognises the tension between technical mastery of a subject and enlightenment or satori.

On 7 May 1959, C P Snow, a Cambridge academic, delivered an influential Rede lecture, 'The Two Cultures'. Snow's core idea was that lack of communication between the sciences and the humanities

interfered with solving global problems. One such moment awaiting us in Commerce, and I don't know whether it will be art, science or comedy, AH, AHA or HAHA, must be bridging the divide between those who believe in markets and those who don't to more subtle positions in the future so we can start to solve global problems. I must share a story from Jan-Peter Onstwedder that gives a funny insight into how traders think:

'In early 2001, following the collapse of Enron I was doing due diligence on buying portions of Enron in Houston. On the deserted trading floor a senior guy explained how they had been able to extend their oil and gas trading system to coal trading in just a few weeks. I'd been impressed and he enjoyed boasting the achievements of the good bits of Enron. We came to the empty desks of their successful North American gas trading team where I saw a screen showing a coral reef with some fish off the Bahamas. Every season the gas trading team would take billion dollar positions in Northeastern markets and make a killing. I asked how, and he said that they'd employed a meteorologist to find leading indicators of Gulf Stream patterns. When there is less warm water along the coast, coral reefs change colour, and temperatures drop starting the winter heating season. So Enron put a colour camera underwater, with a live feed to the trading room. Every day they'd watch and, when they saw the change in colour, they'd put on their big position.'

Folks who believe that the 'Market-will-provide' and folks who believe that 'Organisation-will-provide' find the other side inhuman - slaves to the profit motive or mindless automatons believing somebody else ought to organise everyone to do something. Try to convince an Organisation-will-provide person that the Market-will-provide. Take innovation. 'Yes, but please just tell me from where the next innovation will evolve.' 'OK, it might well be that the next innovation will be X.' 'Great, we'll do X and then come back to your Market-will-provide mysticism later.' Try to convince a Market-will-provide person that the Organisation-will-provide. Take innovation. 'Yes, but please tell me from where in your command & control organisation the next innovation will come.' 'OK, we'll organise an innovation committee to invent something'. 'Great, do that, but leave me out of your Organisation-will-provide mysticism.' Market-will-providers believe in bottom-up emergence, while organisation-will-providers believe in directed evolution - Darwinian evolution against Lamarckian or Baldwinian evolution.

We could construct long lists of dualities: chance versus destiny, comfort with uncertainty versus comfort with predictability, equality of opportunity versus equality of outcome. These are moderately interesting lists, but like all such lists are hardly provable or firm. There are no saints and sinners, no angels or demons, just people. Many people succeed in believing commercial contradictions. Cornelius Vanderbilt was both monopolist and anti-monopolist. He strove to overturn monopolies in steamboats and trains, yet tried to collude in shipping and railways to restrict other competitors. Vanderbilt might doubt the value of a consistent commercial philosophy, 'If I had learned education, I would not have had time to learn anything else'. At one extreme we could concur with Adolphe Quetelet, the Belgian statistician, that everything is down to our social structures, « c'est la société qui prépare le crime et que le coupable n'est que le instrument qui l'exécute » 'society prepares the crime: the guilty person is only the instrument who executes it' [Quetelet, 1832, page 26]. At the other we could agree with Robert Nozick that organising others is none of our business.

For brevity tonight I will share a pithy comment from Stephen Aguilar-Millan [email: 18 May 2009] that summarises widely held views on both sides, 'If we think in terms of institutional degenerates, then it seems quite obvious that the Private Sector degenerates into greed and excess. The Public Sector usually degenerates into waste and inefficiency.' Private, at its best, is decentralised, public is centralised.

The market-organisation divide raises fundamental questions about the nature of the state. Gerald Ford said, 'a government big enough to give you everything you want is big enough to take away everything you have'. Pierre Rosanvallon's fascinating book, *The Crisis Of The Welfare State* [*La Crise De L'Etat-providence*] highlights the tensions as we move from a state founded on protection to one judged by its ability to provide. Arguably, the state feels more comfortable raising terrors and protecting against them than being judged on its ability to provide. Rosanvallon calls for new thinking about public and private, reducing the demands of the state, rebuilding social solidarity and opening up debate.

One could argue that there must be some third way across this divide. Many people do try to bridge markets and organisations, charities, non-governmental organisations, social enterprises. Some bridging is just primate power plays, such as the enforced reverse consideration of tax. Or primate preening and posturing; take charity fundraising - 'my bid is bigger than yours'. Advertising by another name. Rather awkwardly do note that when people get tax refunds for charitable giving they basically get democracy plus



- leverage on their refunded tax money to choose where they'd like to affect the system. More democracy for the rich than the poor. But bridging may help tone down the rhetoric and help people recognise that there are many examples of mixed markets and organisations that do work, such as, in some places, irrigation or forests or health. Equally, there are places where irrigation, forests or health don't work with mixed markets and organisations.

Thus far our debate on ways to structure society anew - laissez-faire, socialist, communist - seems short of new ideas. Markets and organisations are just tools. I find it difficult to get upset about a hammer, so why do people get very upset about the use of markets or organisation? First, I think that people find it annoying to see the wrong tool used, or used badly. Yes, I can open my expensive watch case with a hammer, but I shouldn't and it's offensive to the watchmaker. Likewise, I shouldn't pry open a jar using a jeweller's screwdriver. So it can frustrate people watching others either using the wrong tools or using them badly. Of course, I remember my father remarking, 'Son, use the right tool for the job, and it's always a hammer.' Second, I think we seem unable to move past the tools to the objectives. If we could do that more often I think that both our debates would be richer and our solutions improved.

Unlike Francis Fukuyama, I do not think history is at an end where liberal democracy and capitalism are probably the culminating form of civilisation. There are many ideas of how we can use technology to alter our social structures our communities and our group decision-making to align our primate natures with our three commercial objectives of risk reduction, reward enhancement and increased certainty. I believe that there is a chance we could evolve to some radically new social structure, but we may be some time. Meanwhile, the Somalian born, Dutch MP, Ayaan Hirsi Ali sums things up nicely:

'For those seeking moral perfection and a perfect society, a free market is not the answer. In the course of history, the search for perfect societies - that is, the failure to acknowledge human imperfection - almost always ended in one or another form of theocracy, authoritarianism, or violent anarchy. But for those who seek to work with human flaws of every stripe, and to increase the sum total of individual happiness, the free market, combined with political freedom, is the best way.' [<http://www.templeton.org/market/>]

I would probably add, so far. Nothing ages faster than the future.

## Competition

Market-will-provide and Organisation-will-provide debates shall run and run, so if I have to make a single point myself tonight, it's that competition seems to be a major source of Commerce delivering the goods to society. If we go back to primate matters, apes compete and competition motivates them. If we go back to the biology behind primates and fish, we see that competition guides evolution. Where competition is restricted, we see inefficiency. Where competition thrives we see diversity. Where we've railed against lack of competition failure often follows, most recently in the credit crunch where there were less than 20 global investment banks, four audit firms and three credit rating agencies. Many things restrict competition. As Adam Smith observed, 'People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public.'

One of the best questions I've had from a Gresham audience was when might one have too much competition (3G spectrum auctions by telcos?; Premier League football contrasted with American football?). I've reflected on that question at length. Milton Friedman said that 'Monopoly exists when a specific individual or enterprise has sufficient control over a particular product or service to determine significantly the terms on which other individuals shall have access to it.' [Friedman, 1982, page 120]. There are a number of suggested ways of detecting lack of competition, such as the time gap from the last successful market entrant, the market shares of existing participants, or even biodiversity indices applied to business. Friedman has done his best, but the definition of monopoly will always be problematic; starting with defining the product or service for analysis, to what determines sufficient or significant. By contrast, what might constitute too much competition? Well, certainly violence. Definitely waste. Perhaps too frequent startup and failure. Friedman points out that 'competition is an ideal type, like a Euclidean line or point - there is no such thing as 'pure' competition' [Friedan, 1982, page 120]

Of the many questions I've fielded, the Goldilocks zone, neither too hot nor too cold for competition, is among the most interesting. I believe that the complex economic deity of evolving choice allows this level to emerge through both politics and finance. Too hot and we lament market disorganisation, waste or theft. Too cold and we lament stagnation, inefficiency or theft. Competition itself is falsification and helps us learn. But while it can be very hard to learn in fast-changing environments, there is no need to learn in

stable environments. We evolve through an appropriate level of competition.

For example, imagine a town without regulated taxis. Taxi firms will emerge, proliferate or evolve. But imagine too a town awash with unsafe, rip-off taxis, so we move to state provision. Then imagine taxi drivers working 10 to 4, never turning up, drawing down enormous pensions. So we can evolve to black cabs or yellow taxis where competition is core, but not too hot or too cold.

Both Professor Persaud and I have pointed out that regulation itself often, too often, restricts competition while competition itself is a form of regulation, probably the key form of regulation before we move to supervision and direct instruction. Perhaps we should clearly distinguish competition, i.e. making sure one group doesn't make all the rules, from supervision, i.e. knowing what's going on, from regulation, i.e. saying what should go on. In competition, people snitch on each other to the benefit of customers, supervisors and regulators. With competition among more and smaller firms, more eyes are on the 'coal face', watching risk and adding value to customers, while fewer eyes are looking upwards to the higher politics-only ladders endemic to all large organisations. With competition, customers have choice and choosy customers pressure weak firms. Society can afford a continuous, low-level string of failures rather than periodic, catastrophic rescues of a few firms too big to fail. Likewise, society should be concerned with an industry that doesn't attract new entrants, permitting existing entrants to either best them or fail themselves. We do not seek competition on the obvious, such as fish restaurants not poisoning customers or, more subtly, fisheries being unsustainable. Of course a competitive world exhibits evolution and evolution leads to diversity and from diversity evolves choice.

A number of people have accused me of being on one side of the divide or the other. That I either hate government or hate markets. Actually, I just like to see competition, whether it's for ideas or free and open press or markets. I like competitive sports. Good competition brings out the best in our primate nature. I'd like to move toward more competition in our political systems, from our elected dictatorship with cries of 'elect the King', to structures that open up decision-making. In previous lectures I've pointed out that many public services could be public and still compete. While policy might be set centrally we could still have Passport Office A and Passport Office B or Tax Collection Y and Tax Collection Z. If there is no choice, there is no competition. It's not just free-market or state. Mixed models can work. But mixed models work when open competition is present for the decisions that matter.

## Long Commerce

Edward O Wilson, Harvard's famous entomologist, resurrected the term 'consilience' to describe the means of unifying knowledge - 'the greatest enterprise of the mind always has been and always will be the attempt to link the sciences and the humanities'. Everything in a global system is inter-connected, thus solutions are neither simple nor straightforward, but messy and manifold. Solutions need to have the requisite variety to match the complex, recursive nature of global society itself. So at the risk of seeming a monotheist, tonight I'm a fanatical believer in a consilient complex economic deity of evolving choice who seeks to destroy his own faith by turning it into the falsifiable consilient complex economic deity of evolving choice.

My friend Bill Joseph once suggested something akin to the Hippocratic Oath for Commerce. Can there ever be such an oath? Perhaps Google's 'Don't be evil' isn't so crazy. Perhaps our oath is 'Do no long-term harm'. Speaking here last month I stated that the key question for the credit crunch was 'how would you know when the financial system is fixed?'. These questions remind me of a question posed by the computer scientist Danny Hillis in 1995, 'how could one build a clock to last 10,000 years?' Dr Hillis' question led to the 01996 (sic) Long Now Foundation, providing a counterpoint to today's 'faster/cheaper' mindset by promoting 'slower/better' thinking. For Commerce, the big problems are achieving a sustainable environment and a sustainable economy - creating enduring value. So for Commerce, the fundamental question must be 'how would we know when our society will work over the long term?'

In conclusion, what is the point of lectures such as tonight? Twofold, first, science emerges from falsification and falsification emerges from debate. Second, debate helps us develop options for the times of change. There's a great phrase doing the rounds, don't waste a good crisis. When crises happen, prior debates accelerate our responses, hopefully in the right directions. Moreover, lectures such as tonight help us frame the problems and the questions.

Finally, who is an expert on Commerce? Not businessmen nor bankers, not politicians nor philanthropists, nor journalists nor junkies. With wicked problems the entire world is involved; no one person could be an

expert. I'm reminded of a line from 'All of Me', a Steve Martin and Lily Tomlin film, 'If there's anything I can do to help, you're in deeper trouble than I thought.' Our culture is 'the way we decide things around here', and as we can be active about the way we decide things around here so your choices shape culture. Even not taking a choice is a choice. Thus you too, the Gresham audience, have a key role in helping find the long-term solution.

I believe that competitive markets can make the world a better place, but equally that markets are social tools requiring design, oversight and justice to meet their objectives. My key recommendation, trust in open competition, requires bravery and trust in open markets, but not blind faith.

Now a valedictory lecture can be two things - a stunning lecture of infinite subtlety, or a round of thanks. While compiling this lecture, I feared coming across with a hubristic tone, reminded of F R Leavis's contemptuous put-down of Snow's lecture, 'a tone of which one can say that, while only genius could justify it, one cannot readily think of genius adopting it' [Collini, Stefan in Snow, 1998, page xxxiii], so I hope to at least do well on the thanksgiving. These lectures have themselves been full of commerce with many people, so may I thank:

- .. over 100 people who have helped at various points with ideas or sources and, at the risk of singling out just three, especially thank - Bill Joseph, Jan-Peter Onstwedder, and my long-standing, long-suffering, inspirational business partner and collaborator of two decades, Ian Harris;

- .. our excellent team at Z/Yen who have been instrumental in giving me the time and support to produce over 250,000 words, particularly Linda Cook and Monique Gore;

- .. the delightful and efficient team at Gresham College led by Barbara Anderson, consisting of Geoff Pavitt, Dawn Fulks and James Franklin, as well as Mandy and Mohamed, for making all these productions so smooth and painless;

- .. the wider Gresham community - provosts Sir Roderick Floud and Lord Stewart Sutherland, the Gresham Council, the Gresham Academic Board, the Gresham Society, my fellow professors and my predecessor Professor Avinash Persaud;

- .. Gresham College's sponsors, the Joint Grand Gresham Committee of the Mercers Company and the City of London Corporation, along with the Old Mercers for the Mercers' School Memorial Chair;

- .. my wife Elisabeth, my son Nicholas and our daughters Xenia and Maxine for their patience and their support, but also for their many many contributions.

Over four years we've ranged around an archipelago of four clusters in search of our deity - bright stars of theoretical perfection ranged above, the depths of the human condition murky below. We dallied in the dappled shallows and fished the deep, hopefully sustainably. We end our cruise with a few insights, but better questions.

We need spaces for open debate and I'm pleased that Gresham College has been such a space for four centuries. It's a complex world where the falsifiable consilient complex economic deity of evolving choice gives ambiguous, changing answers. The Enlightenment period from which Gresham emerged was another time of systemic awareness and competition among ideas. I've been honoured to be allowed to open debates here so many times and delighted that you, the Gresham audience, have been kind enough to share your time and your thinking in this commerce. May I prevail upon your patience just once more. Over the years, I've always wondered whether Shakespeare took to the opportunity to come to this Tudor Open University and, if so, might have chaired, opened or closed a Commerce lecture [Jacques: As You Like It, Act 2, scene 7, lines 139-143]

All the world's exchange,

And all the men and women merely traders;

They have their wares and their merchandises,

And one man in his time plies much commerce,

His acts being short changes.

Thank you.

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3. HOLT, Sidney, 'Shall Future Generations Eat Fish Or Whales?', Gresham College, 11 November 2008 - <http://www.gresham.ac.uk/event.asp?PageId=45&EventId=803>
4. Recapitulation Theory - [http://en.wikipedia.org/wiki/Recapitulation\\_theory](http://en.wikipedia.org/wiki/Recapitulation_theory)
5. For this lecture's conclusion to suffer by comparison:  
Jaques:

All the world's a stage,

And all the men and women merely players;

They have their exits and their entrances,

And one man in his time plays many parts,

His acts being seven ages.

(As You Like It Act 2, scene 7, 139-143)