



The Shock of the New Re-balancing the knowledge long and wisdom short society Professor Kenneth Costa

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Good evening. It is a pleasure to give another commerce lecture. The Museum of London is a world- renowned repository of knowledge. It goes well beyond that, however, in making huge efforts to encourage people to interact with what's on show, during both regular visits and in special events. So it serves as a first-class example of what I am hoping to promote tonight - the importance of underpinning knowledge with wisdom.

The financial crisis happened because we shorted wisdom and went long on knowledge. We had more knowledge than ever before about the sub-prime debt market in terms of quantitative analysis, but no-one questioned whether those trailer parks in San Diego were Triple A securities - and if they were, whether it was wise to have such a concentration in them.

There is no doubt that the world has changed, and changed forever. In the great sweep of things, it really isn't so long ago that Bill Gates' dream that homes throughout the world should have a personal computer would have seemed outlandish. Classrooms today look vastly different to how they looked just a couple of decades ago, with interactive screens replacing the whiteboards that replaced blackboards and chalk. Teachers are as likely to confiscate mobile phones as chewing gum.

The Apple iPad is not merely a fashion item, subject to fickle whim. It is a transforming commercial act, enabling knowledge on the move. According to a recent article in Newsweek, "The iPad could eventually become your TV, your newspaper, and your bookshelf." Apple have already received 240,000 pre-orders. Knowledge will be even more readily available at the end of our fingertips - indeed the iPad has the user navigating directly with their fingers rather than a keyboard and mouse.

We have created the assumption that the assessment of knowledge needs to be done at same speed that we access knowledge. By assuming that quantitative - let alone qualitative - analysis can properly be done almost immediately, we created a crisis. We thought we could be wisdom short because knowledge alone would deliver results. The requirement for incredibly quick judgements gave us no opportunity for reflective assessment.

International trading takes place at unbelievable speeds. So too does life in general. We are expected to be on the end of a Blackberry at all times and to respond to emails immediately. We in turn demand 24 hour news with minute-by-minute updates.

We are bombarded with information like never before, through a vast panoply of media. Relationships are built that exist only in cyberspace; major political movements start in the same place. Many of us turn to bloggers before we consider what established writers in the "dead tree press" have to say.

When I started in the City, the Lex column was the cornerstone of commentary – an authoritative voice in the "dead tree" press, not only reflective but perhaps the only column offering sophisticated comment, with the clearest possible distinction between news and views. Now it is just one of many.

Tonight I want to ask us all to pause for a moment. Not, in Luddite fashion, to reverse the direction of technology, but just to take in our surroundings and consider whether we are taking the right path forward. In particular, I want to make the case that not all knowledge is equal, and that what we really need to be aiming for is not information

overload, but wisdom. And especially how this could be made to apply in every day commercial judgements.

The concept of the "knowledge economy" - put in its simplest form the notion that brains have replaced brawn - was made popular by the management theorist Peter Drucker, who used it in his 1968 book *The Age of Discontinuity*. Drucker acknowledged the economist Fritz Machlup as its inventor.

The term is thrown around with abandon these days. It is an accepted part of our political lexicon, domestically and worldwide. South Korea even has a Ministry of Knowledge Economy. President Obama recently told his nation that:

"In this kind of knowledge economy, giving up on your education and dropping out of school means not only giving up on your future, but it's also giving up on your family's future. It's giving up on your country."

Not everyone finds it useful. The Guardian journalist John Harris has described it as a 'shop-soiled phrase', while the satirist Quentin Letts has described its use by Government ministers as "a good indicator of neophile waffle."

Stephen Overell of the Work Foundation has perhaps the best insight. He comments:

"It's a description of the changing nature of the economy. It's silly to focus on the jargon and not the very real changes taking place behind it."

I start from the premise that we do live in a knowledge economy but that it is far from perfect. In seeking to improve it, we must first consider the ways in which the knowledge economy has profoundly changed the way we do business.

More than ever, companies cannot quantify their assets simply by taking a register of labour and capital. A boss must also evaluate the skills held by each of their employees, and in particular the knowledge they hold in their heads. The challenge is to ensure that as much of this knowledge as possible is retained when staff leave.

Businesses will locate where these skills are found in abundance. When they are available at low cost - as in India and China - the decision becomes all the easier. China has more students in tertiary education than the United States, and India has made plans to boost education spending five-fold between 2007 and 2012. Gordon Brown has spoken of "a global skills race".

Decisions are expected much more quickly. This does not necessarily make for the best decisions, though.

Unlike more tangible resources, knowledge is not a finite resource. Indeed there is a real danger that we will drown in it.

We live in exponential times. Knowledge is accumulating at a mind-boggling rate. The economist William Baumol has calculated that "nearly 90 percent ... of current GDP was contributed by innovation carried out since 1870." Much more recently than that, there has been an explosion in online content, such that this generation must surely have accumulated more "knowledge" - in the broadest sense of the word - than all previous generations combined.

Right from childhood, future generations will feel a sense of empowerment that we did not. Answers to questions are available at the click of a button. (Whether they are the right answers, or even the right questions, is another matter.)

This means that young people are less likely to see knowledge as something that must be imparted by someone older and supposedly wiser. They have got used, from the earliest age, to finding things out for themselves.

This is empowering, no question. But is it entirely welcome? Can we be sure that younger people's critical faculties are developing properly? There is some reason to be pessimistic. My fear is that we are losing sight of the crucial distinction between access to facts, figures and opinions and an ability to evaluate them.

The commentator Charles Moore has written eloquently on this matter: "We seem to have devised a system of curriculum and examination which pulls off the incredible double of being very hard work but very low quality. There are endless projects and modules, and endless ways of re-marking to upgrade one's results, but no definite test of what is known and understood ... too often, the people who emerge from those long years have not learnt the "what" or the "how to" or the "why"."

He has also written: "We keep being told that we must live and compete in the "knowledge economy", but the idea that there is a hierarchy of things worth knowing and that they must be properly learnt comes under fierce attack. London taxi drivers still have to do "the knowledge": increasingly, students don't."

Charles Moore is right. There may be many routes that lead to our ideal destination, but we have forgotten that some are better than others.

This is translating from schools to further and higher education. When I was at Cambridge, I was led to believe that facts matter - so I went to the University Library to find them. Knowledge had to be found. It was not available existent laborious activity.

But today, finding is a search engine and the world's databases are at our fingertips. We're not even complete authorities on ourselves - because we have lost control of the data that is kept on us. Retailers, mobile phone and credit card companies, supermarkets and others have all sorts of information about our demographic background and spending preferences.

The idea that knowledge is available at the flick of a switch is utterly encasing. But the irony is that it means that facts matter less to people. Contemporary society has wall-to-wall knowledge just as we had wall-to-wall sound. It's not that I am inherently hostile to the concept. But I do worry deeply that - in an age where surfing Google or Wikipedia from one's room can be far more tempting than traipsing to the library - veracity of sourcing is falling by the wayside.

The number and variety of degree courses has mushroomed, but there is little sense that the quality of higher education has increased at the same rate. Research by the organisation Your Business has found that the number of cutting-edge British technology companies emerging from universities has tailed off dramatically. In the period 2005 - 2008 an average of 210 new companies a year were founded thanks to research from universities. The figure for 2009 is estimated to be 50 or fewer.

Of course the recession has played its part, but it does make one question whether our education system - at all levels - is fit for purpose. I don't believe that commercial life has benefited from this explosion in the number of courses.

What is happening to young minds? Well possibly quite a lot - and not all of it good. The way people exchange information and interact with each other may fundamentally change the way their brains work. Baroness Greenfield, Chancellor of Heriot-Watt University and moreover a Professor at both Oxford University and Gresham College, is a specialist in the physiology of the brain. She says of the post-Facebook age:

"It is hard to see how living this way on a daily basis will not result in brains, or rather minds, different from those of previous generations. We know that the human brain is exquisitely sensitive to the outside world. - As a consequence, the mid-21st century mind might almost be infantilised, characterised by short attention spans, sensationalism, inability to empathise and a shaky sense of identity."

All the while, data is being thrown at us but we are not getting enough help in separating the wheat from the chaff. Even the brightest among us will find it hard to cope. Jeff Stibel, an American brain scientist, believes that there is such a thing as too much knowledge. He says:

"Wisdom can be shattered by too much information. Great scholars, for instance, tend to be great in very narrow disciplines. "The brain is not intelligent because of the sheer volume of data it can ingest, but for the way it can quickly discern patterns - and then guess the rest. - faced with an abundance of information you fall victim to analysis paralysis - unable to make any decisions in the face of so much data. To be frozen by information is perhaps the single biggest risk of knowledge. Ancient Greek philosophers used to warn their

children about this ailment."

As Chancellor of the Exchequer and Prime Minister, Gordon Brown has used facts - or at least figures - as a weapon. He bludgeons his political opponents with them in debate, and often scores a short-term victory. But ultimately he is exposed as a modernist in a post-modern age. We don't want to be deluged with statistics. Mere knowledge doesn't connect.

On websites such as Channel Four's FactCheck blog - which ruthlessly dissects the veracity of statements from politicians from all sides - we see the clearest demonstration that the media and public alike just don't believe in the knowledge. They see that it is twisted through the prism created by politicians, many of whom will inevitably seek to manipulate and misrepresent it to serve their purposes

Every speech, every press release and every briefing note is being pored over by bright and not-so-bright analysts - professional and amateur alike - during this general election. Their thoughts will appear with incredible rapidity online. Indeed before Brown, Cameron or Clegg sit down they will have been the subject of multitudinous tweets from the Twitterati.

We delude ourselves if we think this is a purely political phenomenon - to a great extent the credit crunch was a version of the same practice - but in politics we see in stark terms the hunger for a sense that those who lead us are wise and not just know-it-alls.

So what is happening when the scholars move to the workplace? Inevitably they are more and more inclined to think they know better than their managers - and sometimes their managers will agree. In the knowledge economy, management has become much flatter. The civil service retains immense power over ministers through its greater expertise, leaving the question of who is really in charge open-ended. So it is increasingly in the commercial arena, too.

Over a decade ago, Joseph Stiglitz from the World Bank said: "in industry, the shift towards a knowledge-based economy involves a shift in organization away from top-down hierarchical systems to horizontal structures such as networks of semi-autonomous teams."

He added that efforts to impose best practice from outside would: "not produce lasting change. It will undermine people's incentives to develop their own capacities and weaken their own confidence in using their own intelligence. The external development agency, instead of acting as a catalyst or midwife to empower change, will only short-circuit people's learning activities and reinforce their impotence."

Stiglitz is correct that best practice cannot simply be imposed - the world is too diffuse for that now. But I am certain that it should be encouraged. The question is how. The advent of the Internet has led to much more flexible working, and with many businesses put paid to more established practices such as set hours and demarcation lines. Projects have become more important than process. This is all well and good, but will a lack of human contact make for better business?

Thomas A Stewart - one of the board of editors of Fortune magazine - wrote a book entitled *Intellectual Capital: The New Wealth of Organisations*. It made the point that:

"The rise of the knowledge worker fundamentally alters the nature of work and the agenda of management. Managers are custodians; they protect and care for the assets of a corporation; when the assets are intellectual, the manager's job changes."

Bosses, Stewart argued, no longer know more than their workers, rendering the traditional pyramid model of management redundant.

The role left for managers, said Stewart, is leadership. He hit the nail on the head there. Wise leadership, of course, means knowing when to dictate and when to defer.

I am reminded of a lovely, and true, story from an aluminium plant in England. One day a young manager - awash with formal qualifications but very green in terms of factory floor experience - instructed one of the older members of staff to switch off a machine. He was advised that this was a bad idea. "I am telling you to do it", replied the manager. "Righto", said the worker. He duly switched the machine off - and the whole plant came crashing to a halt, as the older worker knew it would.

It's not only David Brent who recognises that sometimes experience trumps paper qualifications and that wisdom comes in many forms.

And it's not only producers and service providers who have been changed by the knowledge economy. Consumers have too. Will Hutton, executive Vice Chair of the Work Foundation, is an optimist. He says:

"British consumers are richer and better educated than a generation ago. - They want personalised offerings - from the configuration of the playlists on their iPods to the dashboards of their cars - to which successful companies must be responsive in whatever sector."

Hutton feels that too few companies in Britain get the credit they deserve for meeting these demands. He may be right. But I am sure he would agree that success relies on shrewd analysis. Being truly responsive to your customers really means understanding people.

In the old days, when you met people at a drinks party or in a work environment, having a conversation meant seeing them face-to-face. You would interact in person and have a chance to read other's body language and employ your own.

Even on the phone one takes in the cadences and pauses that tell us more mere words. In all these interactions, one has implicit permission to communicate with others. Now we are being encouraged to converse with people we have never met and will never meet, whose voices we will never hear.

It is taken as read that the other person has an opinion worth considering and that we do too. A new dynamic emerges in social networks and the assumption is that every minute event of the person's life is not only worth communicating but worth communicating to a large audience they will never meet. In the post-Twitter age, this is the new normal.

Everyone feels that they have the right to tell their own version of history - ancient or extremely modern. What will the commercial effect of this be?

To my 20-year-old daughter - a university undergraduate - it seems perfectly natural, the way things are and the way they should be. To me it feels alien. But I'm sure I will change; how fast will depend on the take-up. I wouldn't even presume that everyone here tonight thinks that it is worthwhile to listen to me. Although I do hope that if your stance on this matter has changed during the course of my speech it has changed in my favour!

There is a grave danger that we mistake communication - which has never been easier or more widespread - with empathy, which is much harder. It is harder still when we are encouraged to conduct life at breakneck speed. When E.M. Forster wrote 'only connect' he didn't mean that a brief exchange of Facebook messages equates to a meaningful relationship.

As the journalist Jackie Ashley observes:

"When it comes to complicated issues, we also need time and space. Not everything can be whittled down to text messages. We are living in a world of fact boxes, ever shorter sentences and flatter, simpler statements; and I wonder if we can begin to resolve some of these complex challenges this way."

The sheer volume of data whizzing around the world can be incredibly time-consuming, and often undermines effective working. Just as Britain used to run half the world with a much smaller civil service, I wonder if the private sector could use modern media a little less frequently, even if it cannot cope without it altogether.

Paul Hemp, contributing editor at Harvard Business Review, reports that people can take as long as 25 minutes to get back to work after an email and every Blackberry user knows how they surreptitiously try to access data under the dinner table. Social networks are thought to cost British business over a billion pounds a year.

In the wake of these concerns, some companies have started to take action. Representatives of American business and academia have formed the Information Overload Research Group, which actually holds workshops on the problem.

In true knowledge economy style, Paul Hemp solicited online advice from his readers. One suggested replacing email with instant messaging, as messages tend to be shorter (if not less frequent). Another felt we had no choice but to move with the times. He wrote:

"As a 20th century father, I considered it character building to help my kids find their own answers to questions, as in homework. When they asked, "Dad, what's an axolotl?" I'd help them trawl through our books or we'd often head off to the local library.

As a 21st century grandfather, the grandkids don't ask that kind of a question. They simply Google "axolotl". The question they ask is "Grandad, which of the 600,000 entries should I click on?"

The character building element has changed from finding information themselves to being able to CHOOSE the best links to click on. By the way, an axolotl is a neotonic salamander, which means that it stays larval and reaches sexual maturity without undergoing metamorphosis - according to Google and Wikipedia.

Maybe Hemp's correspondent is right, and information overload is a fact of life. I am convinced he is right that there is still a need for guidance. Not necessarily from older heads, but from wise ones.

We see this desperate need for speed all the time in commerce. Trading desks have been utterly transformed in a very short period of time. They can force through more content than any brain can possibly hope to absorb. The faster the transactions, the more can go through the pipes and the more money can be made.

In finance as much as anywhere, decisions can be made with immense speed. And because they can be, it is expected that they should be. One again, it should go without saying - but it emphatically does not - that this may not lead to the best decisions.

What is considered too slow is quite astonishingly fast. I remember the chairman of the London Stock Exchange complaining that the settlements with the Milan stock exchange was too slow - yet transmission was occurring at the speed of light! How do you assess knowledge at that speed?

Margaret Thatcher is thought of as someone who knows her own mind, but she also said that as Prime Minister she never took a decision before she had to. Today she might be asked to tweet it before telling the House of Commons - although I suspect she would resist.

Today we have a ubiquity of information. Because of that, it sometimes seems that there is no discrimination at all. Yet at the same time the papers today are far less interested in knowledge than opinion. There's a reason why the financial journalist Hugo Dixon created the Internet site [breakingviews](#) rather than [breakingnews](#).

I have spoken before of "digital platoons". Today everyone with an Internet connection has been empowered to persuade and can use technology to inform, opine, offend and incite. Online versions of newspapers offer readers the chance to comment, publicly, on what columnists have written. (Some of these commentators appear to think that libel laws don't apply to them.)

Again we see the shifting balance in the weighting we give to opinion as opposed to fact. We have the bizarre situation where wisdom is overlooked even as the words "opinion" and "content" are treated as synonyms.

The implications for commerce are as massive as they are for politics. Activists can thrive. Shareholders in a public company can start their own blogs on what their company is doing - they won't wait to see an annual report, and directors can't wait for its publication before they respond.

It is only a matter of time before we have a grassroots shareholder revolt, empowered by, say, Facebook - resulting in a major digital corporate confrontation. A single issue will grow to be so dominant that other facts will be forgotten.

But what is acceptable practice in political lobbying is rather different to what we are used to in commerce. We will have to wait to see how such an event is handled in a commercial context by major corporations.

Managing and understanding one's own knowledge is another task in itself. People often find it harder to explain a

subject on which they are expert, because they lose track of how much the layman is likely to know.

Psychologist Elizabeth Newton conducted an experiment where she asked participants to tap the rhythm of a well-known song to a listener, and then to guess how likely the listener was to identify the song correctly. The tappers thought the listeners would get it right at least 50% of the time. The actual result was 3%.

This was explained by the way that the tappers "heard" the song - the voices, notes and harmonies - in their head, while the listeners could only hear taps and silences.

Of course none of this means that we should just abandon formal learning. I very much support the approach of Professor James Fleck, Dean and Professor of Innovation Dynamics at the Open University, who says:

"Good theory has to capture reality. If it doesn't, then it isn't good theory?"

At Edinburgh University we used to joke about lectures as being a way of transferring the lecturer's notes into the student's notebook, without passing through the brains of either party. The OU is totally different. We have created core materials for the courses, but the students interact with them. It's not a question of simply talking at people, or their passively reacting."

This practice-based learning is surely the key - to make every effort to enable young minds to engage with what they are being taught, and not merely to let it wash over them or be absorbed into their system without first passing through the filter of critical analysis. This is even more important for commerce in the digital age.

Once monasteries enjoyed power through their hoarding of knowledge, today knowledge is far more democratic - and we can thank modern media. But yet again, we must be wary.

How then, can we handle this knowledge economy, at a time when we have access to more facts and possible facts and untruths than ever before? At a time when we can access all of the above with incredible speed?

In the 2nd February edition of the New Scientist, Tom Simonite and Michael Le Page published an article that was as fascinating as it was potentially terrifying. They cited the Venus Tablet of Ammisaduga, which resides in the British Museum, and dates back 2,500 years. The information recorded on it - relating to the movement of Venus in the sky - is 1,000 years older than that.

Simonite and Le Page acknowledge that we know a great deal more about Venus today than did the Babylonians. But they also point out how ephemeral and fragile is the storage of much of our knowledge. It is not on stone tablets, but rather in electronic form. The authors ask us to:

'suppose, for instance, that the global financial system collapses, or a new virus kills most of the world's population, or a solar storm destroys the power grid in North America. Or suppose there is a slow decline as soaring energy costs and worsening environmental disasters take their toll. The increasing complexity and interdependency of society is making civilisation ever more vulnerable to such events.

Whatever the cause, if the power was cut off to the banks of computers that now store much of humanity's knowledge, and people stopped looking after them and the buildings housing them, and factories ceased to churn out new chips and drives, how long would all our knowledge survive? How much would the survivors of such a disaster be able to retrieve decades or centuries hence?'

If that seems absurdly apocalyptic, Simonite and Le Page remind us that knowledge loss is far from unheard of. It ranges from family photos when the hard drive fails to the Fogbank crisis, where the US forgot how to make a secret ingredient of some nuclear warheads and then realised that all key personnel had retired or left. This added a cool \$69 million to the cost of a warhead refurbishment programme. Microsoft took several weeks last year to recover the data of Sidekick mobile phone users when servers crashed.

Even when data is backed up the news isn't good. Formats such as magnetic tape or optical discs are not reliable for as long as five years. Retrieving raw data from discontinued media can be extremely difficult. Moreover, the buildings that store data may be vulnerable to earthquakes or flooding.

Finally, Simonite and Le Page observe that the most backed up data tends to be the most popular, so that in a post-catastrophic age Abba could top the charts once again and we'd probably be able to rescue some copies of The Lord of the Rings. That would doubtless be cheering, but perhaps we would regret the loss of other, dare I say more improving, material.

These days - in a further narrowing of the distinction between facts and opinions - websites as Wikipedia mean that one individual can assume responsibility for creating, recording and distributing a piece of information, but not necessarily for protecting it.

How secure is this information? We know that public sector data on us isn't. At home just as abroad the Government has been known to lose control of it. The well-reported cases of laptops left in taxis, computer systems failing and discs being lost may well be only the tip of the iceberg.

The fragility of data storage means that we will always need brains, and can never rely on superhuman technology alone. The inventor, author and futurist Ray Kurzweil reminds us that: "The amount of information represented in a mature brain is thousands of trillions of bytes, which is a lot of complexity."

But how can we best apply this complex organ? Must not we remember at all times that even the brain is flawed? How it can be otherwise, when the brains we are talking about are human, and humans are of their very essence flawed?

Whatever the outcome of the investigation of alleged data fiddling by climate change scientists at the University of East Anglia, the case serves as a reminder that the settling of the most pressing and important issues facing mankind will be deeply affected by the prejudice and imperfections of men and women, and the many pressures society imposes on them.

The modern media has undermined rules and regulations. Again, this is partially welcome. It has greatly added to people's freedom of expression, and makes it far harder - indeed almost impossible - to censor dissenting voices.

Yet not everything is rosy. Intellectual property theft is rife. Indeed the Government is so worried about it that they recently rushed through a Digital Economy Bill forcing Internet providers to cut off or slow the access of people who repeatedly download illegally.

An absence of quality control is good in so far as it enables received wisdom to be challenged and new voices heard. But it is bad if it encourages instant gratification ahead of hard and disciplined work. And we must make the distinction between the fact that everyone has a right to hold and express an opinion and the erroneous idea that all opinions are equally valid.

I have spoken before about how in the rush to understand the credit crunch we have focused too heavily on regulation, capital, equity and structure at the expense of morality. I make no apology for repeating this observation tonight in the context of the knowledge economy.

For surely the most important function of wisdom is to help us distinguish between right and wrong. There is no way of articulating this truth without sounding old-fashioned - but it is a price that I am more than happy to pay.

Just as Adam Smith stressed that capitalism had to have an ethical underpinning, so too would he surely opine today that the knowledge economy must as well. As in our approach to a new capitalism, the question is how to return to a moral core without imposing burdensome regulation. We must have a care, especially those of us from older generations, of not seeming to simply dictate what is right and wrong, good and bad.

The answer, I believe, is to foster, celebrate and share wisdom. Wisdom and morality are not the same thing, but they are inter-dependent. This then is the public discourse that we should be groping towards, however imperfectly: how to underpin the knowledge economy with a growth in wisdom.

The best hope for knowledge networks is that they will provide a platform for mutual understanding, and that people will talk to each other, not just at each other.

Last month Julian Dobson of the RSA wrote a piece entitled From a knowledge economy to a wisdom economy, demonstrating that great minds think alike; I wasn't aware that he would pen this article before I agreed to make a speech on the same subject! He wrote:

"A wisdom economy doesn't ignore knowledge, but recognises that value is attached to the ethical and social framework within which that knowledge is used. Wisdom recognizes that values and value-judgements are implicit in the way we live and that we need to be open about them."

I couldn't have put it better myself. We must not run away from the need to impose a moral framework on the knowledge economy, but positively embrace the challenge.

I have a view of morality that says we have got to come to an enlightened view as to what kind of society we are working towards. Where are we going, and what is the journey's end? I cannot respond to an immediate crisis in morality without knowing where I am going.

Amidst this huge upheaval caused by the financial crisis, we have to consider what are the really important issues. We must determine for ourselves what kind of society we want. Yes, we should and will grow modern technology, but we should subject it to a controlling experiment. That controlling experiment should be the fulfilment of our humanity rather than the reduction and emasculation of it.

Last October the Institute for New Economic Thinking was founded with \$50 million from George Soros. The Institute is an admirable endeavour that seeks to rediscover the human element in the world economy.

In their book *Animal Spirits: How Human Psychology Drives the Economy, and Why It Matters for Global Capitalism* George A. Akerlof and Robert J. Shiller did the same.

Their work spells out a crucial message - that we must consign to the dustbin of history the notion that economic actors are wholly rational. Rather, Akerlof and Shiller contend, humans are subject to a variety of impulses, emotions,

interests and misunderstandings – and this shapes economic activity in undesirable ways.

They are surely right about that. None among us is wholly rational, and none among us always acts in an economically rational and predictable way. If we did then economists would earn even more than they do now.

You can't atomise human behaviour outside a moral and - dare I say - spiritual context. So while Akerlof and Shiller advocate greater regulation, I prefer to return to this theme which I have covered in several speeches - placing the moral spirit at the centre of all levels of economic activity.

While I would never suggest that only clever people can be good I say again that morality - a sense of what is right and what is wrong - is utterly dependent on wisdom. There is nothing ageist about that. Young people can be wise and good. So too can old farts; wisdom is not like a prime steak - best when aged - but is available to young people as well.

We require a mutuality of learning, with old and new generations alike learning both values and the practicalities of change in the knowledge economy. And there is also a wisdom piece now, because society is changing so rapidly that wisdom is required for us to work out our commercial ends as well.

We need a mentor and mentored system where the distinction is not age but perspective. In a post-modern age we have to draw on different resources such as experience, and not just a surfeit of knowledge.

Instead of trying to know everything, we need to rediscover the joy of discernment. We need to realise that a surplus of knowledge is not enough for us to presume that we know what course of action to take. We need to assess who is worth listening to and who isn't.

Our schools focus on the impartation of knowledge, and this has to change. We all need to learn the nature of wisdom and discernment - how to draw together that which belongs together and separate out that which doesn't.

I am not talking about censorship - I grew up in a country where Black Beauty was banned by a government that didn't know it was about a horse. Even flirting with the concept of restricting knowledge is anathema to me.

But my experience of South Africa in those days gave me two things. A deep and abiding belief that there is such a thing as right and wrong, and a hunger not only to learn but also to understand, really understand. The successful pursuit of wisdom does require a filter of some kind. The challenge is to locate a filter that is not oppressive. 'Context' must be the mantra of the age.

By far the best way to do this is to empower future generations so that they continue to make these decisions for themselves, but in a rather more informed way. As an elderly friend of a friend once put it, "in my day, saying that a man had a tendency to discriminate was a compliment".

We have to learn to deal with complexity, now that so much knowledge is assumed. What we have to be able to say is that even when you've got that much knowledge, the whole nature of complexity means that you have got to make managerial and commercial judgements based on as much knowledge as you can realistically get. Because inevitably, in the finite real world, you will be restricted in how much knowledge you're going to have. We will always have imperfect knowledge.

Our schools, colleges and universities should move students away from the unthinking, uncritical pursuit of knowledge motivated by a desperate longing to pass exams by hook or by crook. They need to infuse a love of wisdom in their charges, a sense that ideas matter. But not, ultimately, that all ideas are equal.

All of us need to be given the tools to pursue the wise and morally correct course of action. All the regulation in the world can't help us if we don't have those. And you can't Google how to be a good person. It takes rather more effort and reflection than that.

Edmund Burke said that "education is the cheapest defence of nations", but he also asked "what is liberty without wisdom?" Burke was one of the wisest men the world has ever known, and his words - committed to paper long before they were made available online - should be a clarion call for all of us.

Thank you very much indeed.