The Big Data and Technology Revolution

by Ruth Kelly

Many thanks for the opportunity to contribute to this conference and to reflect on some of the contributions that have been made over the past couple of days. The theme we have been discussing is an important one and we have had some fascinating insights on virtues, ethics and culture in economic and financial life on the role of regulation and self-regulation, on incentives, on the role and utility of speculation – or otherwise – in promoting the common good. We have also considered the role of social and impact investment, the legal footing of corporations, the role of corporate governance as well as the potential contributions of schools and universities to equipping people to handle moral dilemmas.

While no one has argued that financial technology or Fintech presents new ethical dilemmas or questions, it is clear that the acceleration of innovation – or what Andy Haldane, Chief Economist at the Bank of England, has called the Fourth Industrial Revolution – has made the issues even more acute than perhaps they have been in the past, creating an even less personalised financial system, with greater potential for harm as well as for good, having significant implications for the world of work. I was very struck by Pascale's comments that he foresee 50% of jobs in the asset management industry being automated in the future. Technology and innovation has also created much greater complexity, both in the types of financial instruments being used and traded and in the structure of organisations.

I would like to cover a few issues which have arisen in the course of this discourse in my remarks. For some areas, I will then propose further avenues for discussion.

The first topic I would like to return to is the virtues. Professor Philip Booth, a colleague of mine from St Mary's university, spoke compelling of the need for a reconsideration of the virtues in public life, rejecting the divorce of economics from ethics seen in both neoclassical and Keynesian economics.

He argued that many complex financial transactions are neither intrinsically moral or immoral and that intent and discernment are important in determining the moral rectitude of a decision or transaction. More controversially perhaps he argued that financial speculation can play an important role in delivering just outcomes and promoting the common good eg bring forward food production at a time of food shortages. Dr Mark Hayes from the University of Durham however, did not accept that speculation – which he defines as "transactions which are intended to be reversed – with no account taken of the economic benefits of ownership apart from the prices" can ever be justified. So this is the first area of further investigation, I would like to suggest: that real-life examples of speculation are examined in a theological context to see if a consensus can emerge if speculation is always an ill – or whether it can in certain contexts, with the right intent, contribute to the common good. This is a question which is hugely important both for who work in the financial industry and for those who use it, particularly given the Vatican's expressed scepticism in this area.

Clearly, the complexity of the financial system will require significant discernment from individuals, whatever the view of the role of speculation. It was very useful to hear Bishop Paul's view that ethics demands not just hold oneself to a high standard, but also being prepared to hold those around you to account. Speaking out against immorality, however, requires significant courage. As Josina has said, another problem is that while there are lots of codes of good practice in the world of business and finance, acting on a code is a real problem. Whistle-blowing can destroy a career – it is a very blunt and as she described it "violent" act.

Anthony Hilton finds it difficult to believe that bankers or those working in the City are ever likely to speak out, arguing forcefully, that the "love of money" is always likely to override decent moral sentiment. As he put it "Decent people are easily seduced by money". "The moral compass doesn't point in the right direction when large amounts of money are at stake"

That may be true, at least to an extent. If so, arguably that is why promoting a good "culture" within organisations becomes incredibly important. – one in which speaking out is valued. As Anthony acknowledged, what is considered to be "normal" behaviour in a given context has powerful affects in influencing individual decisions. Or as Tomas has said "Culture eats strategy for breakfast!"

Professor John Kay discussed the nature of a successful organisation, citing Alistair MacIntyre, one which is "A coherent and complex form of socially established cooperative human activity through which goods internal to that form of activity are realised in the course of trying to achieve those standards of excellence which are appropriate to, and partially definitive of that form of activity, with the result that human powers to achieve excellence, and human conceptions to the ends and goods involved, are systematically extended". This concept of excellence, clearly moves beyond traditional understandings of how to maximise shareholder value – even if excellent corporations in this sense may ultimately prove more successful in commercial terms. Whatever the merits of the current legal structure of the company, it is clear that ethics demand more than just a short-term focus on shareholder primacy and a consideration of the needs of a broader set of stakeholders, including the workforce itself.

Bishop John Sherrington and Lord Brennan questioned whether schools and universities properly prepared students to act ethically in future in the world of business. A good question, which I think we all need to reflect on. Children in schools can be incredibly morally demanding of their superiors – but are they themselves being properly equipped for the future? Recognising the acuteness of this issue, at St Mary's University, we have just launched a new School of Business and Society – differentiating ourselves from the usual business school offering. Indeed Philip Booth, our new Dean of the Faculty, has been working on integrating ethics into the business curriculum so that our all our students –

whatever their faith background – are taught to reason critically - in the tradition of virtue ethics - on relevant modern business practices using live business case studies.

It was fascinating to hear Helena's idea of creating mentors from the Church community to work with business leaders – an idea taken from the 30% club to get women onto boards. If the Church and the Christian community could, as she put it, "infiltrate" business, it would be possible to change practices from the inside rather than to rely on other incentives, codes or regulation.

The next area of debate was over the role of regulation in solving market failure. Professor Booth argues that regulators systematically fail in correcting market failures, partly because of the inherent unpredictability of their actions. And that regulation agreed at an international level injects a potential systemic bias, which could then destabilise the international financial system. He argues for self-regulation as an alternative. Domingo, Jean-Pierre, Dagmar and others reminded us that whatever type of regulation exists, what it can't do is make people within a company act ethically and Archbishop Martin powerfully reminded us of the failure of state regulation in Ireland to prevent fraud in the banking system – although Laurence Gonzi, who used to be Prime Minister of Malta, argued that regulation can work provided that the quality of regulators is sufficient good, and that they are inspired by universal Christian values.

While I don't agree with Philip that state regulation is always perverse – that would indeed be strange for a member of the FCA's board! - where I do agree is that CST has a huge amount to say about the role of subsidiarity in public life – and that this is a relatively unexplored topic in the literature. It would be very interesting to hear much greater debate about the contexts in which self-regulation can work, and those in which self-regulation is likely not to appropriate for the task, not least where conflicts of interest are most acute – or if they exist how they might be managed.

Turning now to consider financial innovation itself a little more closely, it was useful to hear from Jason Chamell some of the benefits that technological innovation can bring to the poor and marginalised – not least in banking the unbanked through mobile telephony – and in promoting innovative educational models around the world.

He added to the powerful views expressed at the beginning of this session by Bishop David Walker who talked about about the power of the Church's engagement in investment decisions, pointing to the number of asset managers worldwide who were now signatories of the Principles of Responsible Investment. "Real change is happening" he said.

As Helena said, technology can help level the playing field between the elite and the masses. Technology gives us all access to information, information that in the past was the preserve of only a few. It reveals the flaws in political and business leaders; and it gives the people networks to fight back.

Paul Novak from the TUC noted how important it is to consider how the benefits of this new technological revolution are shared between capital and labour, noting that it is not good enough simply to appeal to the impact on consumers.

One area of innovation explored by faith and Pascale, among others, is the increasing power of Big Data - personal data is being harnassed and exploited, creating new opportunities for businesses, changing business models, and removing important parts of traditional financial services business outside the regulatory perimeter. And I think this is another important area for reflection and discourse.

As people change the way in which they pay for goods and services, relying increasingly on non-cash payment services, they are generating an unprecedented digital footprint. According to IBM, that 90% of all data in existence as a result of human history has been created in the past two years.

As Faith compellingly described, much of this innovation can lead to good consumer outcomes. For example, consumers increasingly expect a more personalised service – from the public sector as well as private companies - and big data allows financial institutions to collect and analyse customer data and respond by providing more individualised and bespoke advertising and product development. It can rebalance power between producer and consumer and by lowering price, increase access to groups who where previously underserved by the industry.

Algorithms used wisely will of course present significant opportunities for promoting the common good. For example, algorithms will allow the early detection of financial difficulties and be able to offer money management advice at the most appropriate time for the individual. Algorithms can also shop for consumers to find the "best" deal in a matter of seconds. Consumers can use algorithms to evaluate their own personal risk based on their financial situation and the assorted price they should "expect" to pay, helping them evaluate whether offers they are given are fair or purposefully overpriced. But without proper supervision of the use of such algorithms, they can also be exploited to identify vulnerable consumers who may be perfect targets to advertise scams, who are prepared to tolerate higher prices or a worse service without switching provider, or to exclude consumers who are unlikely to present profitable opportunities for the firm.

And we can also see the effect of Big Data in risk and credit management, with vast data lakes being exploited to identify patterns of behaviour which assess risks at a more and more individual level and provide appropriate products – or not - at the lowest cost. My biggest concern is that without proper controls and ethical discernment, this could easily lead to financial exclusion, and potentially the disintegration of the insurance industry. Who after all will offer insurance (at any price) for a illness to someone with a known propensity to develop that illness?

Regulators will need to understand the people behind the algorithms and understand what data is being used and how it is being used, as they will be the holders of an incredible power in dictating what is and is not displayed, and what is and is not offered or presented to consumers – and at what price. Without proper supervision, there is no way to guarantee that big data and algorithms will work in the interest of consumers. And so too will Boards. Company boards and executives at every level need to be aware of their responsibility to be able to understand and articulate models in use in their business and the impact of the use of these models on consumer outcomes. Just as after the Financial Crisis, members of the boards of big banks were criticised if they had not taken the time to understand or were not capable of understanding the complex financial institutions in their institutions, in the future they may well be held to account on how individual's data is being used.

All these impacts create significant ethical questions – for policy makers, for regulators, for businesses and for consumers themselves, many of which are hardly even being analysed never mind addressed. Many of them are also increasingly outside the scope of the financial regulators, as business model change push much of the data storage and analysis outside the bounds of the financial industry.

One issue which will be forced to the forefront of debate is what data is allowed to be provided to regulated firms by third parties – public or private.
The governance rules should ensure that decisions about the use of data and the extent to which risk is mutualized or socialized is a collective decision by all interested stakeholders (public authorities, financial services providers, consumers, data protection authorities). Such bodies need to decide about the proportionality of using personal data.

As Helena said in her paper:

"We are looking to exploit something we know little about, haven't fully grasped the implications of, intoxicated by the commercial possibilities".