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How the human race will survive the new economy of the 21st century

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Introduction: an article for Christmas 2014

Dear Edouard,

Would you be able to send us an article for the review of the Pontifical Council for Culture? Our next issue is dedicated to the economy…

On 10 September 2014, my friend Laurent Mazas, a priest and executive director of the Cortile dei gentili, sent me this message from Rome.

At first, I was going to decline. I already had too much work lined up for the season: new duties in a European think tank, clients to advise in a very uncertain period for global finance, weekly columns for the French business newspaper *Les Echos*, an already-delayed book and travels in Europe and Asia. Finally, and above all, my children were growing, and two parents are barely enough to watch over them.

But then, it became clear: was this not, on the contrary, the ideal moment, and *Cultures and Faith* the ideal publication, to openly express my deep conviction about global finance and the global economy? It is a conviction with roots in my own practices, in two senses of the word. I have been a practicing Christian for 44 years, in a country growing ever more uncomfortable with religious freedom. And for 20 years, I have held a professional practice in the world of business and finance, specialising in the anticipation and management of financial crises. My conviction is that, if we do not make radical moves very soon – and I make some suggestions of what can be done at the end of the article – the impact of the next technological and financial crises could reach far beyond our economies to threaten our very humanity. My hope as a Christian is that this plea, published in 12 languages on Christmas Day of 2014, will be heard. I will explain how and why.

(What follows is a translation by Mike Woods, with VoxEurop, of the article "Will the human race survive the new economy?" published in the Cultures and Faith *review of the Pontifical Council for Culture.)*

The credo of the old economy

When I was a student in the early 1990s, economics was a human science. After 20 years as an entrepreneur, financer and observer of this defining sector of contemporary culture, I am no longer sure economics is still a science, and I am increasingly convinced it is becoming less and less human.

My mentors taught me several truths that I held to be self-evident. They rested on three pillars:

- ***"The only genuine source of wealth is man"*** (Jean Bodin): where humankind exists, there is growth, hope, dynamism and human creativity. "Look at a country's demographics, and you will see its future wealth." Economics was definitely a human science.
- ***"Time does not respect what is done without it"*** (Paul Morand): praise for long-term investment. In economics, there is no need to hurry, because time is on your side. Time is the friend of money – as interest rates clearly show.
- ***Money is rare and precious; it therefore carries a heavy cost. It can only be entrusted to those with the experience to treat it with care: the bankers.*** In other words, to those who know how to identify and understand risk. Finance, "in service to the economy", is a serious business that could not be left in the hands of just anyone.

However, in 20 short years working in the world of business and finance, I watched each pillar of this triptych collapse before my eyes as the new economy emerged – this new economy that has spread across the world.

The task at hand is not to reopen the debate on the benefits and excesses of capitalism that characterised the old economy of past centuries. Global trade has led humanity to mix and mingle, facilitating the free circulation of goods, ideas and people. And despite its spectacular crises, capitalism has significantly improved the expectancy and the quality of life of men and women around the world, and it has also helped to spread the ideals of freedom and democracy that I hold dear. Despite its good intentions, socialism, the alternative of capitalism, has plunged multiple generations of entire populations into totalitarian nightmares: the barbarity of the gulags and the concentration camps, unrelenting violations of conscience and tortures of the body.

The problem of the present day is the following: are the 7.2 billion human beings that inhabit this small planet capable of adapting to the new economy? To an economy that does not obey the rules, but gives into impulses, interactions and phenomena that shatter all of our old and familiar concepts? And which shows every sign of wanting to weed human beings out of the equation?

A definition of the new economy
The new economy we are witnessing in 2014 is, to put it in fashionable terms, a traditional economy "enhanced" by three interrelated phenomena: the globalisation, the digitisation and the financialisation of human economic activity.

Globalisation

Globalisation is an old phenomenon, already spanning several centuries. It has accelerated at an alarming rate since 1989, with the fall of the Berlin Wall, the end of communism, the conversion of most of the world's countries to market economies and the spread of the tools, standards and techniques that facilitate global trade and production – free trade agreements, shipping containers, increasingly multinational businesses and management software allowing the standardisation of economic activity and the establishment of a common work language. Let us take a brief look with the help of some figures.

On the positive side of globalisation, we find:

- More than one billion jobs have been created since 1980[2].
- Since 1990, nearly one billion people have been lifted out of extreme poverty[3], as the worldwide production of wealth has quadrupled[4].
- Since 2000, the wealth of households around the world has more than doubled[5].

On the negative side, we observe:

- We are plundering the planet's limited resources so quickly that, following the predictions of the World Wildlife Federation, 5.5 billion people will be living in regions where water is in short supply by 2025[6].
- Some 2.8 billion people live on less than $2 per day, and 925 million do not have enough to eat[7].
- The richest 1 per cent of humanity possesses more than half of the world's wealth[8]. Despite growth that should be of benefit to all, inequalities continue to deepen, and a sense of injustice along with them: 7 out of 10 people live in a country where the disparity between rich and poor has increased in the past 30 years[9].

To summarise what has developed since 1989, the world has seen more wealth and more work, but also growing inequalities between countries and individuals, in a trend that seems to benefit very few at the expense of the vast majority. We also have a planet of limited resources, plundered at every turn.

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[2] Does not include agriculture. "When giants slow down", *The Economist*, June 2013.
[3] Internationally defined as living on less than $1.25 per day *(The Economist*, June 2013).
[4] The gross world product, in purchasing power parity, grew from $28,250bn in 1990 to $101,828bn in 2013, according to the World Bank.
[5] Crédit Suisse, *Global Wealth Databook 2014*, October 2014. It has increased from $113trn to $263trn (Crédit Suisse, *Global Wealth Databook 2014*, October 2014).
[6] "The Human as Bigfoot", *The New York Times*, October 2010.
[7] United Nations, *Resources for Speakers on Global Issues*.
[8] Crédit Suisse, *Global Wealth Report 2014*.
[9] In the United States, the richest 1 per cent has captured 95 per cent of growth since 2009. Cited in "Working for the Few: Political capture and economic inequality", Oxfam, January 2014.

Digitisation

In a landmark work on digital sovereignty[10], French digital entrepreneur Pierre Bellanger observes: “The internet has not added itself to the world we know, but has replaced it. The internet siphons our jobs, our data, our private lives, our intellectual property, our prosperity […] and our freedom.” All evidence up until now supports his thesis.

A Boston Consulting Group study predicts that the personal data of 500 million Europeans, currently plundered by digital platforms from abroad, will be worth €1trn by 2020[11]. Such platforms are hard at work capturing data from all around the world. Increasingly intrusive, but also with our consent, they monitor our smallest gestures, movements and consumer habits in order to anticipate, replicate and sell them. Today, their customers are consumer brands; tomorrow, they will be doctors, banks, insurance companies or even states anxious to maintain control over their populations.

Therein lies the trap of comfort and of things that appear to be free: who today would imagine paying for an email service, an electronic agenda or an internet search? The hidden cost is, in fact, immeasurable: it is a matter of our freedom, our private lives and our health. Certainly, today I have no problem with sharing personal information with an insurer or a health professional, if it will help me prepare for an accident or a serious illness. But what happens if tomorrow, my insurer analyses my data, learns I am highly likely to have a serious illness and refuses to assure my coverage? Who will I turn to for financial protection?

With our own consent and the mass complicity of traditional business, platforms plundering our personal data and private lives are growing into empires equipped with resources far superior to those of many of the world’s nations.

Indeed, what do France, Italy, Argentina and the United Kingdom, all of them crippled by huge debts and soaring deficits, as well as facing the burden of supporting aging populations, have against Google, Alibaba, Apple, Facebook and Amazon? These five companies have a combined value of around $1.6trn, several hundred billion dollars in reserves and investments in research and development – notably in robotics, nanotechnologies and the human genome – that will allow them to cement their leads on increasingly unstable nation states. Furthermore, while these states still aim to tax businesses in order to meet the needs of their populations, the agile and globalised digital giants contribute, each in its own way, to a worldwide tax evasion estimated between $5.5trn and $26trn[12].

These digital empires, for which it is not enough to avoid paying taxes, also seek to evade every form of national regulation that could impede their development. By way of example, we can cite the Seasteading Institute project to build giant ships that would hold offshore digital platforms outside of territorial waters, where they would not be subject to the regulations of any state.

Tomorrow, who will be best positioned to finance and raise an army? Sovereign states, or Google, whose recent acquisitions of several military robotics firms (including Boston Dynamics) mean it will soon be able to build battalions of robots? Robots that will know you

[10] *La souveraineté numérique*, Editions Stock, 2014.
[11] “Personal data value could reach €1tn,” *Financial Times*, 7 November 2012.
[12] According to the International Monetary Fund and the Tax Justice Network, respectively.

well, and be able to recognise you, thanks to your internet searches, your geolocations, your network of friends and contacts on social networks and Gmail.

The new economy, of course, also has a positive dimension. It creates new services that are often free; it increases our effectiveness in a number of domains; it generates interesting jobs; it boosts a population's quality of life. Who today could live or work "as before", without email or portable phones, looking up information in a printed encyclopaedia rather than on the internet?

But does this new economy create jobs for everyone? The world's top two private employers, McDonald's and American distribution giant Walmart, together employ four million people. Their combined stock market value is $325bn, for an average "value" of $81,250 per employee.

This is very little compared with the stars of the new economy. Alibaba, Facebook and Google combined are worth nearly $800bn, but they barely employ 80,000 people, representing $10m of "value" per employee. From east to west, north to south, it may appear a worker in the new economy is worth a hundred times more than one of the traditional economy. But this value has a whole different meaning if we consider it from the opposite perspective: that the new economy has a hundred times less need for "human capital" than the traditional economy.

In their study "The Future of Employment", Oxford researchers Michael Osborne and Carl Benedikt Frey[13] are unambiguous in their conclusion: the digitisation of human activities means 47 per cent of current jobs in the United States are at risk of disappearing[14]. The trend of replacing people with machines has begun: electronic checkouts are replacing cashiers in supermarkets, while industrial robots are replacing labourers on assembly lines. Foxconn, a Chinese subcontractor of Apple and Nokia, announced in 2012 it plans to purchase a million robots to replace its labourers. The result will be a society in an hourglass, with a small group of winners on top and a much larger group that will fight amongst itself not to lose jobs that are less and less well paid.

The deflationist and regressive reality of the new economy is particularly intimidating for those who have a job, for those who do not, and for those who have children – which is a lot of people. It contributes to reinforcing inequalities between those who understand and create new artificial intelligence systems and those who suffer from them. But even those at the top of the pyramid must fight to remain "competitive", to stay alive in the economic sense. For that, teaching and learning itself is adapting: as the economy becomes globalised and digitised, education does too. A global education market is emerging, with universities seeking to recruit the best students and professors, wherever they come from, and to open campuses around the world[15]. At the same time, more than six million students are already enrolled in massive open online courses[16], paving the way a standardisation and automation of training, with little regard for histories and cultures of origin, nor for the needs of men and women in their home countries.

But, in the interest of productivity and profit, it is no longer enough to ensure human beings are well trained – it is far more convenient to remove them from the equation. What worker could be more profitable and productive than an industrial robot that never sleeps, never balks at a task and has no personal problems districting it from its job? What driver could be more vigilant

[13] http://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf
[14] In Europe, a similar study by The Bruegel Institute puts this figure at more than 50 per cent.
[15] "The Globalization Of Higher Education", *Forbes*, 28 July 2010.
[16] Jeremy Rifkin, "The rise of anti-capitalism", *The New York Times*, 15 March 2014.

than an algorithm? And tomorrow, what programmer could be more effective and creative than a machine doted with a far superior artificial intelligence[17]?

Can humans survive this evolution? Already, those of us who are not "digital natives" – who have not grown up with digital devices – are overwhelmed by the flow. While human beings have proven they can adapt to anything – as they have with previous technological ruptures including the printing press, electricity, oil and railways – the condition is that it always takes time. However, how much time remains when algorithms can make elaborate decisions about investment and consumption that humans are no longer capable of making themselves, at their own pace, with time and reflection?

The new economy does not mark a new step in technological progress at the service of humanity, which would be very welcome. On the contrary, it represents the great replacement of the human with the machine. However, this economic revolution is part of the real scientific, political and philosophical project known as transhumanism, whose ambition is to enhance human capabilities by fusing man and machine and, ultimately, to render humans immortal. Such is the crazy but conceivable project of Google, whose engineer in chief is none other than Ray Kurzweil, the apostle of transhumanism and author of successful books – including *The Singularity is Near: When Humans Transcend Biology* and *How to Create a Mind* – clearly detailing its aims and ambitions. Far from being the sort of shadowy project that fuels conspiracy theories, transhumanism expresses itself openly in Mr. Kurzweil's books, just as it does in the products, innovations and acquisitions of Google. The project stopped having purely commercial or financial motivations long ago: it has become political and even religious, in the sense that it seeks to completely transform our way of life and our values. Transhumanism would use technological innovations to "enhance" the body to the point that humans achieve immortality. Nothing would be able to stop the spread of technology around us and even within our bodies – certainly not the boundaries of human ethics, which would be shattered in the process.

Up until now, few countries have explicitly opposed the growing influence of transhumanism. In China, the Beijing Genomics Institute has been working on the DNA sequences of 2,200 "gifted" individuals, hoping to eventually inject "good" DNA into its population, to hold its own in global competition. In Europe, France and Germany have shown resistance, but for how long? German think tanks and government authorities are leaders in the protection of private lives online, as evidenced in the brave and clear-headed open letter of Axel Springer CEO Mathias Döpfner, "Why we fear Google"[18] – an all-out attack on the giant's business model. In France, several digital entrepreneurs[19] have warned consciences and political authorities, mostly in Europe, of the dangers posed by these new tools of domination. Laurent Alexandre, a doctor and founder of Doctissimo, provides a crucial analysis of Google's transhumanist project[20]: from the multiplication of acquisitions of military robots to the registry of patent 8543339 B2[21], which allows Google to selectively sort the "best" human embryos, we discover a vision of human individuals and societies that must be "improved" and guided by technology.

[17] James Barrat highlights this idea in *Our Final Invention: Artificial Intelligence and the End of the Human Era*.
[18] http://www.faz.net/aktuell/feuilleton/debatten/mathias-doepfner-s-open-letter-to-eric-schmidt-12900860.html
[19] See Olivier Sichel and the Open Internet Project, as well as Godefroy Jordan and renaissancenumerique.org.
[20] http://fr.openinternetproject.net/news/25-video-le-monde-futur-vu-par-google-et-decrypte-par-laurent-alexandre
[21] http://www.google.com/patents/US8543339

Voices of dissent are growing in other European countries as well, particularly in Spain, Italy and Poland, where the unstable democracies of the 20th century have left an enduring wariness of totalitarian visions and their consequences: eugenics, the manipulation of bodies and minds, and the rejection of the weak, of those who used to be called *Untermenschen*, subhumans. In a transhumanist world, is it not the fate of all normal humans to become *Untermenschen*?

And tomorrow, how will we tell the difference between a human enhanced by robotics and a humanised robot? With each technological advance, this distinction becomes more blurred, and threatens to exclude "normal" humans from the system – more precisely, those who will not have had the financial means to integrate technological advances alongside or within their own bodies. There will be the "haves" and the "have-nots". On one hand, we will have the poor, all-too-human humans, who fate is sickness and death, and on the other, the super-humans, those who deserve immortal life. There will be the humans without the technological "enhancements" required to appreciate or understand voting or participation in civil life, and the others, the "super citizens", the only ones worthy of the privilege to vote. What democracy would be able to resist?

Financialisation

Along with globalisation and digitisation, financialisation pushes the new economy to ever greater limits of human and earthly realities. Let us take a look at a few key figures.

- There are 7.2 billion human beings on Earth. Together, we generate about $75trn of wealth every year[22]. That means each earthling annually generates, on average, about $10,000. Keep this in mind for the astounding nature of the figures that follow.

- Every year, in a market detached from all tangible reality but that of electronic fluctuations and computer clicks, nearly 2 million billion dollars are exchanged. Or $1,934,500,000,000,000, to be more precise[23]. This is the foreign exchange market, where dollars are exchanged for euros, yen for pound sterling, and so on. This market is 25 times larger than the global production of wealth, and it has no relation with the social and economic reality of the world. Like the derivatives market – itself worth "only" $693trn, or 10 times the annual wealth produced on Earth – it feeds on wagers, speculations and, marginally, the insurance needs (against risks of fluctuation) of the different actors of the global economy.

- Today, there exists a new form of banking known as "shadow banking". A number of financial players, free of any banking regulation, have gradually secured the possibility to act like banks: to transform short-term deposits (your money in the bank) into long-term credits by going into debt. Who is capable of controlling the level of this debt, monitoring the nature of these bankers' activities, or verifying whether they can actually support these risks? The year before the crisis of 2008, which it played a powerful role in aggravating, shadow banking represented $62trn, an amount practically equal to the annual wealth of the planet. One may ask whether the crisis led all these uncontrolled activities to be strictly regulated or reduced to nothing. I still recall the well-constructed words of United States President Barack Obama, denouncing the insanity of Wall Street and calling for strict "parental supervision" of these "billionaires and millionaires"[24]. However, according to the latest indicators, shadow banking represents nearly $70trn. It has continued to grow.

For several months, I believed the serious crisis of 2008 would be an historic opportunity for world leaders – the heads of state, ministers, business leaders and central bankers of the world – to regain control. Such was the task of numerous G20 summits. I joined other economists in calling for more regulation in this financial world gone mad[25]. A few rare voices, including Paul Volcker, tried to put the genie back into the bottle and to disarm the most dangerous factors of financialisation: speculative funds, vulture funds, those with the power to bring whole countries, such as Argentina, to their knees. However, instead of disarming them, global institutions decided to increase their firepower. We treated sickness by prescribing more of the disease, excessive debt with a boost of financialisation. Such was the policy of central bankers in the world's largest countries: in the their greedy pre-crisis euphoria, private banks bought assets, which they could not sell, at prices so high that they were unable to carry out their functions of loaning money to business and households. One by one, central banks decided to

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[22] According to the International Monetary Fund and the World Bank, which add the GDP (gross domestic product) of all the countries of the world.

[23] Bank for International Settlements.

[24] Andrew Clark, "Obama promises 'adult supervision' for Wall Street", *The Guardian*, 19 December 2008.

[25] See the briefing papers of the Institut Montaigne ahead of the G20 summits in London and Pittsburgh, March and September 2009: http://www.institutmontaigne.org/fr/publications/reconstruire-la-finance-pour-relancer-leconomie and http://www.institutmontaigne.org/fr/publications/entre-g2-et-g20-leurope-face-la-crise-financiere.

redeem those unsaleable assets, creating money *ex nihilo*, in a practice known as quantitative easing. Since 2008, the heads of the world's six major central banks, by writing lines of code on their computers, have created more than $8trn of "real money" out of nothing. And they have not hesitated to give this cash to banks around the world, in exchange for unsaleable assets.

Central banks, which are supposed to be the guardians of the world's currencies, have instead loaded their balance sheets with toxic products. They may as well have placed mould in a safe full of banknotes. However, they surely had no other reasonable option – the alternative would be to send the global financial system into cardiac arrest, by depriving it of its lifeblood. Private banks took advantage of the deal and quickly rebuilt their profits, activities, speculations – and paycheques. In 2013, the same Wall Street bankers who brought the global financial system to the brink of default 2008 shared $26.7bn in bonuses, $10bn more than they had five years earlier[26].

Today, private banks are overflowing with unused resources to the extent that even those facing considerable fines – some for laundering money of Latin American drug cartels, others for deliberately misleading their American clients – have a sole message for the markets: "it doesn't hurt!" Their profits are so large that they are not affected in the slightest. Since 2009, American and European banks paid more than $128bn in fines to American authorities, without a single having the least difficulty. It is no surprise: also since 2009, American banks alone have registered more than $500bn in profits[27].

The same is true for businesses, which also no longer know what to do with the fortunes they have amassed. In 2013, the 500 largest American companies on the S&P500 index turned 95 per cent of their profits over to their shareholders.

This lack of plans, desire or will to reinvest their profits in the future is also evident in share buyback figures. Certain companies are so profitable, already giving so much money in dividends to their shareholders, but also so short of ideas to develop new activities, to hire new staff or to increase their production or distribution, that they prefer to use those profits to reduce their own capital. They buy back their own shares, in order to cancel them and to increase yields for their shareholders. This is no small phenomenon. In 2013, it represented more than $500bn for the 500 largest American companies on the S&P500.

Despite this, we can observe the daunting levels of cash holdings the companies maintain: at the end of 2013, American companies held $1.6trn in their treasuries[28], while companies in Europe, Africa and the Middle East hoarded more than $1trn[29]. Held as uninvested capital in private equity funds, known as "dry powder" in industry jargon, it is used for little more than covering the management fees of the happy few[30].

"And for what?" Men and women in private sectors around the globe are under constant pressure to be more and more productive. The threat of unemployment is persuasive: the world counts more than 200 million people without work. Among them, 75 million are under the age of 25. Youth are three times more affected by unemployment than their elders, especially in Europe and the Middle East, which fuels fanaticisms, from pseudo-religious fervour to outright

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[26] According to the New York State Comptroller, each banker received an average bonus of $164,530.
[27] FDIC, Wall Street Journal, Reuters.
[28] Moody's.
[29] Deloitte. Companies around the world had $3.5trn hoarded at the end of 2013.
[30] Preqin.

xenophobic discourse. To these 200 million jobless, we can also consider the 839 million workers who live on less than $2 per day[31]. And yet, companies around the world continue their cost-cutting exercises, never letting up the everyday pressure on their workers, who are forced to be more efficient and productive, up until the moment they are replaced by robots.

Such is the reality of the new economy of the 21st century: a global economy becoming quickly digitised and overly financialised, but without enough faith in humanity or in the future to consider reinvesting its enormous profits in them.

[31] International Labour Bureau.

How can we return the human to the centre and escape the trap of the new economy?

How can we escape the trap of the new economy?

I see two possibilities, and only two. The first, the worst-case scenario, must be avoided at all costs. There are accidents brewing at the heart of the new economy, especially in the world financial and digital markets, where humans are quickly losing their grip.

The worst-case scenario

Three accidents could happen, each of them just as likely as the others:

- ***A financial crisis comparable to 2008***, but which the global system would not be able to curb. In hindsight, and having been close to the heart of it while living in New York, I know we came very close to global financial default. Chance or Providence decided otherwise. But since this episode, no significant safeguards have been put into place to face up to the next disaster. Where will it come from? From a slowdown in the global economy, provoking a bond market crash in Europe? Or to bank default in China? It matters little: once a fire starts in such an interconnected financial system, it spreads quickly and stretches very far.
- ***Financial algorithms going out of control.*** This accident already happened, on a small scale. On 6 May 2010, the New York Stock Exchange (NYSE) experienced a "flash crash". At the time, two thirds of all trades were conducted by robots, or algorithms. For reasons no one could explain[32], including the regulators at the US Securities and Exchange Commission, these algorithms went out of control and destroyed $862bn worth of stocks in 20 minutes. The situation required a human intervention *in extremis* – the president of the NYSE "pulled the plug" on the market, arbitrarily cancelling hundreds of thousands of trades, in order to contain the meaningless stock market crash. If we do not take the lead, there will be more "flash crashes", on larger scales, involving more of the world's interconnected financial centres. The percentage of market transactions that are automated is constantly increasing, as is high frequency trading, which represents half of market transactions in the United States, and which allows carrying out orders at the speed of light, if not beyond. Market algorithms are now capable of carrying out no less than 600 transactions in 100 milliseconds – the blink of an eye. Who can top that?
- ***A deliberate attack.*** An incident susceptible of sweeping away swaths of financial wealth from the digital world economy can be the result of chance – machines reacting to their own complexity – or of a deliberate strategy to destroy the financial industry. If, in the summer of 2014, a group of unidentified hackers could infiltrate the information systems of JPMorgan – the most powerful bank in the United States – and make off with the private data of 76 million American households for some as-yet-undetermined future use, what financial data and information are safe today? What bank or financial centre can claim with a straight face to be totally protected from the risks of such an intrusion? Henri de Castries, CEO of AXA, the world's top insurance company, said in April 2014 the greatest risk for insurers worldwide, ahead of car accidents, natural disasters and wars, would soon be cyber attacks[33].

[32] http://www.bloombergview.com/articles/2012-05-07/flash-crash-story-looks-more-like-a-fairy-tale
[33] Interview in *Les Echos*, 23 April 2014.

Who can open their online bank account without imagining that in just a few clicks, a few lines of rewritten computer code, someone somewhere could empty it out, leaving nothing? If central banks can create thousands of billions of dollars in cash reserves by writing a few lines of code, could a similar manipulation not destroy those reserves as well?

No serious long-term investor or asset manager would hesitate to take protective measures for such a risk. Today, they heavily invest in tangible assets: businesses, the real economy, real estate, farmland, raw materials and energy. They are right to do so. But the most worrying question is not about how to optimise a financial position or situation, but how to avoid an economic, financial and social meltdown akin to the crises of 1929 or 2008.

Do we have to wait for the next Deluge, this time financial, in order to restore our societies to their original state? To finally make finance serve the economy, and the global economy serve humanity, instead of the other way around? To take control the algorithms and robots that will populate our societies, to make them work for us, instead of letting them, out of laziness and our desire for comfort, dictate our preferences and then our choices? To reclaim the sovereignty that we have given to monopolistic digital empires, which are more powerful today than the countries of the world and will be capable tomorrow of producing and raising armies of machines? And which have the gall and the cynicism to couple their predatory commercial actions with a slogan that fools nobody: “don’t be evil”?

“Don’t be evil.” Who will deliver us from that evil? This is the only other outcome: the one of liberation. It is up to humans, with the help of an authority superior to that of machines or of finance, to liberate themselves from the trap of the new economy.

The scenario of liberation

Charles de Gaulle said that “nothing can be built outside of reality”. However, if we want to build or rebuild an economy and society with humanity at the centre, we must begin with a simple observation: no financial power can hope to counter the firepower of the financialised global economy of 2014. Furthermore, no nation or organisation of states, as sophisticated and powerful as they may be, can rival the artificial intelligence systems spreading at a super-human speed through the 10 billion computers and other devices connected to the internet today[34].

Thankfully, humans are equipped with a much more powerful tool. This tool is small as a grain of sand in a well-oiled machine. As troublesome as a small pebble. This small pebble that our elders called, in Latin, *scrupulum*. The scruple: this sharp little pebble in at the bottom of a shoe, stopping us from running too quickly towards catastrophe.

The scruple, or a raised conscience. The best antidote to a new economy that seeks to dehumanise us – or to transhumanise us, to speak the language of the false prophets of Silicon Valley – is human conscience. No machine, no matter how sophisticated; no totalitarianism, and transhumanism is without a doubt just that; no mass of money can succeed in burying human conscience. Human history has shown many examples, especially over the last century: Alexander Solzhenitsyn, Vaclav Havel, Lech Walesa, Elie Wiesel, Nelson Mandela and Gandhi; “the last woman who died for sheltering one of our own at Ravensbrück”[35]; and Karol Wojtyla. In the 21st century, human conscience will once again come to dominate machines and finance, just as it vanquished the totalitarianisms of the 20th century.

“A carpenter with a hammer sees nails everywhere,” and certain entrepreneurs and engineers of Silicon Valley, of Bangalore in India or of Zhong Guan Cun in China see nothing in human beings but a pile of flesh, bone and intelligence reducible to molecules and equations, infinitely reprogrammable and modifiable. It is also true that certain financers of Wall Street, the City or Hong Kong see nothing in humans but a series of cash flows, a capacity to work, an asset to enhance and to exploit. But we know, even in the scientific realm, they have already lost the game. During seminars in which I participated at the Collège des Bernardins, a 13th-century cathedral-school in Paris, re-established in 2004 after two centuries – the French Revolution passed by there – a topic that came up was the Human Brain Project and the work being done on the human brain at Bar-Ilan University in Tel Aviv. To quote one of the researchers: “We succeeded in isolating, with the goal of eventually duplicating, every function of the human brain but one: the conscience.”

This conscience has not been forgotten. In the United States, the leading country of the new economy, the voice of conscience is called philanthropy. Giving back. Each year, 95 per cent of American households give to charities, in amounts totalling more than $300bn[36]. Therein lies a first step to disarming the trap of the new economy and returning the human to the centre.

The second path is European: the slow but steady appearance of the sharing economy. In Europe, without a doubt more than anywhere else, there exists an awareness of the world as a place of limited human and natural resources. Instead of taking the predatory and mercantile approach that abounds elsewhere in the world, many are choosing to share what they have and

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[34] IMS.
[35] André Malraux, in his address upon the transfer of the remains of French Resistance leader Jean Moulin to the Panthéon in Paris, 19 December 1964.
[36] National Philanthropic Trust.

avoid monetary exchanges as much as possible. It can be a trip in a car, a service at home or an offer of a place to live. The human is regaining his rights, and the local community as well. The sharing economy – in which assets are used, rather than owned – has a great future ahead of it[37].

American philanthropy, the European meaning of sharing. Asia is not to be outdone: Jack Ma, founder of Alibaba and the wealthiest man in China, has the will and potential to become the greatest philanthropist of the early 21st century and to inspire a new model of development for his compatriots.

Sharing and philanthropy. No algorithm can duplicate or anticipate the sudden appearance of a human conscience that will have the last word. But how can we make it suddenly appear, quickly, in a new economy becoming quickly dehumanised?

A technical approach should be explored for the medium term, in partnership with the global organisations that are well equipped to do so (the IMF, the World Bank, the United Nations), to promote the use of standards and consumer labels. The time has come to impose simple and universal human standards on the globalisation, digitisation and financialisation of our economies. "Human inside". With the goal of helping and rewarding businesses and financial institutions to prioritise the human, in a concrete and measurable way in their generation of wealth, rather than the transhuman or the machine; to favour philanthropy (of shareholders, managers, employees) rather than rapacity; and to emphasise sharing rather than predatory behaviour. It is not just a matter of linking the generation of wealth with effective job creation – this would be a good start, but it is not enough. Working conditions and their impact on the environment – on what Christians call Creation – must be of foremost concern. Of equal consideration should be the living conditions of the growing number of people who cannot directly participate in the productive economy.

This is a real plan of action that global organisations should undertake immediately. But it should also include leaders and players in the development of the new economy, from the financers of Wall Street and Hong Kong to the engineers in Silicon Valley and Beijing. It should be brought to bear in London, Berlin, Tel Aviv, Bangalore and all the technological and financial hubs preparing the world of tomorrow. This plan will take time. However, the emergence of human conscience in an economy with less and less place for it needs to happen today. This emergence needs a springboard, a point of departure. A superior moral and spiritual authority.

In an increasingly barbaric world, where human conscience is disappearing, I dream of a day to come, very soon, when a figure representing such a moral and spiritual authority will rise, take up his pilgrim's staff and approach the centre of the today's global economy: New York. Which is also the headquarters of the United Nations. I dream that he brings the leaders of all the great religions with him, with no conditions or exceptions. And that together, they send the economic, financial and political leaders of the 21st century this simple message: tear down this wall. That they take inspiration from the images of Pope Saint John Paul II of 1978 and of Ronald Reagan at the Berlin Wall in 1987, and that they call on global elites to tear down the uncompromising barriers of insane money and alienating technologies, which divide humans

[37] In 2012, two-thirds of the British and a quarter of Germans were "co-consumers" (Arte, July 2013).

and exacerbate inequalities, rivalries and violence between them. This invisible wall that pushes human beings out of democratic, economic and social life, for the benefit of soulless machines.

Tear down this wall. Who can insist upon the emergence of human conscience, this preferential option for humanity, before it is too late? Who other than Pope Francis, in New York, 50 years after Pope Paul VI’s address for peace at the United Nations, can send such a message of liberation?

Postscript: What will tomorrow bring?

(This postscript was written after the editing of the December 2014 issue of Cultures and Faith*, and after the confirmation on 17 November 2014 that the Pope would go to New York in September 2015.)*

The message of liberation of Pope Francis in New York can now be anticipated. We can hope it creates a hole in the unremitting wall of mad money and dehumanising technology that dominates the 21st century – a hole to be filled not only by the great monotheistic religions, but also by the secular philosophies that place human dignity above all, in order to propose concrete steps to re-humanise our economies and societies.

In this regard, the Catholic Church has already been proposing a social doctrine that offers responses to the current challenges for more than a century.

It includes the absolute principles of dignity and respect for the human being. An intangible human being, not to be exploited: "the order of things is to be subordinate to the order of persons, and not the other way around."[38] The transhumanists and other Doctor Strangeloves can abstain.

How can we conquer the financialisation of our economies, if not by rendering concrete the principle of the "universal destination of goods"[39]? We undeniably possess the goods of Creation, but we are no longer their custodians. Our task is to make them bear fruit for the generations of today and of tomorrow. Only in this way can we outline a sustainable model for finance[40], one that serves what we call the Common Good.

Finally, how can we respond to the challenges of globalisation, so rich in opportunities and in dangers, if not with the emergence of a "universal public authority"[41]? This could be a new United Nations, one whose umbrella groups are finally brought to bear in the powers of the 21st century: Latin America, Asia beyond China, the Muslim worlds. A new UN that puts the re-humanisation of our economies and societies at the top of its agenda, for a lasting peace between peoples.

This will be the other challenge facing Pope Francis in New York: to give the UN a mission and a legitimacy it seems to have lost 70 years after its founding, and 25 years after the fall of the Berlin Wall. A challenge in the form of hope.

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[38] Compendium of the social doctrine of the Church: http://www.vatican.va/roman_curia/pontifical_councils/justpeace/documents/rc_pc_justpeace_doc_20060526_compendio-dott-soc_en.html.
[39] Ibid.
[40] Outlined in François Villeroy de Galhau, *L'espérance d'un Européen*, Odile Jacob, 2014.
[41] John XXIII, Mater et Magistra, 1963.