THE COFFEES OF
THE SECRETARY-GENERAL

Ian Goldin

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Bringing New Perspectives to the OECD

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Short Bio
Ian Goldin

**Ian Goldin** is the Oxford University Professor of Globalisation and Development, the Director of the Oxford Martin Programme on Technological and Economic Change and the founding Director of the Oxford Martin School.

Ian previously was World Bank Vice President and the Group’s Director of Policy, after serving as Chief Executive of the Development Bank of Southern Africa and Economic Advisor to President Nelson Mandela. Ian has served as Principal Economist at the EBRD and Director of Programmes at the OECD Development Centre.

Ian has a BA (Hons) and BSc from the University of Cape Town, an MSc from the London School of Economics, and a MA and DPhil from the University of Oxford.

Ian has been knighted by the French Government and has published 21 books, including Age of Discovery: Navigating the Storms of Our Second Renaissance; Development: A Very Short Introduction; The Butterfly Defect: How Globalisation Creates Systemic Risks and What to Do; Divided Nations: Why Global Governance is Failing and What Can Be Done; Exceptional People: How Migration Shaped our World and Will Define our Future; and, Is the Planet Full?

He has been a non-executive Director on numerous boards, the Senior Independent Director on CDC, is a Trustee of Comic Relief and the Chair of CORE-Econ initiative to modernise the teaching of economics.

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Thank you very much for hosting me for the Coffees of the Secretary-General and thank you for attending my talk. I was at the OECD many years ago and have been in and out of many organisations in the subsequent period. I believe that this organisation, more than any others in the international arena, has managed to renew and transform itself to become even more relevant than I could have possibly imagined when I left in the early 90s – and certainly in the period since 2006 thanks to Secretary-General, Angel Gurría.

I will share with you today some thoughts from my new books and try to provide a perspective of where I see the coming decades heading, because I believe that this institution is really at the heart of trying to shape, not only better lives but also a better future and better policies for better lives everywhere. It is that agenda which requires an understanding of the dynamics of the world in order to work out what your comparative advantages are and how best to affect change. Whether you are successful or not, is not just of importance to yourselves and your own careers, it also really matters to the world.

1 The original transcript of the presentation by Ian Goldin has undergone minor editing to ensure that the text published in this brochure is presented in a reader-friendly format.
I believe that our time is defined by the image of the Berlin Wall coming down in November 1989; and it is also about walls coming down everywhere, moving from a divided world where about 200 million people around the globe shared the same information and values in the late 1980s, to a world today where we have 6 billion (of the 7.5 billion in total) sharing information. This is a dramatic change and there has never been a more rapid transformation of the world in the history of humanity. It is a transformation that has shaped our lives in many new ways.

I was at the OECD when the Berlin Wall came down and I remember thinking how remarkable that was; but I never imagined how dramatically it would affect my own life. What we know today with the benefit of hindsight is that within three months Nelson Mandela was released from the prison where he was held for 27 years, within a year he came to Paris and he asked me to be his economic advisor and go to South Africa and run the state bank which I did when he became President. But what I have learnt from that experience is how these events which seem unrelated to our own individual lives, in fact shape them in very new and different ways, and that is because of the complex integration of the world. What happened in Europe led to democratisation in 65 countries around the world over a 5-year period and that transformation included the end of apartheid in South Africa.

Going forward, we need to appreciate that what is happening elsewhere in the world will dramatically shape all of our lives in new ways. Because the walls have come down, there are 2 billion more new people on the planet; ideas have travelled which are leading people to live longer and healthier lives; infant mortality has plummeted and life expectancy has increased by at least 15 years over this period of time. Part of this has come through simple ideas such as: washing our hands prevents contagious diseases, smoking kills, wearing a safety-belt saves lives; and of course, through more complex ideas like new cures for cancer and new vaccines. And with the spread of ideas comes a new extraordinary thing, the ‘release of genius’, the release of talent from the slums of Mumbai, Shanghai, Soweto and other places that were previously constrained. So when we think about the global ideas
space and what will shape our lives, let’s think about the Einsteins, Mozarts and Shakespears that will emerge in new ways from new streets.

We also know today that it is not only individuals that shape the world, it is teams and sparks and the connections between ideas, it’s people working together. And whether it is you working with colleagues around the world on new ideas on how to solve a problem or whether it is the group that I started in the Oxford Martin School working on new cures for cancer, working on a 24-hour cycle with data in the cloud and labs in Shanghai, Mumbai, Paris, New York and San Francisco; the nature of invention, innovation, change, and the way we go about thinking is fundamentally different to what it was in the 1980s and prior to that period. It is not only because there are more people and more education, but also because of the development of the World Wide Web, which was developed the same year as the Berlin Wall came down. It is precisely that shift to create a connectivity which is the reason that I believe that we live in a Renaissance; it is an information revolution that changes the space in which ideas cook. It is both formal and informal.

When I first went to China in 1983, 78 people were doing doctoral degrees, this year in one department that I teach in Changhua university there are more than 78 doctoral candidates. In fact, there are over 250,000 doctoral candidates in China today. If we look at the number of patents, the number of journal articles and other indices in the ideas space, we see similar trends. Of course this is increasingly being concentrated and far from the world being flat, it is becoming more mountainous. Where this ideas space is, is dramatically changing; over 80% of ideas are now taking place in dynamic cities and over 60% of the world’s population lives more or less one hour away from these cities. This differential of where things happen and the places left out of change is quite fundamental about the way that we need to think about the future.

There are lots of ways to confirm what I have been saying about the transformation of the world, but let us examine some financial flows. The four sets of financial flows are FDI, remittances, bond and equity flows, and official assistance to countries. All four were relatively stable and flat until 1990, in the subsequent period we see a much higher order of magnitude and instability for all flows. So we have a fundamental change in the nature and the level of these flows. This complex dynamic system defines where we are today, with a greater number of participants and a higher flow level, and they continue to grow. This is the reason why we see extraordinarily rapid progress. Both income and population growth have never been more rapid. I believe that this is the result of integration and connectivity. Another way of thinking about it is that evolution has speeded up, we are in an age of discovery and in this age, the past is a very poor guide for the future. A key question of course that matters to us all is, what will these trends be in the future? Will they continue to rise? Will they flatten? Or reverse?
Why this matters is because behind these trends is development. We have also experienced a more rapid learning about development and that is why people’s lives have progressed more rapidly. Globalisation has played a big part in this development. By globalisation I simply mean the flows of ideas – principally – but also products, goods and services across national borders. Why this matters is because if you are poor, you have never lived in a better time in human history. There has never been a greater prospect for most people in the world of escaping poverty and incomes have gone up in dramatic ways. So despite the world’s population increasing by 2 billion, the number of desperately poor people has gone down by 300 million. This has never happened in history before. Historically, when we had rapid population growth, the number of desperately poor people increased even if their relative share declined. This time it is different. A large part of that is due to the extraordinary improvement in literacy. In a world of 5 billion in 1990, only 2 billion could read and write; in a world of 7.5 billion people today, 6.5 billion people can read and write. If you believe in literacy and education as a driving force of ideas, of change, of progress, then this is the reason to believe we live in a positive time. As a result, we see an average improvement of life expectancy in the world of 20 years. It took from the Stone Age to the 1960s to get that sort of progress.

I will tell you many things that may depress you and give you nightmares, but when you go to bed tonight remember the good news: this is by far the best time in human history to be alive, this is a new Renaissance driven by an information revolution. At first it was the Gutenberg press, before that only priests and less than 0.5% of Europeans could read or write. There was very little available to read and write, few manuscripts and Latin books locked up in monasteries. And suddenly the revolution of cheap paper and print came, over 50 million books were printed in a 50-year period and many more political pamphlets. In that sense, ideas travelled, languages were developed, nationalism developed and science leapfrogged, and that is why we celebrate the Renaissance so many years later. We also celebrate the iconic art which we see in museums today because they were true revolutions, they changed the way that people perceived things.
The da Vincis and Michelangelos changed perspective in dramatic ways. But it was much more than an artistic experience, it was also a scientific revolution. We went from a small flat earth with Europe at the centre and dragons and angels at the edges, to total circumnavigation. This was globalisation 1.0, the beginning of commerce. It also led to the discovery that we were not the centre of universe with everything orbiting around us, but we were simply another planet, around another star and we were not God, we were not in the middle of things. This posed a fundamental challenge both to the Church and to everything that was known and believed until then. Cities became more important, the most rapid urbanisation growth that had ever been seen in humanity took place. Places of diversity mattered in that first information revolution, Florence was 40% immigrant, it was diverse and multi-religious and the liberal views of the world were welcomed. That is why progress took place, because ideas were exchanged and flourished.

The point of my book, ‘Age of Discovery’, however, is to highlight not only the creative revolution that took place but also the risks. The ships that sailed to the new world spread diseases and also brought diseases back with them that killed many millions. The information technology revolution was used by extremists such as Savonarola who invented the political pamphlet which he used to disintermediate the authority of the Church, and ultimately overthrow the Medicis in Florence and create what we would now call a religious jihadist republic in Florence. The burning of the books, the bonfire of the vanities, this new information technology was used to spread religions, it led to counter-attacks such as the Inquisitions, and there was an attack on science and experts – an echo of today – with total renunciation of science and evidence; fake news had its heyday.

So this process that we celebrate 500 years later was actually dismal, it led to religious wars and put Europe back in terrible ways. When writing ‘Age of Discovery’ with my co-author, Chris Kutarna, I aimed to highlight that these periods of exceptionally disruptive progress have the seeds of destruction in them and they need to be effectively managed. What worries me today is the similar trends that we are seeing. While the walls have gone down between countries, within countries the walls are going up, evidence has been produced on
rising inequalities. I believe that this is because when things change rapidly, people get left behind more quickly and we forget that at our peril.

Important issues that the OECD focuses upon such as, social inclusion and regional policies are absolutely vital for the stability of the current system. We see this in the evidence in terms the top 1%, people being left behind and we see it in the work of Deaton and Case and others on life expectancy. The life expectancy of people in the mid-west in the US today is lower than that of their parents, their unemployment rates are higher, their incomes are lower and their chances of moving home are lower than that of their parents. Mobility rates are half of what they were in terms of potential to move to a dynamic city. If we try to understand what is driving the politics in the US – as in many European cities – look at housing prices and look at what opportunities people have.

I believe that today we are not witnessing a revolt against change, I believe it is a revolt by those that cannot change, those who feel that they have been locked out of change. The dynamic cities are very happy, people in cities are not voting for Marine Le Pen in the numbers that they are voting for her in the countryside; they did not vote for Brexit in London, they did not vote for Trump in the dynamic cities on the coasts; and they certainly did not vote for AfD in big numbers in Berlin, Munich or Frankfurt.

Inequality is the first great underbelly. The second is that both good and bad things can act when integrated systems join. The great challenge of managing this integrated system is what I call in my previous book ‘the Butterfly Defect’ of globalisation. In other words, how do we manage integrated systems and how do we stop systemic risk? The financial crisis was the first great example of this.

The third great issue is: can everyone have a good time? Can everyone climb the energy curves, the water curves and the consumption curves without the system becoming unstable?
Let me run through three sets of megatrends: demographic, economic and technological. I mentioned growing life expectancy; there is convergence around this except for two regions, Southern Africa because of HIV/AIDS and Eastern Europe, particularly Russia, for different reasons. Much more surprising to me has been the collapse of fertility around the world. The world’s population is expected to flatten quite rapidly over the next thirty years, and in many regions like Europe and China it is already collapsing. It is expected to peak at about 10 billion people at the second half of this Century. This means that median ages will double in many parts of the world, and this dramatically changes many things including politics; the elderly will dominate the vote. Within the next 8 years, Asia is expected to have over 700 million people over the age of 60. The consequences will be huge, the first takeaway from these demographic projections is that women are wiser than men. They do not make as many stupid decisions, they do not drink as much as men, they do not smoke as much, they don’t kill each other as much, and they live longer in all countries of the world. So we expect more elderly women than men everywhere. But the opposite is true at the other end, we will have more boys than girls. And the reasons again are very simple, you live in a sexist society and the status income career prospects of boys are better than for girls; you can only have one child; and you possess the technology to choose, then you choose to have boys. And so this increasingly skewed dynamic has many dramatic consequences including accelerating collapsing fertility.

For economists and for the OECD, the weight of the elderly on the young is a dramatic story that shapes everything in terms of public finances and many other things going forward. When the pensions and social security packages were built in the 1960s and 1970s, the average life expectancy on retirement was 7 years and average risk-adjusted returns were 4%. Today, average life expectancy on retirement is 25 years and growing by at least 2 years every decade, and risk-adjusted returns, maybe if you are very lucky, are 0.5%. This means you have to save at least 20 times as much for the similar standard of living than you would have in the past. In some countries much more than 20 times, maybe 50 or 100 times as much.
Where will the savings come from? Consumption. One of the terrible things that are happening is that perverse regulations in Basel III and Solvency II are forcing people out of equities and into gilts and long dated yields and that is pushing the yield curve down even further and quantitative easing is compounding this particular problem.

There is a lot of uncertainty in the US. Over half the children being born in the US today are being born to immigrant parents, even though they only constitute 14% of the population. The workforces of the world are changing in dramatic ways, Europe has passed its peak, in China we have 1.6 million less workers in 2018 compared to last year and I believe that real wages are likely to double in China over the next 5 years; Africa and India are the growing regions, migration becomes more and more important, but even if migration was 10 times its current level it would not have set the demographic drivers for these basic shifts that we are seeing. It is however the driver of innovation, skills and of many other important things as I have mentioned.

Regarding economic projections, my view is that the future will look a lot like the recent past. In other words, we see world growth figures being extremely healthy – a round 4% – driven by emerging markets, which are in fact becoming our saviours. The situation we witnessed in the past century is dramatically reversed. The future is likely to be characterised by shocks and risks, having spare capacity and resilience, the ability to throw money at problems is very important going forward. When you have fired all your fiscal ammunition, as has happened in the OECD countries, then you do not have much resilience capacity, let alone the political gridlock that comes out of low growth. But when you are growing at 4% - 6%, you can invest in the future without cannibalising from existing generations. The political economy of investment, growth and crisis management is much easier in emerging markets than it is in the OECD economies. I do not believe this is likely to change. The good thing about emerging market growth is not only that it leads to higher world growth but also more stable world growth because you have more growth engines. When the US gets a cold, there rest of the world doesn’t have to get a fever because we now have China and other emerging economies playing an active role. Of course per capita depends on both growth and on population and because there is no population growth in China, everything goes into per capita, going up to 35,000, whereas India doesn’t go above 10,000 and Africa doesn’t go above 5,000. We are changing our assumptions, not only about growth but also about population growth and this, in-turn, changes in dramatic ways given the compounding effects. Along with this, we have an explosion of the middle-class in the order of 4.9 billion middle-class consumers within the next 13 years, mainly in Asia.

One of the many reasons, I believe that Brexit was an absolutely crazy idea of self-harm by the British people (in fact, only 51% of the British people) was because the US market is going to become smaller and smaller, while Europe will more than double the size of the US market going forward; and Asia is the real driving story behind this. A key question is: is there enough stuff? Are there enough resources for all these people? I will come back to this.

Regarding technologies, all future projections are fraught with risk, and this is nowhere more true than it is for technology, where the greatest minds and institutions are getting it wrong habitually. This should not stop us thinking about the future; we know that we are going to be wrong more often because the world is more complex and more dynamic and there are more variables at play, so expect to be wrong more often. We do however need to think about it more because everything that matters is in the future. In our personal lives, our institutional lives, our countries’ lives and the world. So we should not be scared off by the knowledge that we will get it wrong. We need to instead think deeper and understand structural changes better.
What is good about science is that it has constants and one of them is the capacity of Moore’s law. There is a lot of debate about this in the Oxford Martin School, we have about 50 computer scientists working on various aspects of this and we are pretty confident that we will continue to see a doubling of processing speed at about every 18-24 months and at about the same price over the next twenty years. So we will get 100,000 to 1 million times the power for the same price over the next 20 years, what we don’t know at all is what we are going to do with it. We already know what we are doing in the lab and that gives us a hint of what will come into the market in the next 10-20 years. For example, we are going nanolevel, building a needle that can release a drug into individual cancer stem cells at a speed of 44 billionths of a second; we are also gaining the capacity to rebuild different cell groups. What is happening in genetics and genomics is even more revolutionary and makes other things seem trivial; developments in this area are not merely advancing in exponential speed but at super-exponential speed. This raises a number of fundamental questions, not only will we all have our own DNA sequencing done over the next 10 years, but for the first time in history we will also be able to have individual medicines made that will be much more effective. So one of the big areas that I would suggest that the OECD is likely to be involved in is the regulatory and ethical questions around new technologies and biomedical technologies. Questions will arise such as: should we create super-humans? Who will decide? Is it a pharmaceutical, a private or a national decision?

Unfortunately not only the good guys have these technologies and one of the great worries is that DNA sequencing is becoming more affordable. A cleanroom can already be built for about 200,000 USD, and can be used to develop, for example, smallpox or Ebola put it on a drone and fly it down our streets. The price of terror and of systemic risk is going down and one of the most dramatic things to understand about technological change is that these are simply platforms that can be used for immense good and immense harm and how they are used will depend on institutions, regulations and social choice. That is why developing a regulatory framework to stop these technologies from coming into bad hands, is very important.
What we know from finance is that Barings Bank had existed for over 150 years; can you imagine the technological, political and other changes in the world over a 150-year period? A fantastic bank with incredible management, and one day this management team woke up and discovered that one young kid, Nick Leeson, playing with new technology had destroyed them over night. That is the lesson, are we capable of understanding new technologies, who is using them and what their upside potential and downside risks are?

We live in a world of cybersecurity pirates where small groups can do immense harm. The problem in understand these new risks is that the past is an extremely poor guide to the future. We can draw risk probability curves for anything. Systemic risk is an altogether new concept. In England we thought that a rat coming off a ship in 1348, in an early phase of globalisation, may have led to the death of half the British population, so systemic risk is not a new idea. What is new is the speed and the scale with which it is happening today. The super spreaders of the good of globalisation are also the super spreaders of the bad and the question of how you manage integrated systems is understanding them and working out how they develop.

We also need to understand the implications of Artificial Intelligence (AI) and robotics for the future of societies and particularly for jobs. What the OECD is doing in this area is tremendous. Suffice it to say that this area of work will be extremely significant looking ahead. In that respect, getting governments ready and developing the education systems and skillsets, housing markets and transport systems that can cope with this new world is absolutely central and flexibility becomes more and more key. If we think it is a problem for the advanced OECD countries, it is an even greater challenge for middle income countries where a higher share of the economy is routine rules-based work. Essentially anything that is repetitive and rules-based and does not require dexterity or empathy can be disintermediated in the coming decades. Therefore call-centres, manufacturing jobs, the middle rungs of the development ladder are likely to be most vulnerable and it is the price of capital and not of labour that will determine where AI and robotics locate.
This is not the only technological disruption. SpaceX is now 3D printing titanium rocket parts. Elon Musk is printing 70% of his rocket on site. In a world where technology threatens us through bioterrorism or through AI or through cyber-attacks, how societies respond becomes key. And again the OECD will have a crucial role in preparing societies for technological change.

I mentioned earlier the question of the adding-up problem and systemic risk. The problem of the commons is not new, we have known it with the north Atlantic cod and economists have studied the problem of the tragedy of the Commons for many years. What is new however is the pace and the scale of what is happening today. It arises because nature doesn’t know a price and nature has economical limits, it is fine if 300 million people in the world take antibiotics but if 2 billion people take them, then they will not be effective. So scale matters in ecological systems, and regulation, therefore, becomes more and more important. The higher that people climb up the income curve and the more connected they are, the greater the externalities. We all have a dramatic impact on each other and on the world with every decision that we make. That is why the role of the OECD and thinking about corporate activity and the relationship between markets and freedom of choice; the increased choice that higher income gives us become more and more central. This balance between freedom and constraint becomes more acute the higher our incomes and the more connected we are.

How markets are constrained becomes a bigger issue. But it is not only a market problem, it is also a government problem. The Aral Sea for example was shared by 6 countries and each one was doing the right thing in the short-term, drawing water to feed their populations and irrigate their crops; it was of course a disaster in the medium to long-term. The Oxford Martin Commission for Future Generations study, ‘Now for the Long-Term’ tries to grapple with this issue. How do we meet these long-term challenges? And in this respect, climate challenges are particularly acute. We know what we have to do, we have to go to zero net carbon emissions over the next 25 years, that is the only option on the table. And this has to be done on an ethical basis, which means allowing the rest of the world to climb the energy
curve. But how we get to this transition in a way that is pro-development is also absolutely central.

The current global governance system is unfit for 21st Century purpose. It has served its purposes and we can celebrate its many achievements, but radical reform is required. We can celebrate the fact that the world is no longer run by 12 white men smoking cigars in a room as it was after the Second World War. So progress has been achieved; 35,000 people coming to the COP21 on their twitter feeds, that is progress. But the current system does raise global governance complications, new powers are rising and the system needs to catch up and reform.

So we have this paradox of hyper connectivity and knowledge, and a Westphalian governance system; increasing numbers of governments, not decreasing, the EU being the very remarkable exception. The global system that is most expert is the financial system. Our national treasuries and our central banks are the powerhouses, the best paid and most powerful people. And at the global level, it is the IMF. Can we compare the IMF to the UN? No, they are not in the same league in terms of people and power and money. And yet this global system has proved itself unfit for 21st Century purpose. If we want to understand why people don’t trust experts and authority, look no further than this, because we have let them down.

I believe there are five reasons for this: Firstly, a failure to understand where we are in history in terms of interdependence, complexity and the fragility of today’s system. Secondly, a disconnect between the national and integrated systems, we saw that during the financial crisis. Thirdly, a failure of government and business to understand technological change. Fourthly, the short-termism of incentives and some of the regulatory responses. Lastly, too much data and not being able to discern what is important, being blinded by a blizzard of information.

Because this system has let us down so badly, people are looking romantically to the past. Unfortunately these attempts of withdrawal are destined to make things worse, because the fundamental aspect of the current situation is that there is no optionality, there is no choice.
There is no wall high enough to keep climate change, pandemics, cyber-attacks at bay. Sadly, these walls will keep out the people, the ideas, the expertise, the technologies, the goods, the services, and most of all the ability to co-operate which is absolutely central to our ability to manage globalisation.

I believe that we possess the understanding of what is happening around the world, the capabilities and empathy in order to make progress. Unlike the Renaissance, which was essentially a white male affair, today we have a diversity of the global talent. We also have a demonstration of the ability to disintermediate not only from the left and the right but also from the centre, which I think is inspiring. These are reasons for optimism.

What does this mean for the OECD? My own view is that your relevance is growing all the time. It is because you have this capability of drawing ideas together and thinking about the policy implications. The global disruptions are absolutely systemic, no country is insulated and this will affect the poorest most dramatically. But it requires an interdisciplinary expertise, it requires going beyond what the financial institutions can offer and that is what the OECD is so good at. Bringing the disciplines together through cross-pollination problem-solving. The studies that you have been producing on the tensions between local, regional, city and global are at the heart of it. You have the data, ideas and policies and you focus on the right questions, the institutional and regulatory ones. In order to continue to be relevant, you need to continue your focus on excellence. You are only as good as whether people want to listen to you, and that depends on whether you are the best; it is an increasingly competitive ideas space. That excellence will also require that you keep changing who you are, keep being agile and coming up with new and different ideas. That requires being plugged into research, plugged into the frontiers and of course constant renewal, and I know Secretary-General that under your leadership the OECD can be relied on to never stop changing. If you do that, you can keep rocking on to a very happy old age.

Thank you.
Question and Answer Session:

**Tracy Burns, EDU:** You gave a compelling story about how experts failed the public in terms of preventing the crisis. But there are several domains, other than economics, and you gave examples such as climate and sciences. In those areas, the scientists did not fail the public, in fact they are highly respected yet the fight against expertise and the resistance against it affects all areas. How would you explain that and how would you tie that to the role of research and rigour?

**Ian Goldin:** My own view is that the financial crisis and the failure of experts in finance has helped to accelerate a broad distrust in experts which is contaminating other areas. And that’s partly about a deeper question which is one I am involved in. I am the Chair of CORE Global Initiative, which is trying to reform economics. I think economics is not a science, and part of what is behind the financial crisis is a total failure of mainstream economics. Economists have been pushing themselves as experts, when they actually were not really scientific experts, they were strongly relying on ideologies and on non-experts’ judgements, and that has contaminated other areas. So I would agree about the distinction between medics or climate scientists and many other areas of science and experts in the finance area. But I do think that there has been contamination and lack of trust, broadly as a result of that.

I think a more difficult question is why there has been such a strong pushback? In climate for example, when all the scientists are right, and we believe them, why do people still have science denial? I think this is fuelled by social media, by fake news, all sorts of contesting opinions, and what goes to the heart of that is who is behind these contesting opinions? Lobbies, most often. I believe a point comes when governments must make decisions. My own view on climate or vaccine regulation is I think governments should insist, I don’t think we should let anyone in our societies decide “I don’t want to get vaccinated”. It is a collective good, and anyone can threaten the whole. The fact that there are significant minorities of people who oppose science should not be a reason for allowing their views to dominate and
I think governments should be much more forceful in that respect. We also need to engage much more effectively in the war of ideas on the internet and elsewhere, and I know people that are doing so through charities for example.

H.E. Zoltan Csefalvay, Ambassador of Hungary to the OECD: What, in your view, would be a better way of addressing the term globalisation which is used in several different contexts today? What can we learn from the first industrial revolution and how does it compare to the current one?

Ian Goldin: On globalisation, the term has been much abused and greater clarity is needed. This process of integration and opening up of societies has accounted for the most rapid progress that humanity has ever known. At the same time, I think it is also the most dangerous process as it unleashes all sorts of systemic risks which are endogenous and not optional to globalisation. This is why if we want more progress we need better coordination.

The industrial revolution has huge amounts to teach us, what I would caution about is the assumption that the current industrial revolution – if we want to call it that – is anything like the previous one. Firstly it is not mainly about industry, it is society-wide. Secondly, it is not very slow, compared to the first one. In fact there are still parts of the world that haven’t been touched by the first industrial revolution. You can see in parts of Africa or India farmers pulling hand ploughs behind oxen. But they will have a mobile phone in their hand and that is the difference. Thirdly, previous industrial revolutions resulted in more high skilled jobs and higher incomes. Although they were disruptive and messy in the end we can still say that people were better off, I am not at all convinced that this is the case today, for all sorts of reasons, not least the AI and jobs issue. Anything that one can learn from history is always good, not because history repeats itself, it never does, but because history does rhyme. We can pick up insights and similarities from the past which can help inform the present and where we are going.
Alice Holt, OSG: I would like to ask you precisely about the label Renaissance. Do you find it a useful analogy through which to think about our rapidly changing world? The Renaissance was a perceived leap forward from the so-called dark ages but it was also supposed to be a reconnection with an idealised Golden Age. What, if anything, plays a role in ancient Greece and Rome in Renaissance 2.0?

Angel Melguizo, DEV: As you know we work with many non-OECD member countries. In the case of China, do you not believe that it is transforming and leading the digital economy and actually regaining the leading role that it had in the world during the 18th Century?

Andrew Wyckoff, Director STI: Is the digital divide – or is the clean water and electricity divide – a leader in inequality?

Ian Goldin: The whole concept of the Renaissance was a reconnection with Greece. My sense is that what we are doing now is reconnecting, not only with the whole trajectory, but also with many of the philosophical underpinnings, we see it a lot in civil society and in other areas – people are rediscovering values.

I believe that the fears regarding China are largely misplaced; it is a leader not only in digital but also on climate change, on global co-operation and other areas. I also believe that the level of invention, inquisitiveness and curiosity in China surpasses that of any country I have visited in the world. On digital and inequality, yes I believe the digital divide is a big question. Should we begin thinking about digital access as a human right? That can lead to other implications, for example, elderly people for different reasons do not have digital access, they do not feel comfortable.
Governments which are going digital are therefore disempowering parts of the population. I do not necessarily want to compare digital to water or food, the latter are necessary for us to have a life. However, I believe digital is necessary for us to express our freedoms, our human rights and choices. Some digital access is important and I believe that pretty soon we will be in a world where, in advanced economies at least, we will have free digital access.

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