



## Will robots and AI cause mass unemployment? Not necessarily, but they do bring other threats

In 1965, philosophy professor Hubert Dreyfus, a staunch critic of artificial intelligence, boldly claimed that a machine would never beat a human at the game of chess. It would only be two years before the sceptical scholar was himself checkmated by an MIT-developed computer. By 1997 machines were advanced enough to defeat one of the greatest chess minds of his time – Garry Kasparov. In 2015, our species' finest player of the very intuitive and “human” game of Go repeatedly conceded to Google’s computer.

With the rapid technological advancement of recent years, computers are increasingly encroaching on domains that were previously considered exclusively human. The astonishing progress in such areas as artificial intelligence (AI), robotics, 3D printing and genetics has enabled computers to perform the tasks of architects, medical doctors, music composers and even a [16th century Dutch master of painting](#).

Nearly every day brings news of remarkable feats achieved by computers or robots, and with them a gnawing question: Will machines edge us out of brain jobs?

This question is made even more unsettling by the [recently unveiled world population trends](#). Latest UN DESA data show that, by 2050, our population is expected to reach 9.8 billion people, over 6 billion of whom will be of working age. Meanwhile, we are already struggling with finding decent employment for [71 million](#) young people worldwide.

It is easy to see why new technologies are increasingly viewed as a major threat to labour markets. Some estimates even claim that a staggering 80 per cent of jobs run the risk of being automated in the coming decades.

A [new report by UN DESA's Development Policy and Analysis Division \(DPAD\)](#) finds some of these calculations unrealistic. Drawing from historical lessons of past industrial revolutions and from a wealth of current research, the study offers several reasons why our planet is not on track to becoming a robot's world just yet.

First off, artificial intelligence, 3D printers and other innovations are generally designed to excel at a very specific set of tasks. They will rarely be able to substitute an entire occupation, which, in most cases, requires much more versatility and adaptability.

Secondly, new technologies not only destroy, but also create jobs. "Throughout history, technological innovations have enhanced the productivity of workers and created new products and markets, thereby generating new jobs in the economy. This will be no different for AI, 3D printing and robotics," says the report.

Thirdly, just because it is technically feasible to substitute an entire profession with computers, does not mean it will happen. Various economic, legal, regulatory and socio-political factors will prevent many occupations from disappearing. A recent study found that by 2016, only one out of 270 occupations listed in the 1950 US census had been eliminated by automation – that of an elevator operator.

In many cases, people will continue to do the work cheaper than machines. In others, we will have to make tough legal and political choices. For example, who should be held responsible for a medical AI's wrong diagnosis – the system's manufacturer, the programmer or the doctor?

But even if our nearest future looks nothing like the set of Blade Runner or other dystopian science-fiction movies, we should not downplay the disruption that AI, robotics and other innovations are already bringing.

New technologies are contributing to increasing inequalities – both between different groups of workers and between labour and firm owners. While they do not cause widespread loss of jobs, they do change the demand for certain skills and contribute to a shift towards more flexible but precarious "contingent work" arrangements.

Technology is one of the reasons behind the growing disparities within the work force in many countries, with middle-wage earners losing ground. Internationally, the lack of access to new technologies in least developed countries and the rapid gains by manufacturing powerhouses threaten to increase inequalities between countries even further.

If left unchecked, these disruptions caused by advanced technologies may have enormous consequences for societies. This is enough reason for policymakers to look closely at technological progress: what it means for their countries and how best to intervene.

"History shows that new technologies can lead to great gains for our economies but are not without pain for some people and communities. The overall impact will depend highly on social institutions and policies," said Pingfan Hong, Director of DPAD. "Policies are needed to help workers adapt to the new reality and to ensure their participation in the benefits arising from technology."

Governments may be tempted to focus on the benefits of technological progress, while largely ignoring its negative impacts. Low-income countries are particularly vulnerable unless policymakers have a clear understanding of the risks and potential of these new technologies. The sooner we start re-thinking and re-designing labour market policies,

social security schemes and taxation systems, the better we will adapt to the future that is already happening.

For more information:

The Impact of the Technological Revolution on Labour Markets and Income Distribution

Watch the video: Frontier Issues: Artificial Intelligence and Development

## HIGHLIGHTS



### SDG Advocates: Why we should care about the Global Goals

“Wake up, Monsieur le Comte! You have great things to do.” Those are the words, which, uttered by his personal valet every morning, would rouse the celebrated 19th century thinker, Henri de Saint Simon. But for most of us, struggling to wake up in time for school or work, or leaving home at daybreak to reach a far-away well, greatness is not

the first thing on our minds.

Overwhelmed by our daily struggles, some of us might not feel equipped to take on something as immense as the Sustainable Development Goals (SDGs) – 17 objectives to overcome some of the greatest challenges facing humanity today.

The SDG Advocates – 17 exceptional personalities from the worlds of politics, economy, advocacy, sports and show business – see things differently. At the end of September, many of them attended the high-level week of the UN General Assembly and the SDG Media Zone, convincing everyone, from world leaders to youth activists, that we all have a role to play.

“The big thing about the Sustainable Development Goals is that they’re for everybody and they’re about everybody,” says SDG Advocate, director and screenwriter, Richard Curtis. “Our governments have made a promise that they will find solutions to the things you care about, so when you’re fighting at your most local level you’re a part of a huge global fight and you can apply the global muscle to that local level.”

“Today’s young people are the most powerful generation in human history,” says SDG Advocate and Nobel Prize-winning economist, Professor Muhammad Yunus. “The question is: what do they want to do with that power? If you don’t use that power, it will be wasted. You can re-design the whole world in the way you can imagine it. Your capacity is to do massive things, mega-things, so think big!”

These positive calls to action, uplifting as they are, are often drowned out by the narrative of hopelessness dominating the media. How can we remain hopeful with stories of climate change, extreme weather disasters and nuclear warfare making the headlines every day?

“One of the things is to know that the good news won’t be at the front of the newspapers, but not to lose faith in the fact that it’s happening,” says Richard Curtis.

“But the reality is, what we see on TV is what we know,” says SDG Advocate Alaa Murabit, medical doctor and activist. “And we know that people are suffering from climate change, that people are suffering from injustice around the world. I say to young people: ‘Use that as fuel. Recognize that the current system, the current way, in which we engage globally, is not working and we need young people. We need new ideas.’”

“You just can’t watch the politicians all the time,” says renowned economist and SDG Advocate, Professor Jeffrey Sachs. “The truth is, there are a lot of solutions around. Poverty came down a lot, the disease burden faced by very poor people came down a lot, many areas of progress were made. The Sustainable Development Goals say: ‘Finish the job! End extreme poverty, end hunger, obtain 100 per cent access to healthcare, 100 per cent access to quality education!’”

“Ignore all those problems,” urges Professor Yunus. “Create the world that you want! In the process, these problems will disappear. If you’re trying to fix these enormous problems, you’ll never get out of it. They’ll suck you in. You do the things that you want! Work for the kind of world you want.”

“The world has had eight years of formidable international convergence. It gave us the Paris Agreement and the 2030 Agenda,” says UN Assistant Secretary-General at UN DESA, Thomas Gass. “But all this started with the financial crisis. The world has had crises and difficulties before, but we don’t build a lighthouse for sunny days. Now we have something that was built during a time of international convergence and strength. And we need to use it to create a ratchet effect to not go back. That’s what is important and that’s what is already happening.”

“A good SDG Advocate is someone who understands how the Sustainable Development Goals are different from a ‘classic’ development strategy, who understands what happened on the 25th of September 2015 when the leaders adopted this shared vision for humanity,” adds Mr. Gass.

Ambassador Dho Young-Shim, chief of the UN World Tourism Organization’s ST-EP Foundation and SDG Advocate sums it up: “At the end of the day, it’s our world and nobody can be exempted. We breathe the same air, drink the same water, we face the same challenges. It’s not yours versus mine. It’s our world.”

For more information:

Sustainable Development Goals (SDGs)  
SDG Advocates  
SDG Media Zone



## UN Calls for harnessing one of the world's greatest untapped resources – older persons

This year, older persons around the world are celebrating the United Nations International Day of Older Persons, by looking to the future and underscoring their vital role in it. Today, there are 962 million older persons worldwide, who are projected to outnumber youth by 2030, the target date for the Sustainable Development Goals (SDGs).

It is undeniable that global ageing has become a mega-trend that is clearly going to have a significant impact on the road to the achievement of the SDGs, which necessitates the inclusion of older persons and harnessing their untapped potential in the process.

This year's theme "Stepping into the Future: Tapping the Talents, Contributions and Participation of Older Persons in Society" is about enabling and expanding the contributions of older people in various aspects of social, cultural, economic and civic and political life, in accordance with older persons' basic rights, needs and preferences.

The official commemorative event will take place at UN Headquarters in New York on 5 October 2017 and is organized by the NGO Committee on Ageing in partnership with UN DESA Focal Point on Ageing, and sponsored by the Permanent Mission of Argentina.

The event will include a panel discussion to showcase cutting-edge research, age-related technological innovations, and models of civic involvement and entrepreneurship of older persons. It will also feature the official launch of Highlights of the 2017 World Population Ageing report.

The commemoration will be broadcasted live via [UN Web TV](#). To follow the conversation via social media, the online audience is encouraged to use the hashtags #UNIDOP and #60Plus.

For more information: [International Day of Older Persons 2017](#)



## Heeding the call to end poverty

There is growing consensus among the international community that poverty poses a major challenge to global economic stability. Upon the adoption of the 2030 Agenda for Sustainable Development, Member States committed to end poverty in all its forms and promote shared prosperity by 2030. To renew commitments and show solidarity, the United Nations will commemorate the 2017 International Day for the Eradication of Poverty at UN

Headquarters in New York on 17 October.

The commemoration event will be organized in partnership with the International Movement ATD Fourth World, the NGO Sub-committee for the Eradication of Poverty and UN DESA, supported by the Missions of France and Burkina Faso to the United Nations. Furthermore, an online exhibition of collective artwork by children will be featured on the official website of the International Day for the Eradication of Poverty.

## A path towards peaceful and inclusive societies

This year marks the 30th anniversary of the Call to Action by Father Joseph Wresinski – which inspired the observance of 17 October as the World Day to Overcoming Extreme Poverty – and the recognition by the United Nations General Assembly in 1992 of the day, as the International Day for the Eradication of Poverty, all Member States are invited to presenting and promoting concrete activities regarding the eradication of poverty and destitution.

The 2017 theme, “Answering the Call of October 17 to end poverty: A path towards peaceful and inclusive societies” reminds us of the importance of the values of dignity and solidarity, as well as the Call to Action to end poverty everywhere.

## Join the Stop Poverty global campaign

The Stop Poverty campaign is inspired by a vision that negative stories and images about poverty can change, that extreme poverty is not inevitable, and that the violence which it represents can and must be eliminated.

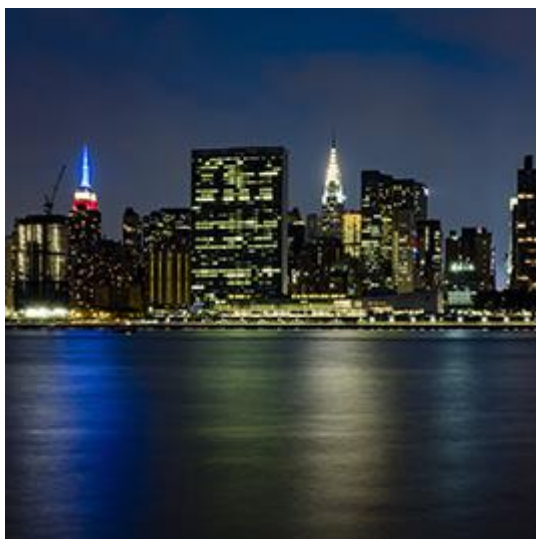
Everyone can join the campaign by visiting: [poverty-stop.org](http://poverty-stop.org) and signing the call to action to join your name to the mosaic of people from around the world who have joined the fight to overcome poverty. You can submit your own story of change, organize a concert, or find out about events in your area.

In addition to the commemorative event to be held in New York on 17 October, celebrations of the international day are being organized worldwide. The online community is asked to use #EndPoverty to share messages about the International Day for the Eradication of Poverty via social media.

For more information:

2017 International Day for the Eradication of Poverty  
UN DPI International Day for the Eradication of Poverty  
ATD Fourth World  
Stop Poverty global campaign  
Overcoming Extreme Poverty

## EXPERT VOICES



### Global gateways and local governments – how cities and migration interlink

Cities are centres of demographic, social, economic and political change, and magnets for migrants from near and far. The interplay between migration and urbanization poses both challenges and opportunities for the migrants, communities, cities and governments

concerned. Chief of the Demographic Analysis Branch in UN DESA's Population Division, Jorge Bravo, explains why.

**What is the link between cities and migration? What are the trends and future estimates for these processes?**

“Much of the internal population movements are from rural to urban areas, or between cities. Also, cities are in many cases the leading destination of international migrants, owing to the urban concentration of economic opportunity and availability of services. A number of cities serve as “global gateways,” hosting a large proportion of international migrants, partly because of the economic attractiveness of the cities, and also because of the migration networks that are located there.

Urban living is, increasingly, the global norm: about 55 per cent of the world population in 2017 was living in urban areas, and this figure is projected to reach 60 per cent in 2030. Most of the world's migration is internal – within national boundaries. But the number of international migrants, or persons living in a country other than where they were born, is also significant and has increased globally from 173 million in 2000 to 244 million in 2015.”

**Do we have any specific data on migrants living in cities?**

“There are several studies on the issue. Professor Marie Price of George Washington University, for example, researched a global sample of 200 cities. She found that in 2015 there were 22 metropolitan areas with over 1 million foreign-born residents. Nine of these were in US and Canada, five in the Middle East, four in Europe, two in Australia, and one each in Africa and East Asia. Professor Price found that nearly one in every five foreign-born people inhabited one of these 22 major cities in 2015.”

**How can we use this “gravitational pull” of cities to help migrants and spur development at the same time?**

“Cities have more infrastructure and services to receive a larger number of migrants. But the degree of integration and the extent of migrants’ contributions depend critically on government policies, also at the local level. For example, research on the residential concentration of international migrants suggests that in both the U.S. and Western Europe, the areas with high immigrant concentration tend to be politically more favourable to diversity, while the opposite is true in areas with low numbers of immigrants. On a regional level, we have examples from South America. In countries like Brazil, Argentina and Chile, national and city governments have implemented flexible measures to provide documentation, residence and work permits to migrants.”

**Recently, experts gathered at the UN to discuss sustainable cities, human mobility and international migration. What were some of their main conclusions and recommendations moving forward?**

“The experts agreed that cities are the space where internal and international migration meet. They called for more and better data to effectively manage both processes, starting with comparable definitions of what is a city and who is a migrant. The existing information shows that refugees and migrants are mostly becoming city dwellers in their host countries. At the same time, there is no evidence to indicate that the arrival of migrants increases urban poverty. The experts also discussed empowering local governments, who have no governance over migration, yet are the ones who are most exposed to its consequences. We have also heard calls for including gender and environmental considerations into the debate on urbanization and migration.”

**For more information:**

Expert Group meeting on “Sustainable cities, human mobility and international migration”  
International Migration  
Global compact for safe, orderly and regular migration





## The value of water – for our survival, peace and prosperity

Access to safe drinking water can be a matter of life and death. While water covers 71 per cent of the Earth's surface, only 4 per cent is freshwater and only 0.5 per cent of this water is suitable for human consumption. At the same time, this critical resource for human survival is often undervalued, misused and misallocated, leaving far too many

people having to struggle to obtain water for themselves and their families.

Today, 2.1 billion people still lack access to safely managed drinking water and around 40 per cent of the global population suffer from water scarcity.

“Every year, over 800,000 people, including more than 340,000 children under five, die from diseases caused by unsafe water, inadequate sanitation, or poor hygiene,” UN Secretary-General António Guterres said, as he addressed the fourth meeting of the High-level Panel on Water (HLPW) on 21 September.

Speaking before the high-level panel, committed to ensure availability and sustainable management of water and sanitation for all, the Secretary-General emphasized the critical role that water plays for our survival, peace and prosperity. He discussed the impacts of climate change and how 90 per cent of natural disasters in the world are water-related, as well as water's role for peace and conflict resolution.

As the topic of water and its related Sustainable Development Goal (SDG) 6 took center stage in many different events during a busy UN General Assembly high-level week, its relation to peace and security was also explored.



“Climate change, pollution and growing demand for water are adding up to increased scarcity and ever greater challenges to sustainable water management,” UN DESA's Under-Secretary-General Liu Zhenmin said at the High-level event on water as a tool for cooperation and conflict prevention on 18 September.

“The distribution of water resources in some parts of the world has the potential to become a source of conflict. It is up to the international community to rise to this challenge,” Mr. Liu stressed, saying that water can and should be “a source of cooperation, a source of growth and an opportunity for mutual positive interdependence.”

Another high-level event honed in on the upcoming International Decade for Action “Water for Sustainable Development”, which kicks off in 2018. Initiated by the HLPW,

the decade aims to help solve many of the world's water challenges and make SDG6 a reality by 2030.

“Let us work together with a common sense of urgency and action to energize effective and innovative implementation programmes at national, regional and global levels of the water SDGs,” Mr. Liu said at the event, highlighting the opportunities that the decade will bring.

The high-level week's different discussions have made it ever so clear: Water should not be a source of conflict, but a well from which cooperation and solutions to challenges can emanate. And with the 2030 Agenda for Sustainable Development as a guiding tool, the international community has the chance to make a difference.

As the President of the General-Assembly Miroslav Lajčák put it when addressing the High-level event “Towards Implementation of the International Decade of Action “Water for Sustainable Development”, 2018-2028”: “It is up to us – the people who can take our access to water and sanitation for granted – to work even harder on behalf of those who can't.”

For more information:

High-level Panel on Water

VIDEO: Join the High Level Panel on Water to keep the promise of #ivaluewater  
Sustainable Development Goal 6 – clean water and sanitation

## MORE FROM UNDESA

### Preparing for a future of everything



The Nobel Prize-winning physicist Dennis Gabor is famous, among other things, for writing in 1963: “The future cannot be predicted, but futures can be invented”. In 2017, many of the new frontiers in science, technology and innovation – such as driverless cars and service robots – are no longer fiction.

Most experts now agree that the pace and breadth of technological advances are intensifying. By 2030 – the target date for achieving the Sustainable Development Goals – the world will have undergone further changes in the realm of daily human interaction.

Many changes already underway are having a profound impact on our economies, societies and ecosystems. Industrial processes are becoming increasingly automated and robotized, with human intervention increasingly confined to specific tasks.

Rapid growth in large datasets, and the capacity to store and use them, offer new resources for research, analysis and problem-solving, but can also be used by cyber-criminals. Ubiquitous computing, facilitated by advances in the Internet of Things in combination with 5G, big data and nanotech, will also be key drivers of change. We may truly be at the beginning of what has been referred to by economist Klaus Schwab as the “Fourth Industrial Revolution”.

In many of these areas, ethical questions arise around the potential of technological advancements to outpace policies and regulations and, in the process, undermine societal norms. While many advances hold great promise for sustainable development and poverty eradication, they also risk leaving much of the world behind in a global context in which inequalities are already sharply felt.

To address these challenges and forge solutions for using technological change as a catalyst for inclusive development, the Economic and Social Council (ECOSOC) and the Second Committee of the UN General Assembly will organize a joint meeting on “The Future of Everything – Sustainable Development in the Age of Rapid Technological Change”.

The joint meeting will include a three-hour panel presentation and interactive discussion between expert presenters from Government, academia, the private sector, civil society and meeting participants. As part of the meeting, a presentation will be made by Sophia, the latest and most advanced robot produced by Hanson Robotics, who has discussed issues ranging from banking and insurance to auto manufacturing to robotics and artificial intelligence with key decision-makers across industries.

Expert panellists will also include Sophia’s developer, Mr. David Hanson, the founder and CEO of Hanson Robotics; Mr. Stephen Ibaraki, serial entrepreneur, investor, futurist and founding managing partner of REDDS; Mr. Jeffrey Schnapp, Founder and Faculty Director of metaLAB, Harvard University; and Ms. Rita Kimani, Co-founder of FarmDrive. H.E. Mrs. Mariya Gabriel, European Commission for Digital Economy and Society, has also been invited. Ms. Jennifer Strong, host of Wall Street Journals’ podcast entitled “Future of Everything” will moderate.

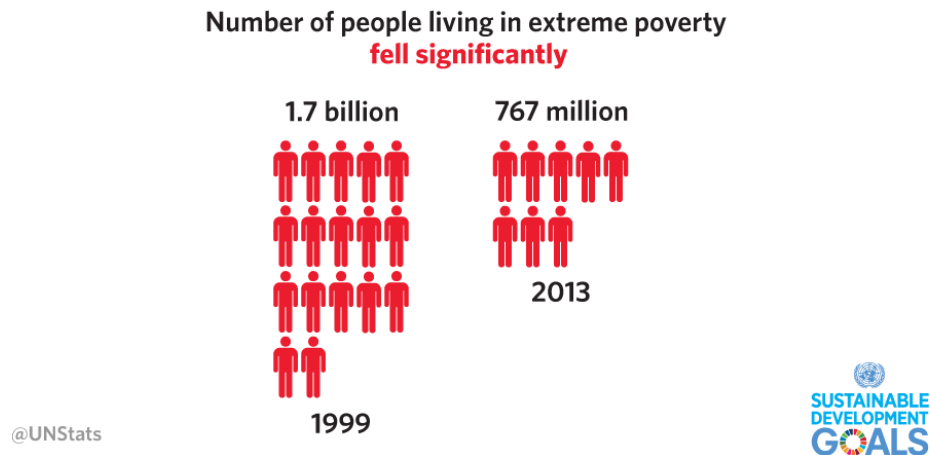
The discussion will focus on best practices and new initiatives with respect to the latest developments in this area, including how policy-makers and their partners can harness the benefits of progress in science and technology, while minimizing their unintended, negative consequences. It will be held on 11 October 2017 (10am – 1pm) in the ECOSOC Chamber at UN Headquarters. Attendance is open to UN pass holders and those who have registered online.

*Photo credit: ITU/R. Farrell*

For more information:

Joint Meeting of ECOSOC and the Second Committee on “The Future of Everything – Sustainable Development in the Age of Rapid Technological Change”

## SDG 1: Ending poverty in all its forms everywhere



This month on 17 October, the international community will come together to renew its commitment to end poverty around the world, commemorating the 2017 International Day for the Eradication of Poverty.

Although we have come a long way in our efforts to eliminate poverty with nearly a billion people having escaped extreme poverty since 1999, three quarters of a billion remain in its grasp. Making a difference for them is at the core of the 2030 Agenda for Sustainable Development, with its first goal aiming to end poverty in all its forms everywhere.

The latest Sustainable Development Goals Report 2017 released in July, also presents where we stand in our endeavour to achieve Sustainable Development Goal 1.

Some of the main conclusions are:

- Working poverty has decreased, but it is still pervasive in many regions and disproportionately affects the young
- Less than half the world's population is covered by at least one social protection scheme
- Social protection coverage varies widely by type of benefit, with many vulnerable groups left behind
- Probabilistic models show that Small Island Developing States are expected to bear disproportionately large economic losses attributed to disasters

Access data from UN DESA's Statistics Division [here](#) and learn more on the status of SDG1.

For more information:

Sustainable Development Goals (SDGs)  
Sustainable Development Goals Report 2017

## UPCOMING EVENTS

- |                                     |   |
|-------------------------------------|---|
| <b>2-5 October,<br/>Addis Ababa</b> | 6th SDMX Global Conference – “SDMX for the Data Revolution”                               |
| <b>2 October, New<br/>York</b>      | Second Committee of the General Assembly  |
| <b>2 October, New<br/>York</b>      | Third Committee of the General Assembly   |
| <b>4-6 October,<br/>Manila</b>      | 2017 International Conference on the Sustainable Development<br>Goals Statistics (ICSDGS) |
| <b>17-20 October,<br/>Geneva</b>    | 15th Session of the Committee of Experts on International<br>Cooperation in Tax Matters   |

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