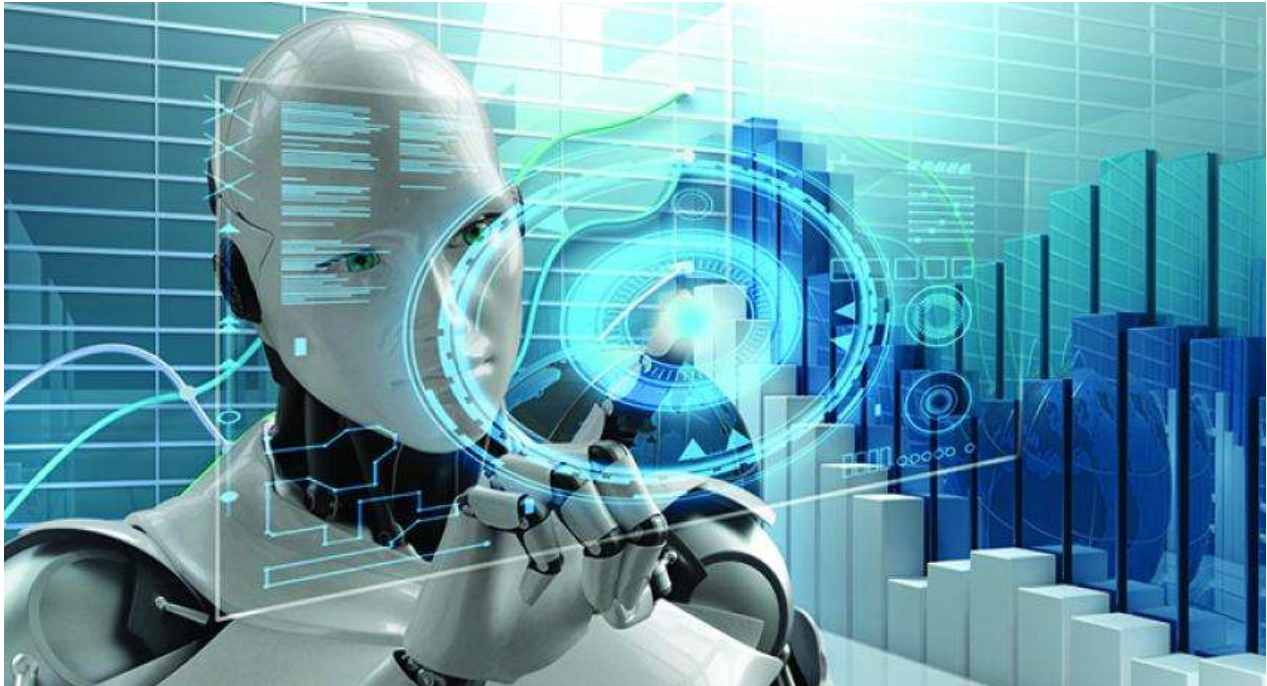


## UN Chronicle (/en/chronicle)



## Towards an Ethics of Artificial Intelligence

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We stand at the dawn of a new era. The technological revolution is transforming our lives at breakneck speed, dramatically altering the ways in which we work, learn and even live together. Alongside the increasingly sophisticated use of big data, artificial intelligence (AI) is undergoing exponential growth and finding new applications in an ever-increasing number of sectors, including security, the environment, research and education, health, culture and trade.

AI is humanity's new frontier. Once this boundary is crossed, AI will lead to a new form of human civilization. The guiding principle of AI is not to become autonomous or replace human intelligence. But we must ensure that it is developed through a humanist approach, based on values and human rights. We are faced with a crucial question: what kind of society do we want for tomorrow? The AI revolution opens up exciting new prospects, but the anthropological and social upheaval it brings in its wake warrants careful consideration.

### A Tremendous Opportunity for Sustainable Development

The transformations arising from the technological revolution, and in particular from developments in AI, are relevant to every aspect of the mandate of the United Nations Educational, Scientific and Cultural Organization (UNESCO). Education is already being profoundly transformed by AI. Very soon, the tools of education—the way we learn, access knowledge and train teachers—will no longer be the same. From now on, the acquisition of digital skills stands at the centre of all our education programmes. Furthermore, we must "learn to learn" because the pace of innovation is rapidly transforming the labour market. Today, more than ever before, the humanities—history, philosophy, literature—are crucial to our ability to act in our rapidly changing world. In the field of culture, AI is already being employed extensively, for example, in the imagery used to reconstruct heritage. It is used in the sciences too, notably in our environmental programmes and underwater research. Communication and information are also directly dependent on progress in AI, particularly with regard to freedom of expression and access to information.

AI could open up tremendous opportunities for achieving the Sustainable Development Goals (SDGs) set by the United Nations in the 2030 Agenda for Sustainable Development. Its applications enable innovative solutions, improved risk assessment, better planning and faster knowledge sharing.

### Tackling the Challenges of Artificial Intelligence

While AI is an astonishing asset for the responsible development of our societies, it also gives rise to major ethical issues. How can we ensure that algorithms do not infringe fundamental human rights—from privacy and data confidentiality to freedom of choice and freedom of conscience? Can freedom of action be

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guaranteed when our desires are anticipated and guided? How can we ensure that social and cultural stereotypes are not replicated in AI programming, notably when it comes to gender discrimination? Can these circuits be duplicated? Can values be programmed, and by whom? How can we ensure accountability when decisions and actions are fully automated? How do we make sure that no one—wherever they are in the world—is deprived of the benefits of these technologies? How do we ensure that AI is developed in a transparent way, so that global citizens, whose lives it affects, have a say in its development?

To answer these questions, we must distinguish between the immediate effects of AI on our societies—the consequences of which we are already feeling—and its long-term ramifications. This requires that we collectively shape a vision and a strategic plan of action.

### **Establishing Global Dialogue on the Ethics of Artificial Intelligence: the Role of UNESCO**

The world must ensure that new technologies, especially those based on AI, are used for the good of our societies and their sustainable development. It should regulate AI developments and applications so that they conform to the fundamental rights that frame our democratic horizon.

Many actors—businesses, research centres, science academies, United Nations Member States, international organizations and civil society associations—are calling for an ethical framework for AI development. While there is a growing understanding of the issues, related initiatives need more robust coordination. This issue is global, and reflection on it must take place at the global level so as to avoid a 'pick-and-choose' approach to ethics. Furthermore, an inclusive, global approach, with the participation of United Nations funds, agencies and programmes, is required if we are to find ways of harnessing AI for sustainable development.

UNESCO will be a full and active participant in this global conversation. Our organization has many years of experience in the ethics of science and technology. Our advisory bodies have already produced numerous reports and declarations, including on robotics, such as the Report of the World Commission on the Ethics of Scientific Knowledge and Technology on Robotics Ethics in 2017. The advisory bodies also have experience in developing normative instruments, including the Universal Declaration on the Human Genome and Human Rights in 1997 and the Universal Declaration on Bioethics and Human Rights in 2005.

UNESCO priorities must also guide our international action in this area. It is essential to ensure that Africa fully participates in transformations related to AI, not only as a beneficiary but also upstream, contributing directly to its development. In terms of gender equality, we must fight against the biases in our societies to guarantee that they are not reproduced in AI applications. Finally, we must empower young people by providing them with the skills they need for life in the twenty-first century for integration in a changing labour market.

UNESCO also has a key role to play in bridging existing divides, which AI is likely to deepen. Eliminating fragmentation between countries and genders, but also in terms of resources and knowledge, could enable more people to contribute to the digital transformation underway.

UNESCO, with its humanist mission and international dimension, involving researchers, philosophers, programmers, policymakers, and private sector and civil society representatives, is the natural home for debate on such ethical issues. Beginning later this year, UNESCO will organize debates on AI in several regions of the world, bringing together specialists from a wide range of backgrounds and expertise. The first debate, which took place in Marrakech, Morocco, on 12 December 2018, focused on AI and Africa. A second international conference will take place at the UNESCO headquarters in Paris in the first half of 2019. This dialogue could eventually lead, with the agreement of Member States, to the definition of key ethical principles to accompany developments in AI.

UNESCO, as a universal forum where everyone's voice is heard and respected, is performing its role to the fullest, informing the global debate on the major transformations of our time while establishing principles to ensure that technological advances are used to serve the common good. The promise of AI and its underlying ethical issues are fascinating, and our responses to these challenges will transform the world as we know it.

Together, we must find the best solutions to ensure that the development of AI is an opportunity for humanity, as it is our generation's responsibility to pass down to the next a society that is more just, more peaceful and more prosperous.

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