



The Future of Work



Ethics in Action for Sustainable and Integral Development

Final Declaration on The Future of Work

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Equipping individuals with skills and opportunities for decent work extends beyond merely meeting economic needs to “earn a living.” Rather, the issue of decent work is a vital moral concern: work is fundamental to becoming a full human being. Pope Francis states, “Work is indeed at the heart of the very vocation given by God to man, of prolonging his creative action and achieving, through his free initiative and judgment, dominion over other creatures, which translates not into despotic enslavement, but into harmony and respect.” Pope John Paul II states in *Laborem Exercens*: “Work is a good thing for man - a good thing for his humanity - because through work man not only transforms nature, adapting it to his own needs, but he also achieves fulfilment as a human being and indeed, in a sense, becomes ‘more a human being’.”

The notion of work as vocation, being central to an individual’s fulfillment as a human being and integral to building up the common good, is shared among the world’s major religious and ethical traditions. In Hinduism, work should comport with one’s inner nature (*Svabhava*), facilitate flourishing within one’s particular community and context (*Svadharmā*), and contribute to universal flourishing (*Lokasangraha*). In Islamic tradition, work should be permissible (*halal*) in the sense that it promotes the common good and should engage the devotion of the worker, including faith in God. In the Chinese tradition, the “Stratagem of Da Yu” (in the Book of History) enjoins workers to “Strengthen moral virtues, benefit others, and develop productions through peaceful means.” The great philosophical traditions of virtue ethics, following Plato and Aristotle, which then inspired monotheistic religions, envision work as part of the cultivation of virtues (*arete*), as a means to become human and achieve happiness.

The issue of work also lies at the very center of the Church’s social teachings. As Pope Leo XIII stated in *Rerum Novarum* in 1891, in the midst of the Industrial Revolution, “The condition of the workers is the question of the hour. It will be answered one way or another, rationally or irrationally, and which way it goes is of the greatest importance to the state.”

Ninety years later, in 1981, Saint John Paul II presciently affirmed the continuing urgency of the issue of work in his magisterial encyclical *Laborem Exercens*: “Work is one of these aspects, a perennial and fundamental one, one that is always relevant and constantly demands renewed attention and decisive witness.” He noted that:

“New developments in technological, economic and political conditions which, according to many experts, will influence the world of work and production no less than the industrial revolution of the last century. There are many factors of a general nature: the widespread introduction of automation into many spheres of production, the increase in the cost of energy and raw materials, the growing realization that the heritage of nature is limited and that it is being intolerably polluted, and the emergence on the political scene of peoples who, after centuries of subjection, are demanding their rightful place among the nations and in international decision-making.”

These are indeed the greatest challenges of work today: automation accelerated by artificial intelligence, intolerable pollution, and marginalized populations excluded from full participation in society and decision-making.

The most important challenge of work is therefore not its specific type or sector—physical or mental, indoors or outdoors, good-producing or service-sector—nor the earnings of a job, but whether work fulfills the deeper purposes of each person as a human being: the cultivation of virtues, the worker’s dignity, and the fulfillment of our social roles as colleagues, friends, family members, and citizens. The type of work surely matters, as some work is dangerous, arduous, repetitive and stultifying. The earnings of work also surely matter: some work is so poorly remunerated that workers cannot meet basic needs. Yet the yardstick of work should start with the moral perspective: how can decent work help each worker to be “more fully a human being?”

It is from this perspective that we should face the future of work. Consider the question of artificial intelligence. Artificial intelligence refers to a cluster of technologies that enable computers to perform specific tasks typically associated with human “intelligence” such as pattern recognition, language translation, remote monitoring, feedback systems for automated machine processing, robotics, self-driving vehicles, game playing at super-human levels, and countless others. These technologies are advancing at an astonishing rate, and artificial intelligence systems are being rapidly introduced in applications across all sectors of the economy, including consumer devices. In combination with robotics and brain-computer interfaces, it may bring unique advances in medicine and care. By elucidating how we learn, it may also bring dramatic changes in education.

Artificial intelligence raises core issues about the future of work. The most widely discussed challenge brought by such technology is the question of “machines replacing workers,” through artificial intelligence systems, robotics, expert systems, assembly-line automation, the internet of things, and other modes by which artificial intelligence is being incorporated into economic, governance and social systems. The integration of artificial intelligence in the economy has accelerated the long-term processes of automation catalyzed by the onset of the Industrial Revolution two centuries ago.

In principle, the rise in productivity from this technological advance can lead to many economic and social benefits. Increased output per worker affords the opportunity to raise living standards while also enjoying more time for family, friendship, voluntary work, education, cultural activities, health, sports, and leisure. We are reminded of the wise words of the Prophet Muhammad: “There are two blessings most people cheat themselves out of: health and leisure.” Artificial intelligence can also provide vital benefits for health, education, and social inclusion. AI-enabled systems, for example, will provide tremendous and varied benefits for individuals with disabilities.

A vital concern, however, is that while artificial intelligence is likely to raise productivity and national income, it is also likely to impoverish parts of our communities. New technologies create new jobs and demand new skills, but also end others, rendering many, already-acquired, professional skills obsolete and unmarketable. Since the beginning of the Industrial Revolution, technological advances have caused unemployment and falling wages for certain groups, especially for those jobs that are directly replaced by the machines. Artificial intelligence will tend to replace jobs that are repetitive, based on predictable physical labor, or characterized by massive data that can be used to “train” expert systems. Jobs based on emotions and personal contact—notably the “care sector”—will of course continue to provide vital jobs and meaningful work that cannot and should not be replaced by smart machines.

The phenomenon of technological unemployment raises a fundamental implication for artificial intelligence. The first round of consequences brought on by the new technologies will be mixed, with some workers benefiting from rising living standards and others suffering the loss of jobs and earnings. A *moral* response to technological change therefore will require effective social institutions to ensure that the gains from artificial intelligence are broadly shared and facilitate the participation of underrepresented groups in new working modalities, including the elderly and individuals with disabilities. In this regard, Pope John Paul II wisely calls for a “social order of work” to ensure that work broadly enhances wellbeing and all forms of health, rather than degrading it.

To this end, for example, the social democracies of Scandinavia have created social institutions—including high union membership, universal access to health and education, income transfers to vulnerable households, and worker re-training programs—that effectively ensure that technological advances such as artificial intelligence are broadly shared. As a result, opinion surveys find that the workers in Scandinavia are far more optimistic about technological change than their counterparts in countries lacking similar social democratic institutions. States should examine how the benefits deriving from artificial intelligence and robotics can be shared by all.

We must be clear that while artificial intelligence presents serious challenges, today’s mass unemployment is actually more driven by policy choices than by technology. Moreover, the conversation about artificial intelligence and work is fundamentally impoverished unless we recognize how much uniquely human work

there is to do—from care work for our young and old to the kind of political and intellectual leadership needed to address the world’s urgent problems of poverty and climate change.

Artificial intelligence raises several crucial issues about work and wellbeing beyond the challenge of worker replacement. First, the actual functioning of the technology itself presents many possible complications that warrant further consideration. Will artificial intelligence systems be fair or biased, perhaps inadvertently and unknowingly? There are many reasons to worry that these systems trained on social data may build in the biases embedded in those data. Another concern is that artificial intelligence systems and digital technologies more generally might trigger new psychological and social disorders. Many psychologists fear that “screen time” is becoming a widespread addiction of young people and that social media such as Facebook are leading to an epidemic of anxiety and major depressive disorders as young people are bullied or feel that they do not live up to the glorified online images of their counterparts.

The Sustainable Development Goals direct the world’s attention to several urgent concerns on the future of work. Decent work for all is a central theme of Agenda 2030, most notably in the targets outlined in **SDG 8**:

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms

8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

8.b By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization.

SDG 5 on gender equality also calls on society to honor, respect, and indirectly compensate the household work of women:

5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate

Pope Francis has mobilized the world to adopt SDG 8.7 to end all forms of modern slavery, a crime against humanity still afflicting tens of millions of people around the world. Modern slavery devastates the afflicted individuals and their families by curtailing the essential freedoms to find meaning at work, friendship in society, and the abiding love of family. We call on the world to heed SDG 8.7, and to use every form of legal enforcement and technology to end slavery, bonded labor, human trafficking, and child labor for all national and global supply chains.

The Church has long taught that a proper social order of work will eliminate the conflict between labor and capital. The Church makes clear that labor must take priority over capital.

As Saint Pope John Paul II has put it:

“A labour system can be right, in the sense of being in conformity with the very essence of the issue, and in the sense of being intrinsically true and also morally legitimate, if in its very basis *it overcomes the opposition between labour and capital* through an effort at being shaped in accordance with the principle put forward above: the principle of the substantial and real priority of labour, of the subjectivity of human labour and its effective participation in the whole production process, independently of the nature of the services provided by the worker.”

There also needs to be a renewed focus on the fundamental teaching, going back to *Rerum Novarum*, that the profits of scientific innovation must be fairly shared with the people who do the work through a fair and orderly process of collective bargaining between capital and labor. Pope Leo XIII envisioned an economy in which the benefits of wealth creation are widely distributed through shared ownership. In our own day too, more widespread capital ownership can reduce the dependence of labor on capital, thereby empowering people to allocate their labor in ways not typically valued by the market, i.e. care work, crafts, entrepreneurship, and education.

Ethics in Action considered several institutional reforms to ensure the real priority of labor, including: a massive expansion of union coverage in places like the United States where the labor movement has been under political

assault; reforms of company law to ensure that workers and other stakeholders contribute to the management of the enterprise; and the amplification of the cooperative sector, wherein workers and consumers directly share in the management and direction of the enterprise.

In implementing these findings, *Ethics in Action* recommends the following specific actions:

A call for the UN General Assembly, in its implementation of Agenda 2030, to recognize and respect the moral meaning of decent work for all. The effort to develop intelligent machines must remain continuously directed to the common good, reducing the poverty gap and addressing general needs for health, education, happiness and sustainability; The use of artificial intelligence and related technologies to promote solutions for decent work, including support for basic social services (health, education), environmental monitoring, prevention of illicit activities (such as illegal fishing or illegal transfers to tax havens), and the accountability of supply chains to eliminate all forms of modern slavery; Social actions to ensure that the benefits of artificial intelligence are widely shared and the misuse of private data is avoided, including: new skill training; education programs; social protection for groups that are hard hit by the new technologies; and a public ownership stake in the automation process itself, through ownership in either the companies benefitting from artificial intelligence or the intellectual property underlying the data; Stepped-up efforts to reform the enterprise sector, through increased union membership, reforming company law, promoting multi-stakeholder governance, and strengthening the cooperative sector; The development of an ethical framework for the deployment of artificial intelligence so that it supports the common good; A call on all economic decision makers to adopt values focused less on the pursuit of profit and power and more on the prioritization of people and the planet. Such values would include non-violence, reverence, fairness, justice, truthfulness, friendship and solidarity. Organizations should also encourage and support moral-virtue education—including the high virtues of love and compassion—in their everyday operations.