The Automation of Jobs

As exciting as the advancement of cybernetics and robotics might look, it also poses a challenge to the way of life we have got accustomed to throughout centuries. Perhaps since the beginning of time, there was a job to do, and a man or woman who performed it. The results of this work—food, goods, money—belonged to human beings rightfully. Work has always been both a way to make a living, and a way of self-realization, fulfillment of one’s calling, and a duty. It is also true that it has always been time-consuming, occupying the time one could probably spend with families, or on hobbies and other activities.

The latter (along with the ever-existing pursuit of increased productivity) caused scientists and inventors to think whether work could be performed on its own, without the participation of people—in order to use their time and energy for something more pleasant, interesting, etc. And in the 21st century, automation and robotic engineering have become the answer to this search; supposedly, almost any manned job can be performed by a machine. Unfortunately, along with the new industrial revolution, the increase of work efficiency, and other benefits, automation will also most likely cause several critical issues to emerge—mass unemployment probably being the major one.

Erik Brynjolfsson, a professor at the MIT Sloan School of Management, and his colleague Andrew McAfee believe the rapid progress in computer and robotic spheres (for example, the usage of robots in heavy industries, or the widespread usage of automated translation services, and so on) do not
correspond with the slow rates of employment growth. In other words, technologies take more jobs than a modern society can produce; this is not to mention that automation reaches, or is about to reach, not only such spheres as manufacturing or retail jobs, but also education, finance, law, and medicine. This is a worrying sign, because such a spread of automation means qualified people gradually losing their workplace in favor of machines; all this can lead to the stagnation of the median income, as well as the growth of inequality—this regards the United States and other technologically-developed countries (MIT Technology Review).

The question arising in relation to this is which jobs are under threat? Generally speaking, automation mostly affects physical labor, such as driving or vending. In 2013, Carl Benedikt Frey and Michael Osborne published a study in which they researched around 700 professions in terms of them possibly being automated. What they discovered is that about 47% of workers in the United States are in the zone of risk, because the specifics of their jobs implied they could be replaced by machines (for the United Kingdom, this index is 35%, and for Japan, around 49%). For example, such spheres as transportation (including taxi and delivery services), logistics, services (sales, technical support, telemarketers, accountants, etc.) are among the most vulnerable ones. According to the authors of the study, “recent developments in machine learning will put a substantial share of employment, across a wide range of occupations, at risk in the near future.” (The Economist).

Yet another study involving 1,896 experts required them to answer the following question: “Will networked, automated, artificial intelligence (AI) applications and robotic devices displace more jobs than they have created by 2025?” The opinions on this subject have fallen into two approximately equal halves. About 52% of experts believe technologies will not replace people in the number of jobs bigger than they create by 2025—as it had happened before, during the previous industrial revolutions; however, the
other half—48% of the experts questioned—believed automation will inevitably displace huge numbers of people working at “blue collar” and “white collar” jobs, as many qualified specialists would become unemployable; the latter is expected to cause a dramatic increase of inequality in terms of income, and the disturbances of the habitual social order existing currents (Pew Research Center).

As it can be seen, the automation of jobs is not by default beneficial for modern society. It is true that it can increase the efficiency of work in a number of professional areas, but the cost is expected to be high; according to studies conducted in this direction, automation will leave countless competent specialists unemployed (mostly in transportation, logistics, sales and services spheres). This is expected to increase income inequality dramatically, and disrupt the existing social order—societies of technologically-advanced countries (and gradually, all over the world) will have to adapt to new conditions, seeking to create innovative workplaces and occupations. So far, this looks more important and dramatic than the anticipated possibility to have more time for leisure and hobbies.