

wealth no matter what we do; distributing that wealth has become the main problem. For centuries, wealth has traditionally been apportioned in the West through jobs, and jobs have always been forthcoming. When farm jobs disappeared, we still had manufacturing jobs, and when these disappeared we migrated to service jobs. With this digital transformation, this last repository of jobs is shrinking—fewer of us in the future may have white-collar business process jobs—and we face a problem.

The system will adjust of course, though I can't yet say exactly how. Perhaps some new part of the economy will come forward and generate a whole new set of jobs. Perhaps we will have short workweeks and long vacations so there will be more jobs to go around. Perhaps we will have to subsidize job creation. Perhaps the very idea of a job and of being productive will change over the next two or three decades. The problem is by no means insoluble. The good news is that if we do solve it, we may at last have the freedom to invest our energies in creative acts.

## **Economic possibilities for our grandchildren**

In 1930, Keynes wrote a famous essay, “Economic possibilities for our grandchildren.” Reading it now, in the era of those grandchildren, I am surprised just how accurate it is. Keynes predicts that “the standard of life in progressive countries one hundred years hence will be between four and eight times as high as it is to-day.” He rightly warns of “technological unemployment,” but dares to surmise that “the economic problem [of producing enough goods] may be solved.” If we had asked him and his contemporaries how all this might come about, they might have imagined lots of factories with lots of machines, possibly even with robots, with the workers in these factories gradually being replaced by machines and by individual robots.

That is not quite how things have developed. We do have sophisticated machines, but in the place of personal automation (robots) we have a collective automation. Underneath the physical economy, with its physical people and physical tasks, lies a second economy that is automatic and neurally intelligent, with no upper limit to its buildout. The prosperity we enjoy and the difficulties with jobs would not have surprised Keynes, but the means of achieving that prosperity would have.

