

## **Study Predicts Computers Will Displace 60 Percent of Current Workforce by 2030**

Think back to the early 1980s. The structure of the U.S. workforce was very different than it is today. There were no such jobs as website designers; the mobile phone and personal computer industries were relatively tiny in size; and airline tickets were overwhelmingly purchased with the assistance of living, breathing travel agents. Simply put, advances in technology and computing ability created new employment opportunities and eliminated the need for a variety of jobs.

So how will the advances in technology change the composition of the workforce 25 years into the future? A pilot study performed by Stuart Elliot of the National Research Council's Center for Education attempts to answer this question and predicts 60 percent of today's workforce will be displaced by 2030, as advances in the abilities of computers meet or exceed the abilities of humans. In *Projecting the Impact of Computers on Work in 2030*, Elliot organized data on 93 of the 96 groups of occupations used in the Department of Labor's Standard Occupational Classification system (information was not available for military-specific occupations). For each of these occupational groups, values were then provided on a seven-point scale for four types of skills: language, reasoning, vision and movement.

Using information about current artificial intelligence research and postulating on the exponential increase of computational processing power in the future, Elliot paints a picture of the functionality of computers in language, reasoning, vision and movement skills by 2030. As computers are able to complete certain tasks faster and more cheaply than humans, those tasks may shift from human performance to computer performance. For example, the study predicts that 90 percent of current office and administrative support occupations will be displaced by technology in this period. But not all occupations are expected to fair the same. Legal occupations, including lawyers, are only predicted to see 6 percent of their jobs displaced.

While additional research is needed to further investigate the scope or the predictions presented in this study, one thing is for certain: Any substantial shift in the supply and demand of the skills needed for the future workforce will require a shift in the education and training of the public. While 2030 may seem a long time away, the children that are born today and graduate from college will be entering the workforce for the first time around that date.

The report finishes with some interesting speculations. As the abilities of computers improve, some human workers may not compete with computers even if they chose to work for free. In the coming decades, entire components of the population without the necessary skills "will become essentially unemployable." Even further into the future, many decades from now, processing power and automated skills may surpass human workers completely, Elliot speculates. If most of the global community is unable to compete in the workforce, this may require our society to create mechanisms that help people to find satisfaction - and income - outside the structure of paid employment.

*Projecting the Impact of Computers on Work in 2030* is available at:  
[http://www7.nationalacademies.org/cfe/Stuart\\_Elliott\\_Paper.pdf](http://www7.nationalacademies.org/cfe/Stuart_Elliott_Paper.pdf)