

# Trouble Waters - The Osborne Report

A recent research project finds that jobs for many Millennials and Generation-Z will disappear in 20 years

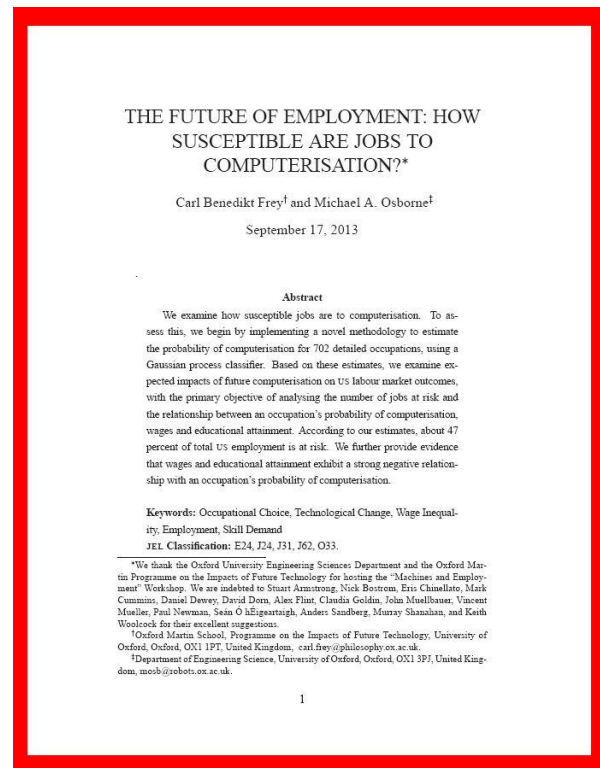
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Lately, there have been predictions in the news about how computers will take many of the jobs away in the near future. Of late, was a 60 Minute interview with venture capitalist Mr. Kai-Fu Lee about the future of artificial intelligence. He estimates that in the next fifteen to twenty-five

years, about 40% of the jobs will disappear because of technology displacement. This comes as no surprise, because as an engineer and technologist for almost fifty years, I have witnessed a number of career fields disappear because of technology innovations. Indeed I've often said that with some effort, as much as 30% of the American work force could be displaced, and with a concerted effort, as much as 50%.

But over and above personal estimates is a research project to actually make some rational deterministic attempt at estimating just how susceptible jobs are to technology displacement in the near future. Something over and above personal estimates and 'guesstimations' based on feelings. Carl Frey and Michael Osborne have attempted to do just that, modeling the job market to examine how susceptible jobs are to computerisation.



Their method was to divide the job market up into 702 detailed occupation fields, then estimate the probability for each field for computerisation displacement using Gaussian process classifier. Their conclusion is that upwards of 47% of the jobs will be gone in the next twenty years or so. Of significance is that the impact of computerisation is no longer confined to manufacturing, but rather is migrating up the skill-intellectual levels to jobs thought to be totally immune from technology displacement. Doctors and lawyers are now threatened. People will continue to be squeezed out of the job market and this fact is based on analysis rather than people's opinions.

This 72 page report is available on the internet as a pdf file just by Googling "Osborne, Report

and pdf' for a free download which you can read at your leisure. More importantly, it contains the full table of the 702 job fields analyzed including the ranking for displacement, job title and the probability of computer displacement. Also, as a pdf file, you can do searches for words or numbers. The important consideration for millennials and generation-Z is that just when it's becoming increasingly difficult to keep individuals in a high technology society, there will be fewer jobs available to them. They will be less and less able to sustain themselves at a time when they are becoming less wanted or needed.

What is missing is the 'stress' factor. Like punctuated equilibria in evolution, few evolutionary changes will occur until there is a change in the environment, then there is an explosion of new species. The same holds true for the job market with jobs tending to remain stable until there is a stress, a recession or economic crash, when suddenly business is looking for ways to control cost and save money, that's when new technologies sweep in to replace people high and low. A fact that escapes the self-proclaimed social engineers when they embark to fundamentally change society, never dreaming that those changes are often a pink slip followed by jobs paying less than what people had been paid . . . that is, if they do find a new job.

Like a tree covered with snow, every time that tree is bumped, jarred or shaken, just any little disturbance and the snow falls off to be lost.

For people, a job is more than a source of income, it's what defines a person, where his value to society is rooted, it's what gives him a sense of purpose in life. For my generation, the average American changed career fields about three times over their lifetime. For the millennials and generation-Z people I can easily see an average of five, six or seven career changes over their life time. And nothing is being done! Why?

Because those who govern us, from the very top down to the smallest hamlets, none have any idea what they are doing or have any real understanding of the twenty-first century they are trying to living in.

That's why I say:

**America's youth is getting the worst deal since the Indians sold Manhattan for twenty-four dollars.**

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