



STATISTICS

Thomas Lumley

Closing the gap

How much of the difference between women's and men's wages is a result of individual choice?

Today, women make up about half our workforce. But they still make 77c for every \$1 a man earns. That is wrong, and in 2014, it's an embarrassment." So said US President Barack Obama in his January State of the Union speech promoting a new salary discrimination bill.

Right-wing blog the *Daily Beast* responded with a story headlined "No, women don't make less money than men." It seems this should be an easy issue to settle, but it isn't. The first step is to ask what that ratio of 77% actually means.

The ratio is for the median annual earnings of women and men employed full-time. More commonly, you see the ratio of median weekly earnings for women and men employed full-time, which for the US is slightly higher, at 81%. New Zealand has one of the highest ratios in the world, but it's still under 90%.

The average weekly earnings of women are lower than those of men for at least four reasons:

- straightforward differences in pay for the same job;
- differences in promotion or other opportunities for equally qualified candidates;
- women on average spend more time caring for children (and other relatives); and
- women tend to do jobs that don't pay as well.

The first of these is illegal and easy to prove; the second is sometimes illegal, though much harder to prove. These are what the proposed US legislation would tackle by making it safer for employees to ask about salary differences and changing the standard of evidence needed to win discrimination

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cases. However, because they are illegal, these two components of the pay gap are relatively small.

The *Daily Beast* story was arguing that these components were zero or at least negligible. An analysis from the US Bureau of Labor Statistics suggests they accounted for, at most, 4.8 to 7.1 percentage points of the 20.4 percentage point gap in 2007. That's a lot of money in aggregate – billions of dollars a week – but fixing this would still leave a big pay discrepancy.

Differences in earnings due to childcare and to type of work are more complicated. Many of the university undergraduate majors that lead to the best income are various types of engineering, which are predominantly male; women dominate such majors as early childhood education, social work and psychology, which don't pay as well. To a large extent, being a preschool teacher rather than an engineer is an individual choice, and the difference in earnings between these careers is not a secret. If most of the pay discrepancy results from such individual choice, doesn't that make it okay or at least not worthy of government intervention?

In mathematics, a very powerful strategy for detecting errors is to look at whether an argument proves too much. The argument that most of

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the 20% pay gap, because it's due to work and life choices, is the "right" value and not inequitable could have been used just as easily in the US in 1990, when the gap was 27%. It could be used in New Zealand, where the gap is 11%, or Japan, where it is 33%. It can prove anything. That doesn't mean the conclusion is necessarily false, but it does mean the argument is unreliable.

It's pretty clear gender stereotypes have an effect on which careers women end up in. It's also pretty clear jobs classified as "women's work" tend not to be paid as well. It's much harder to say how much of the US gender pay discrepancy is a result of these factors, but they can't just be dismissed. Women are paid less. This is an embarrassment. ■

New monthly columnist Thomas Lumley is professor of biostatistics at the University of Auckland. He blogs at statschat.org.nz and notstatschat.tumblr.com; he tweets at [@statschat](https://twitter.com/statschat) and [@tslumley](https://twitter.com/tslumley).

