

Dorling, D. (2016) Medicine is a social science and politics is nothing but medicine - writ large. Rapid Response, BMJ, July 11<sup>th</sup>, <http://www.bmj.com/content/354/bmj.i3697/rr-1>

# **Medicine is a social science and politics is nothing but medicine - writ large**

**Danny Dorling**

## **Brexit: the decision of a divided country**

I'd like to thank Christopher Hanretty and Rob Ford for their comment and, of course, they do have an interesting point to make, but I think it is one that has been over-made in recent days.

The term "size of the denominator population" is used to explain that some population groups are bigger than others, and that this really matters greatly. The attached map, which was kindly produced by Will Stahl-Timmins, shows the number of voters who were polled in each region adjusted to remove sampling bias. The proportion who voted Leave in each area is shown as an arc and these are then summed to illustrate how the absolute numbers of Leave voters was higher in the South. Geographers usually define the UK north/south divide by splitting the midlands in half.

Maps can often help clarify the importance of differing relative risks, especially when they use symbols or even projections that account for the differing size of the denominator populations. On November 28th I am giving the annual Political Studies Association Lecture on "Another World is inevitable: Mapping UK general elections - past, present and future". I'll try to explain more in that and also include some examples of mapping in medical journals. Future political analysis could well benefit from knowing that it is not just the highest

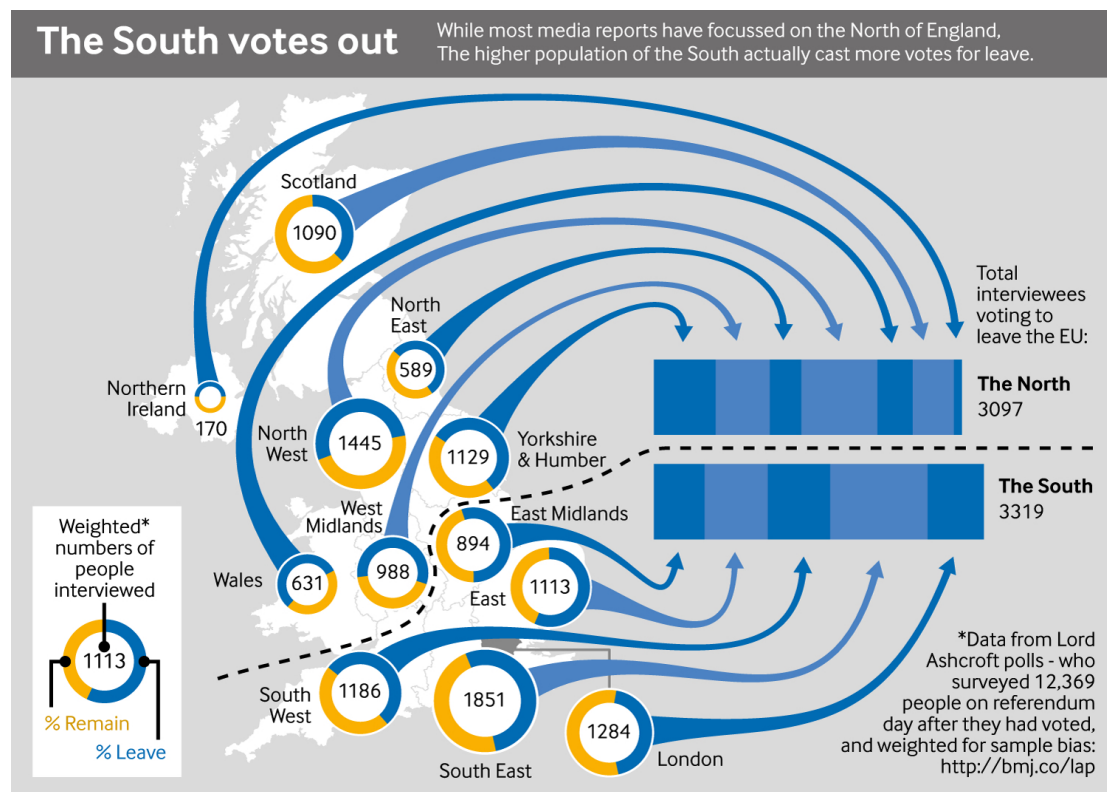
relative risks that matter, but the overall spread of an affliction, or the causes of that affliction.

Furthermore there are often connections between politics and health that are not well known. I speculate on some here in regards to Brexit:

<https://www.psa.ac.uk/insight-plus/blog/austerity-rapidly-worsening-public-health-across-uk-and-brexite-0>

In the five years leading up to the Brexit vote the self-reported health of the population of the UK, across all of the UK, became much worse, year on year. This mostly affected older people. That rapid deterioration in people's health may well have had an impact on how many of those who got to vote on June 23rd felt about their lives.

Rudolf Ludwig Carl Virchow put it simply many years ago: "Medicine is a social science and politics is nothing but medicine". writ large



**Competing interests:** No competing interests

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## **Re: Brexit: the decision of a divided country**

Professor Dorling is right to identify the culprit as austerity not immigration; that's what the people of Scotland did, having a majority party which provided an alternative narrative of austerity as behind the worsening conditions of life. Scotland didn't need to turn to immigration or foreigners as first to blame.

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## Re: Brexit: the decision of a divided country

Prof. Dorling writes that

"the outcome of the EU referendum has been unfairly blamed on the working class in the north of England... [but] because of differential turnout and the size of the denominator population, most people who voted Leave lived in the south of England".

This statement is true but misleading. More people in the south of England voted Leave because there are more people in the South of England.

If we take regions in the North of England to include the North East, North West, and Yorkshire and the Humber, then 4,325,965 people in the North voted to Leave (according to figures from the Electoral Commission). If we take regions in the South of England to include the South West, South East, London and the East of England, then 5,750,908 people in the South voted to Leave. However, the electorate in the North was 11,053,689 people, compared to 16,028,306 people in the South. Thus, the proportion of registered voters in the North who voted to Leave was greater than the proportion in the South (39.1% compared to 35.9%). The proportion voting for Leave in the North is still greater than the proportion voting for Leave in the South if we instead express it in terms of the voting age population.

As political scientists, we are not familiar with the habits of medical journals. In most analyses of voting behaviour it is common to focus on the relative risk of voting for a party or an outcome; an analysis which focuses on absolute numbers is therefore liable to mislead. If medical journals also tend to focus on relative risks, then Prof. Dorling's analysis is also liable to mislead, notwithstanding the qualifications in relation to "differential turnout and the size of the denominator population".

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