Study: Cold 17.36 Times More Hazardous to Mankind Than Heat

Some climates are better, or at least more agreeable, than others. Furthermore, it is well known that extremes of temperature raise death rates considerably. It has been estimated, for example, that they increase by between 8.9 and 12 percent during heatwaves, and by 12.5 per cent during spells of exceptional cold. The reasons for this are not fully understood; only a very small percentage of deaths during heatwaves are directly attributable to heatstroke. Moreover, there is an asymmetry between the effects of extreme heat and extreme cold on mortality. The effects of the former are immediate, and persist only as long as the heat persists; the effects of cold on mortality last three or four weeks after the cold has ceased.

A paper in a recent edition of the *Lancet* attempts to determine what percentage of deaths in thirteen different countries – Australia, Brazil, Canada, China, Italy, Japan, South Korea, Spain, Taiwan, Thailand, the UK and the USA – are associated with changes in the weather. The paper is of such enormous statistical sophistication that I doubt whether more than one in a thousand doctors is qualified to assess its validity: and, indeed, only one of its twenty authors is medically qualified. Nevertheless, the title of the paper, "Mortality risk attributable to high and low ambient temperatures: a multicountry observational study," seems to me (as someone very unversed in these matters) to make an elementary statistical howler: that a statistical association by itself implies causation.

However, let us overlook this criticism, and moreover assume that the authors' complex statistical analysis of the data (or

rather that of their computers) is valid beyond further criticism. The size of their sample is certainly impressive: they have analyzed 74,225,200 deaths in relation to deviations from average or normal or optimal ambient temperatures. After much calculation, the authors come to the conclusion that 7.71 percent of the deaths included in the study were attributable to excess heat or cold, that is to say 5,722,763 of the deaths.

What will perhaps be most interesting to the average reader is the disparity in the numbers of deaths caused (according to the authors' calculations and on the assumption that the relationship is indeed a causative one) by heat and cold. The latter is by far the worse villain of the piece, accounting for 7.29 of the 7.71 percent of deaths allegedly caused by ambient temperature, that is to say 5,411,017 of the 5,722,763 deaths cause by temperature variation, leaving heat a cause of "only" 311,746 deaths. To put it another way, cold is in current circumstances 17.36 times more hazardous to mankind than heat.

Interestingly, the vast majority of the excess deaths "attributable" to ambient temperature are caused not by great excesses, but by moderate deviations. Of course, it is heatwaves and great freezes that attract all the publicity, for drama is the lifeblood of newsrooms and no doubt of the new social media as well. When someone freezes to death it is news; when someone dies of a respiratory infection that he would not have contracted if the temperature had been a few degrees higher, it is not.

It would, of course, be imprudent to base public policy on a single paper, which will no doubt be severely criticized methodologically. But superficial readers might suppose that what was needed to save more than five million lives (actually more, because the study covered only part of the world) was global warming. Save a life, increase your carbon emissions! Drive cars with inefficient engines on unnecessary journeys!

This will be dismissed as superficial, however, because global warming increases the violence of deviations from average, desirable or optimal ambient temperatures. Everyone – or almost everyone – will believe what he wants to believe.

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