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? WHY THE WEATHER ?

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FORTY BELOW VS. ZERO

People from Vermont while visiting friends in Boston commonly tell them that weather twenty, thirty, or forty below zero in Vermont, their "dry cold" is much more comfortable than the "damp cold" weather of zero or ten above at Boston. Minnesota people similarly brag of the advantages of their winter climate over that of Chicago. Is this popular impression correct?

The coldest weather in northern interiors is accompanied by clear skies, sunshine, and no wind, a combination not uncommon there in winter, but weather with moderately low temperatures may be quite cloudy, windy, and, therefore, feel colder than that when air temperatures are much lower. The same is generally true a little farther south, but the occurrence of very cold, quiet, clear days is exceptional. The coldest weather occurs on windy days when cold air is imported from farther north. Thus, cold weather in Chicago, the "windy city", and Boston, of proverbial variability, ^{is much more} commonly of a piercing quality, than is the case in the less windy interior. The average winter relative humidity and cloudiness of Minnesota are less than in Chicago, while the reverse is true with Vermont vs. Boston, so the chilliness ascribed to "damp cold", seems more likely to be the result of windy cold. In fact, typical "raw" days invariably cloudy and windy feel just as chilly with a relative humidity of 50 per cent as with a humidity of 80 or 90. When the air is cold, our body temperatures are so much higher than the temperature of saturation for the air, that what might be styled the physiological relative humidity, or humidity relative to saturation at body temperature, is always so very low, 10 percent or under, that a difference of a few percent would be hard to notice.

(Tomorrow: Fogs and Clouds)

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