inaccurate mental processes. Three theories may be mentioned. The first is that the change of the calendar was responsible. In 1752 eleven days were added to the date, so that in 1751 Christmas Day fell on Jan. 5, new style, that is, almost exactly at the coldest time of the year. The long record at Greenwich shows, however, that the difference between the mean temperatures of the end of December and of the beginning of January is inappreciable. Moreover, the 'old-fashioned Christmas' is practically interchangeable with the 'old-fashioned winter.' Secondly, Mr. M. T. Spence, in the *Meteorological Magazine* for January 1927, points out that long spells of cold weather occur less frequently than long spells of mild weather in winter, so that by the time a cold spell arrives, the preceding one has passed into the hazy 'good old days.' His figures, however, refer only to spells which are statistically cold or mild, and the popular idea of the weather is often at variance with the statistical. A more plausible theory is that the belief is upheld by the memories of immigrants into London from the colder and more snowy north. A difficulty is that the belief is not confined to London, but is deeply rooted in many rural districts where the amount of immigration is very small.

None of these ingenious theories satisfies, but after all, is such ingenuity necessary? A change in our sense of proportion as we grow older would seem sufficient, for a few frolics in the snow when we were young would colour all our memories of winter. The change may not be in the weather, but in ourselves.

I would suggest, therefore, that the belief in the 'old-fashioned Christmas' may have originated in a series of severe winters in the late seventeenth and early eighteenth centuries, but that since then its vitality has been purely subjective, so that it now refers not to any definite period of time, but to the childhood of the speaker.

The Broadcasting of Seismological Reports.

FROM the records of a single well-equipped observatory the position of the epicentre of a large earthquake at a great distance can normally be determined with considerable accuracy. Closer estimates can be made, however, when the records from several stations are available, and especially when the stations are well distributed over the world. A system of exchange of seismological information by cable was inaugurated several years ago by the British Association. By the use of information received from stations in India, Australia, and America, Prof. H. H. Turner, chairman of the British Association Seismological Committee, has been able to determine the details which he has communicated regularly to the Press.

For the circulation of meteorological data, the submarine cable has been almost superseded by wireless telegraphy, and it is a natural development to use the latter medium for inter-communication of seismological information. The first step was taken by France. Since 1921 the readings of seismographs at Strasbourg have been broadcast regularly from the Eiffel Tower. The information is added to synoptic weather messages by the French Meteorological Office. The seismological code was given an international standing by publication in the report of the Rome meeting (1922) of the Seismological Section of the International Geodetic and Geophysical Union. The code is used by the Egyptian Meteorological Service for reports from Helwan. Since the beginning of 1927, seismological reports from Kew Observatory have been broadcast by the Air Ministry with the midday synoptic weather report which is sent out from Kidbrooke at 14 h. 0 m. G.M.T. Arrangements have been made by the Air Ministry for the transmission to London of seismological reports from Bombay. These reports also are broadcast from Kidbrooke.

In America, co-operation amongst the various bodies interested in seismology is well organised. Information is collected from the United States and Canada by the United States Coast and Geodetic Survey, by the Jesuit Seismological Association, and by Science Service, the well-known news agency. At the request of the Meteorological Office, London, it has now been arranged that from Jan. 1, 1929, seismological reports will be transmitted regularly from Arlington with the meteorological synoptic message which is sent out at 4 h. 0 m. G.M.T. This service is made possible by the co-operation of the United States Coast and Geodetic Survey, the United States Weather Bureau, and the United States Navy. The meteorological message from America is re-broadcast from the Eiffel Tower at 6 h. 20 m. G.M.T., and the seismological information will be included in the re-issue. The international or Strasbourg code will be used for this service. Details regarding the code, wave-lengths, etc., will be supplied by the Superintendent, Kew Observatory, Richmond, Surrey, on request.

The data will refer to two stations which will be selected on each occasion by the Coast and Geodetic Survey. The stations will be chosen from those for which the phases of the earthquake are well determined. Stations not too far from the epicentre and pairs giving a good angle of intersection will be selected.

The list of possible stations includes not only nine in the United States (Berkeley, Chicago, Cincinnati, Fordham, Georgetown, Harvard, St. Louis, Sitka, and Tucson), but also two in Canada (Ottawa and Victoria), one in the West Indies (San Juan), and four in or beyond the Pacific (Apia, Honolulu, Manila, and Wellington).

The new service will be much appreciated by European seismologists. The elasticity of the system by which the most valuable data are selected for transmission is noteworthy. In some cases trustworthy estimates of the positions of the epicentres of earthquakes will be available at once instead of after a delay of several weeks.