

July 13. As the subject is of practical importance, I am sorry that experts do not seem to be in agreement as to its extent or as to its effect on the general health of the half of the community which is said to be affected by it. Considerable use by those commercially interested in domestic heating has been made of expert assertions on the subject, and these are widely quoted. It is difficult to find out the magnitude of the effect and whether it is of importance or not in other than pathological cases. Personally, I have never noticed it. Further information on this subject will be welcomed by everyone.

THE WRITER OF THE NOTE.

Perspiration and Erythema

PRELIMINARY spectroscopic experiments have been made to determine the absorption of ultra-violet light by human perspiration. The results, so far only qualitative, indicate that a film of sweat one millimetre thick absorbs light slightly in the region of 3300 Å., very appreciably at 2900 Å., and is practically opaque at 2700 Å. Since sunburn is induced principally by light of wave-lengths lying between 2900 Å. and 3100 Å., these results indicate that human sweat acts as a partial protection against sunburn to a degree which depends upon the thickness of the layer.

Personal experience rather supports the point of view that sunlight effective in producing erythema is absorbed by perspiration; for, other things being approximately equal, one is usually sunburned more readily on a windy day than on a quiet one. Here the presumption is that the wind keeps the body cool and dry and thus nearly free of perspiration. Better evidence is that of a friend, H. C., who, while canoeing on the Mississippi River with G. P. on a very hot day, frequently dipped his arms into the river, and at the end of the day experienced a severe case of erythema on the arms. On the other hand, G. P., whose arms were likewise exposed to the sun, did not immerse them in the water and suffered merely a modest burn. Both canoeists had commenced the day with a normal summer tan. Assuming the two to have been comparable subjects, one is tempted to the opinion that the frequent immersion of the arms of H. C. kept them free of perspiration, while G. P. enjoyed the protection which the sweat afforded against the actinic rays of the sun.

The constituents of perspiration most likely to be effective in absorbing light in the neighbourhood of 2950 Å. are urea, uric acid and certain amino acids. Urea absorbs light in this spectral region slightly, but is nevertheless present in relatively large amount in human sweat. Uric acid has an absorption band with a maximum at about 2900 Å., but appears only in small amount in normal sweat. The amino acids, tryptophane and tyrosine, if they appear in sweat, may be effective in producing absorption since they each have an absorption band at about 2900 Å.

The fact that normal urine, which contains relatively much more uric acid than does sweat, cuts off rather sharply all light below about 3100 Å., suggests that perhaps uric acid may be the primary absorbing agent in human perspiration.

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The Profession of Management

IN view of the forthcoming meeting of the British Association and the dominant place accorded to management in Section F* (Department of Industrial Co-operation), a brief explanatory statement of the position of management, as I see it, from a vocational and scientific point of view, may be of interest.

Management, which at the higher levels is the same thing as administration, is tending to become, or made, a 'recognised' profession, comprising (1) practitioners (that is, actual managers); (2) management consultants (corresponding to 'counsel' and 'specialist' in law and medicine); (3) management research workers (corresponding to those in science); (4) educators for (a) imparting instruction about management (and its associated subjects and sciences), (b) training (fitted) people for management, or, if already managers, for promotion or advancement.

It will be apparent from (1) that management is in reality not a subject but a functional activity, the activity of directing, organising, controlling and developing in an almost infinite variety of circumstances. Under (2) two functions are distinguishable: (i) management 'auditing' to improve or strengthen the management of an individual concern (in the case of a 'business' increased profits expected as a result), (ii) management 'auditing' to determine, in the case of a 'business', safety as regards financial investment, or suitability of any concern for investment of individual effort. Under (3) the work is largely method- and technique-invention, statistical inquiry and objective psychological investigation (managerial thinking, attitudes, training and vocational selection and guidance). The distinction under (4) is highly important. Its neglect is responsible for much of the ineffectiveness of some university courses. Education may be regarded as the 'mother' function of the new profession as a whole, but as in other fields, only supplementary or preparatory to learning by practical experience.

Since managerial action (or inaction) is based on human decisions and judgments, 'good' management should always be used in preference to the Continental 'scientific' management. 'Good' implies the maximum application of scientific method without eliminating the all-important factors of wisdom and morality.

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Experimental Phonetics and Ancient Greek Verse

ANALYSIS of a macrophonic registration¹ of "Devon to Me!" spoken by John Galsworthy² showed that 15 of the 40 lines of the poem had a rhythmic form indicated by $\bar{\cup}\bar{\cup}\bar{\cup}$; an example is the line "Where my fathers stood". This is the form known in ancient Greek metrics as the hypodochmius (for example, "Oed. rex", 1208). Twenty lines had the form $\bar{\cup}\bar{\cup}\bar{\cup}$; an example is "Watching the sea". This is the choriambus, a very common ancient form. Five lines had the form $\bar{\cup}\bar{\cup}\bar{\cup}$ as in "Taste of the cream pan!" This is the form termed adoneus. Every line of the poem was spoken with some form of ancient Greek rhythm. The registration of the first stanza of "Drake's Spirit" by Galsworthy himself showed that the line "I, Francis Drake" had the rhythm of the third epitrite $\bar{\bar{\cup}}\bar{\bar{\cup}}$ as in "Medea", 628, and that the line "When the land needs"