Because these theoretical, mechanical, electron microscopic and electrical properties are like those attributed to the cell membrane and because this experimental membrane is made from solubilized lipids extracted from membrane structures of white matter, we suggest that it is reconstituted cell membrane structure. Evidently it can exist in stable form in the absence of all other cell components and, in addition, can show the cellular function of electrical excitability, and perhaps other cell functions as well, when the composition of the lipid phase and the nature of the adsorbed molecules are properly selected.

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Some Extremely High Acuties of Taste for Phenylthiocarbamide

In human population groups a primary dichotomy (so-called 'non-taster' and 'taster' classes with some overlap) in the distribution of thresholds of taste for phenylthiocarbamide (PTC) was established by the early work of Hartmann¹ and others. Falconer² noted the irregular nature of the distributions of 'non-taster' material; and Lugg and Whyte³, from the results (corrected for the effects of age and sex) of their investigations of southern Chinese, European, southern Indian and Malay ethnic groups, considered these distributions to be potentially (if not always actually) bimodal, a view which was supported by subsequent work⁴ on Negrito and Senoi subjects. They³ also questioned the presumption that 'taster' material is always unimodally distributed; but it was realized⁴ that the distribution irregularities might be due to sampling errors rather than to intrinsic causes. The question remained open, however, and it was hoped that clarification of the overall picture of threshold distributions might come with the accumulation of additional data from work on other ethnic groups.

Results of work recently done in Hokkaido on Japanese and Ainu ethnic groups and on persons of mixed origin support the view that 'taster' material is, potentially, not unimodally distributed. There is appreciable evidence that, apart from the earlier suggested category of 'high acuity tasters', a category of 'extremely high acuity tasters' exists in these, if not other, groups.

The PTC solutions used in these investigations comprise a series integrally numbered from zero, the concentration of solution numbered n being $2 \cdot 60 \times 2^{-n}$ gm. PTC/l. A subject demonstrates his ability to discriminate between solution n and solvent (distilled water) in a sorting trial, the chance of success by guesswork being 0.125, and his most likely threshold value⁵ is $n + 0.5$. The taste-quality he reports is not necessarily the characteristic quality, bitter, experienced with more concentrated solutions.

It was among the Kintak Bong Negritos of Malaya that the tasters of previously highest acuity were encountered⁵, one subject succeeding with solution 18. His reaction in the trial was such as to suggest that he may have succeeded with at least solution 19 if it had been possible then to test him further. In the Hokkaido work it has been found necessary to extend the range to solution 24 in order to carry out the survey effectively. Of fifty 'pure' or almost 'pure' Ainu and of fifty Japanese subjects, seven in each sample succeeded with solution 18 or higher number; and of an extremely heterogeneous sample of fifty persons of mixed extraction containing many children in the 10-14-year age-range, a factor predisposing to more successes with solutions of higher number, twelve successes were recorded. In all, three subjects succeeded with solution 19, eight with 20, four with 21, three with 22 (one of them describing the taste as bitter and the other two as astringent), and one, a 14-year-old Ainu boy who described the taste as sweet, with 23.

Solutions 18 and 23 contain 9.9 and 0.31 μgm . PTC/l. and are 6.6×10^{-8} and 2.1×10^{-9} molar, respectively. The subject takes 2.5 ml. of solution (or solvent) into the mouth in each step of a sorting trial, representing 2.5×10^{-8} gm. or 1.6×10^{-10} mole or some 10^{14} molecules of PTC with solution 18, and 8×10^{-10} gm. or 5×10^{-12} mole or 3×10^{12} molecules with solution 23. If Moncrieff's⁶ estimate is accepted, namely, that 0.05 ml. of solution, properly applied, is sufficient for taste-testing, the number of molecules of PTC involved would be 2×10^{12} with solution 18 (not 8×10^9 stated earlier⁵ as the result of a miscalculation) and 6×10^{10} with solution 23.

The Negrito subject's success with solution 18 ranked him as the most acute taster of any substance among human subjects examined up to that time⁵. Yet, of the 150 persons examined recently in Hokkaido some 17 per cent rank either in his company or (the 14-year-old Ainu boy *in excelsis*) considerably above him. Tasting acuties of this higher order lie far beyond any previously recorded and were utterly unexpected when the work was begun.

Proper acknowledgement of help received will be made elsewhere, when the full account of this work and discussion of its implications in anthropological studies are published. Mention can here be made only of the many forms of assistance rendered by Prof. S. Watanabe, but for whose prior interest the Hokkaido programme could not have been undertaken.

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Hæmophilia and the Protease Inhibitor in Peanuts

Boudreaux and Frampton's report¹ on a hæmostatic factor in peanuts (*Arachis hypogaea*), orally active in hæmophilic patients, aroused great interest. Since these and other investigators have been unable to