two-stream theory—the mixing of two Maxwellian distributions in relative motion—or an ellipsoidal distribution. The two-stream distribution has never made much impact on stellar dynamics, but the ellipsoidal distribution, with minor modifications, is still a familiar starting point for dynamical theory.

In addition to its close link with dynamics, stellar kinematics can also be used in the statistical determination of distances. Whereas the line-of-sight velocity of a star is obtained in linear measures, the transverse velocity is determined in angular measure. The relative distances of a class of star can be estimated from their apparent magnitudes. The absolute scale of distance can be found by requiring the same systematic motions in both radial and transverse linear velocities. The analysis can be carried out in several ways, and this application of stellar kinematics has successfully confirmed distance scales obtained by other methods. Unfortunately this application becomes much less suitable when the class of objects extends over a wide range of distances, and Professor Smart's advice on procedure under these conditions would have been most welcome.

The observer who wishes to interpret the measurements of stellar movements he has made, and the theoretician who needs to compare his theories with observations, will both find valuable guidance in this book. With his great experience of analysing stellar movements, Professor Smart demonstrates a wide variety of methods, yet the reader is not allowed to forget that hazard of all statistical work in astronomy, the effects of observational selection.

G. L. CAMM

OBITUARIES

Professor Eugene M. Cheissin

THE sudden death of Professor Eugene Mineevitch Cheissin on June 26, 1968, at the age of 61, has deprived Soviet and world science of an outstanding biologist, who had made many valuable contributions to protozoology. At the time of his death he was Head of the Laboratory of Microscopy at the Institute of Cytology of the Academy of Sciences of USSR and Professor of Invertebrate Zoology in the University of Leningrad.

Cheissin's scientific work reveals the wide erudition and diversity of biological interests characteristic of the school created by his teacher, the distinguished Russian zoologist V. A. Dogiel. His earlier investigations dealt with the comparative cytology of the astomatous ciliates and with the parasitic amoebae of man, but his best known work is on coccidia (especially of rabbits), the structure and life cycles of which were described in a series of publications, including his thesis for the doctorate of biological sciences (1947) and culminating with a monograph on "The life cycles of the coccidia of domestic animals" (1967). In his studies on piroplasms, new light was thrown on their invertebrate cycle in ticks, necessitating their separation from the Sporozoa.

With the advent of electron microscopy Cheissin turned his attention to the study of the ultrastructure and morphogenesis of diverse protozoa, to which he made notable contributions. He was co-author (with the late V. A. Dogiel and G. I. Poljansky) of the monumental treatise on *General Protozoology* (1962), which was translated into German (1963) and English (1965).

During the last months of his life, as vice-chairman of the Soviet Organizing Committee, Professor Cheissin devoted all his energy to preparations for the third International Congress on Protozoology to be held in Leningrad in 1969.

CORRIGENDUM. In the communication "Charge Distributions of Conjugated Molecules" by H. A. Nash, S. R. Grossman and D. F. Bradley (*Nature*, **219**, 370; 1968) 1968 should read 1958 in ref. 5; 1964 should read 1946 in ref. 16; and 1684 should read 1689 in ref. 18.

ERRATUM. In the communication "Trace Element Identification of the Source of Obsidian in an Archaeological Site in New Guinea" by C. A. Key (*Nature*, **219**, 360; 1968) the reference number of the artefacts found in an archaeological site in New Guinea was omitted; it is ANU 376. The first sentence of the third paragraph should read: There are three known obsidian occurrences in New Guinea separated one from another by distances of 300 miles.

ERRATUM. In the communication "Mössbauer Absorption in Zinnwaldite Mica" by C. L. Herzenberg, D. L. Riley and R. Lamoreaux (*Nature*, **219**, 364; 1968) the last eight lines of the second paragraph on page 365 should be replaced by the following: Spectra from polycrystalline specimens do show much more nearly equal intensity ratios, indicating that this is largely an orientation effect. It seems possible that paramagnetic relaxation phenomena[10] as well as an anisotropic resonant fraction[11] may also contribute to the relative intensity ratios as well as to the somewhat non-Lorentzian line shapes.

CORRESPONDENCE

Nomenclature Madness

SIR,—Dr Wiener's letter (*Nature*, **219**, 544; 1968) adds little of substance to the statements about Rh nomenclature which he has repeatedly made over the last twenty years. The analogy which he draws with the notations of the ABO system is a false one, for the adoption of the symbols A, B and O expressed a distinction between antigens, and between genes, which could not be represented by a series of single arbitrary numbers for phenotypes (not antigens or genes). The adoption of the CDE notation for the Rh system seemed to most workers to make a similar advance, not a regression as he implies. There can be no doubt that it greatly facilitated thinking and writing about the system, and has led to much fruitful research work.

No one denies that the main features of the Rh antigens are the products of a single short segment of chromosome in each gamete. Thus each distinct inherited set of antigens, however complex, must be representable by a single symbol, and in this sense a notation of the type first devised by Dr Wiener is bound always to give the right answers. The question is whether it gives them always in the most efficient way. In most sciences there are hierarchies of symbols representing different levels of analysis. For some purposes Wiener's symbols may continue to be convenient, but other symbols are needed to express the results of deeper analysis.

Nearly all the known facts about the Rh system can be represented as the effects of multiple alleles of *C*, *D* and *E*, with interaction between the supposedly separate though closely linked loci. A few of the facts appear not to be explicable in this way, but this is a reason for trying to carry the analysis deeper still—not for retreating to the exclusive use of a foolproof but relatively undiscriminating notation.

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