

of the Singapore base, and points out that the Dutch Navy will in consequence have probably to be doubled in size.

Combined with all this Dr. Cornish has evolved a practical system of dividing up the world (on paper), so as to make the future strategical aspect of naval movements more understandable by the ordinary reader. This he accomplishes by giving us, and explaining, four maps (on the Mollweide projection) of world-hemispheres, centred respectively on  $20^{\circ}$  E.,  $110^{\circ}$  E.,  $160^{\circ}$  W., and  $70^{\circ}$  W. longitude. A few places of importance mentioned in the text are not marked on the maps: but the general result is good—and clear.

EDWARD GLEICHEN.

*Mathematical Investigations in the Theory of Value and Prices.* By Professor IRVING FISHER. 1925. (Yale University Press. London: Humphrey Milford. 8vo. xii + 126 pp. 4s. 6d. net.)

PROFESSOR IRVING FISHER has given us a reprint of his important paper on value, first published in the *Transactions of the Connecticut Academy of Arts and Sciences* in 1892. It treats of the fundamental definitions and identities of economics, a firm grasp of which is essential to the comprehension of almost any economic theorising. Professor Fisher has since become famous as a master of lucid explanation; and a casual glance at this work, where a large measure of continuous literature is mixed in with the formulæ, might rouse the hopes of an un-mathematical reader. Professor Fisher has chosen in this case to illustrate his meaning by an elaborate mechanism of cisterns and levers, of which models have since actually been constructed in his American laboratory. This method of exposition may be exceedingly helpful to those well accustomed to the use of such instruments, but the lay reader will probably find his perplexities greatly increased. A purely analytic treatment, while more arduous at the outset, would probably have proved easier for him in the long run.

This treatise is embellished with a very thorough discussion of the economists' notion of Utility. Professor Fisher correctly holds that the writers of the school of Jevons did wrong to identify utility with pleasure and thus make it necessary for the economist to postulate that "all men act for pleasure." This proposition may or may not be true and raises interesting psychological problems, but should be and is quite irrelevant to economic analysis. But Professor Fisher, while protesting against the dragging in of these psychological irrelevances, makes the same mistake himself. He identifies utility with desirability and says that we must assume that "each individual acts as he desires." This either is untrue or involves the use of desire in a Pickwickian sense, and it embroils us in the disputes of psychologists, not to say of metaphysicians. All postulates of this type are otiose in economics. This may be seen if we amend Professor Fisher's definition (p. 12) as follows: "The utility of A units of one commodity or service (*a*) is equal to the utility of B units of another (*b*), if the individual ~~has no desire for~~ *does not choose* (or, *does not act favourably to*) one to the exclusion of the other." Choose here refers not to a process antecedent to an act, but to the act itself.

Of great interest is Professor Fisher's conclusion that when the utility of many commodities is interdependent, it may be impossible to integrate utility at all. Integration is quite unnecessary, as the

author observes, "if we seek only the causation of the objective facts of prices and commodity distribution." But sometimes our interest ranges beyond this, and we seek something more. We may be considering public interference to increase social welfare. We cannot consent to remain stultified without an instrument of analysis. We need not only to integrate, but to "compare one man's utility with another's." For these purposes, but for these only, we shall need to find a more subjective definition of utility.

This essay contains much that is stimulating, and we welcome its republication in a compendious form.

R. F. HARROD.