

the quagmire of myths. The work is studded with claims that this has been demonstrated, that has been proved, but the conclusions that are drawn do not seem necessarily to arise from the analyses. In the end there is just frustration.

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Psychological Approaches

Humanistic Psychology and the Research Tradition: Their Several Virtues. By I. L. Child. Pp. vi+213. (John Wiley: New York and London, January 1973.) £4.15.

PROFESSOR CHILD was the author of *Italian or American*, a classic study of the conflicts created in children by discrepancy between the values and style of life of their home and those of the outside society. Although now 30 years old, this study should still demand for its author a respectful reading of any fresh work. The present book, moreover, is particularly sympathetic in approach: it attempts to reconcile different attitudes and points of view about human beings, to extract constructively the best of each, and to reconcile rather than oppose. By "humanistic psychology", Professor Child means those currents of thought in which man is viewed somewhat as he normally sees himself—as a person rather than only as an animal or a machine. The "research tradition", on the other hand, is that of systematic factual enquiry, in which the ideas and methods of study may be highly impersonal in their pursuit of objectivity. The technique of reconciliation which the book uses is to review researches conducted in the empirical tradition, but whose results and interpretation would favour the humanistic attitude. Thus there are chapters on moral development, on the psychology of art, on hypnosis, on cognitive dissonance, on extrasensory perception (ESP), and on clinical work in schizophrenia, psychotherapy, and behaviour therapy. In each of these areas, the choice of investigations is interesting, and they are very well described. Few of us can fail to be interested by evidence for the incidence of ESP being greater in people who believe in it, by agreement between art experts from very different societies on the relative merits of different artists; or by an apparent regression of ethical judgment in some people of university age as they work through to a higher level of adjustment.

Professor Child's praise and criticism of each approach, furthermore, are sound and well judged. In claiming that their virtues might be combined, and their vices abandoned, he is on very sound ground. The book ought there-

fore to be consulted by anybody who would like to achieve this end.

And yet, this smooth reconciliation does conceal genuine abrasive disagreements, which an upholder of the research tradition must emphasize. In several places, the humanistic conclusion from one study contradicts that from another. Moral development is supposed to be independent of the society in which it occurs: and yet the differences in behaviour in prisons, mental hospitals, and everyday life are to be ascribed to the different environments rather than to the individual. The best judges of artistic merit are those who reject the social pressure of others around them: and yet certain techniques derived from the Esalen Institute are suggested to increase hypnotizability, and this is regarded as desirable. A finding that those schizophrenics who report themselves as highly disturbed in a questionnaire also do very badly by objective tests of performance is interpreted as meaning that both scores are the common result of faking to secure a stay in a congenial hospital environment. This interpretation seems highly questionable, and it is not clear that it is more humane than believing what the patient says. Lastly, this book deals only with conclusions about personal choice and self control of which the humanistic thinker may approve: a true reconciliation of the two approaches will need also to take into account the massive evidence which the research tradition has provided of the distortions, limitations, and constraints which the machinery of ourselves and our society may place upon that choice. The commonsense concept of personality may be true enough as far as it goes; and yet it is a problem rather than a solution. DONALD E. BROADBENT

Machine Botany

A Computer-Mapped Flora: A Study of the County of Warwickshire. With a section on Bryophytes by T. Laffin, and contributed chapters by F. W. Shotton, H. Thorpe and G. T. Warwick. By D. A. Cadbury, J. G. Hawkes and R. C. Readett. Pp. ix+768. (Academic: London and New York, December 1971.) £10; \$30.

IN 1949 it was decided that, as so many changes had taken place in habitats and plant distribution in the county since the publication of Bagnall's *Flora of Warwickshire* (1891), a new survey was needed. A single kilometre square selected at random from each block of four (tetrad) was adopted as the basis for detailed study, and recorders listed habitats and frequencies of species on standard recording forms. This information was eventually conveyed to punched tape for processing by a com-

puter. An incremental graph plotter and a line printer produced maps of vascular plants and bryophytes.

The maps occupy 420 pages and those for vascular plants are of two kinds. The first, covering 718 species, are complex and give three main pieces of information: presence or absence of the particular species; the major habitats in which the species was recorded (by the use of nine different superimposed symbols); and an approximate idea of frequency of the species in each habitat. The second, covering fifty-nine less common species, are simpler, and indicate only presence and frequency. Two frequency categories—abundant to frequent, and occasional to rare—are distinguished in the maps, but unfortunately the authors give no quantitative definitions of these terms, so it is left to the reader's imagination (as it was probably left to the ingeniousness of the recorders) to decide what they mean. The distributions of 184 different bryophytes in a fruiting or non-fruiting condition are also mapped. A pocket at the end of the book contains twelve overlay maps which show, besides physical and meteorological features, woods, parklands, heaths and commons.

The check lists accompanying the maps include information on first Warwickshire records, habitats, and occurrence in neighbouring counties. There are keys to the local species of *Rubus fruticosus* agg., *Salix* (including hybrids), *Arctium*, *Hieracium*, and *Bromus*. Chapters on the physical background, geology and soils (with an excellent map showing soil types), historical geography (explaining the changing patterns of natural vegetation in the county from prehistoric times to the present day), and habitat studies, complete the flora.

A shortcoming of the work is the recording in but one square kilometre out of every four. Although it ensures an even survey the result is that only one-quarter of the county is covered, and in spite of the inclusion of records from some squares chosen non-randomly, about 65 per cent of the county is left unworked. Is this the reason why so many species known to the old Warwickshire botanists are "not recorded in the present survey"? How much more satisfying if all squares had been surveyed: but to have done this with the thoroughness of the present work would have been an impossible task. So we should consider *A Computer-Mapped Flora* as an academic exercise expertly planned and accomplished, rather than as a definitive county flora. It is the first flora in which habitat data have been mapped by a computer, and we are grateful to the authors for introducing us to an entirely new approach to vegetational research.

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