

## Pragmatics

*Language and Context: The Acquisition of Pragmatics.* (Language, Thought and Culture: Advances in the Study of Cognition.) By E. Bates. Pp. xiv+375. (Academic: New York and London, 1976.) \$19.95; £12.20.

PSYCHOLINGUISTICS has traditionally depended on linguistics proper to supply research topics. When linguists produce a rule to which the sentences of our native language can conform, psycholinguists can then go off and try to explain either the sense in which we "know" this rule, or how we manage to act as if we knew it. Until quite recently, the rules in question were almost exclusively rules of syntax, and the psycholinguist's problem was, for instance, to explain the mental organisation that might lead us to exclaim "Ah, there's the book that I was hunting for!" but never "Ah, there's the book that I was wondering where was!"

In the past few years, however, linguists have been giving increasing attention to the study, under the heading of "pragmatics", of the conventions surrounding the use of various linguistic forms. For instance, "Can you shut the window" has a syntactic form normally associated with questions, yet it might easily function as a request. Furthermore, it is a more

polite request than a simple "Shut the window". In some circumstances, "Do you think it's a bit chilly in here?" might be more polite still, although at other times it will just be annoyingly indirect.

The psycholinguist Elizabeth Bates has set out to chart the mastery by children of these, and other, subtleties of linguistic usage. Working from studies of pre-school age Italian children, she marks the onset of such phenomena as talking about talking, laying emphasis on particular words, discussing situations beyond the here and now, and wording an appeal for a sweet so as to make it as persuasive as possible. She also considers, from the standpoint of Piaget's theory of cognitive development, what mental capacities are required to reach these pragmatic milestones, and so sets linguistic development in the context of general cognitive development.

Professor Bates has written an excellent and fascinating book. She is considerate to the reader, explaining clearly and carefully both the theoretical background, and the design and interpretation of her experimental studies. It is a book pregnant with possibilities for further research, and one can only hope that others who follow her, maintain her standards of liveliness and clarity. **S. D. Isard**

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## Soils of arid regions

*Soils of the Arid Regions.* (Developments in Soil Science 6.) By H. E. Dregne. Pp. xii+237. (Elsevier Scientific: Amsterdam, Oxford and New York, 1976.) Dfl. 75.00; \$28.95.

THE aim of this book in attempting to collect together the available information on arid region soils is highly commendable. In attempting to cover such a vast topic in only 223 pages, however, the author sets himself an impossible task. The inevitable result is a book which is too specialised for the layman and too superficial for the professional pedologist.

From a brief introduction to arid regions (excluding polar deserts) the author moves on to consider with little comment, various approaches to the classification of arid region soils, finally selecting the USDA 7A scheme as a basis from which to work. Chapter three consists of a short discussion of each of the soil orders found in arid regions together with a cursory summary of the geomorphology of arid regions. In the following six chapters the distribution of arid soils is considered on a continental basis; accompanying each of these chapters is an absurdly small scale map showing the distribution of the principal associations of great soil groups. The choice of symbols is such that on several maps it is impossible to differentiate between alfisol, aridisol and mollisol groupings. This approach to the consideration of soil distribution leads to a mass of needlessly repetitive information on each great group, which could, together with better maps, have been condensed into one chapter. The last three chapters cover very briefly those chemical physical and biological properties of soils which are (according to the author) important for management. Throughout the whole text discussion on pedogenesis is extremely limited and very superficial.

The standard of the twenty-six line illustrations (there are no photographs) is extremely low: several are illegible and many others are irrelevant, adding nothing to the text.

Despite all these shortcomings, had the book been reasonably priced it could have been recommended, simply because it is the first text to attempt to draw together information on arid region soils. With its outrageous price of about £19.00, brief coverage and appalling illustrations, however, there is no reason to recommend this book. Sadly there still remains a great need for a comprehensive text on the soils of arid regions. **M. J. Alexander**

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## Air pollution

*Effects of Air Pollutants on Plants.* (Society for Experimental Biology, Seminar Series 1.) Edited by T. A. Mansfield. Pp. 209. (Cambridge University: Cambridge, London and New York, September 1976.) Hardcover £8.50; paperback £3.80.

THIS volume appears 15 months after the seminar on which it is based. The authors have concentrated on their own findings, and consequently much material appears here for the first time; coverage is uneven and references highly selective. Less understandably, there is no attempt to place the contributions in a wider framework or to define the outstanding problems. For example, the chapter on uptake of pollutants (Unsworth, Biscoe and Black) mentions only the resistance analogy approach; such work surely should form the basis for simulation modelling of the growth of polluted crops, but nowhere in the book is this suggested. Only Bradshaw on evolution and pollution gives an integrated account of his field. The central challenge of bridging laboratory and

field observations is raised both for fluorine (Davison and Blakemore) and for ozone (Manning and Feder)—the latter authors, like most Americans, eschew growth analysis. Both of these chapters find contradictions between laboratory and field data: could the method of expressing pollutant levels (as mean, peaks or dose) be partly responsible? The singular properties of open top chambers (McCune, Maclean and Schneider) make it unlikely that this type of enclosure will yield unambiguous results. By recording changes in enzyme activities following fumigations, the Lancaster group point the way to pollutant-specific physiological tests. Would that more work on SO<sub>2</sub> and lichens were as analytical as that described here (Nieboer, Richardson, Puckett and Tomassini). Two useful appendices summarise data on air chemistry and references to biochemical effects. Overall, we are given valuable data but little perspective; a book for the specialist.

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