Meeting of neurology and psychology

Andy Young

Cognitive Neuropsychology. Editor Max Coltheart. Lawrence Erlbaum. 4/yr. UK (institutional), £20 (individual); elsewhere \$60 (institutional). (individual).

Only 15 years ago psychology students were generally taught that the study of the problems experienced by neurological patients formed an arcane discipline, beset by logical pitfalls, that had little or no relevance to understanding normal experience and behaviour (though the study of brain-damaged rats and pigeons was, of course, quite a different matter).

When viewed against such a background, the increase in interest in neuropsychology has been remarkable. There have been many reasons why this has come about, but one has been the parallel between neuropsychological observations and some psychological models. The fashion in psychology is to conceptualize the cognitive system as being organized into separable processing modules. Modular systems will often have the property that their performance will break down in predictable ways, and these patterns of breakdown will in turn provide information on the nature of the processing modules themselves. This simple insight implies that the problems experienced by neurological patients are of interest to anyone trying to construct a psychological model to account for the performance of a



particular cognitive skill, and that such models can also be used to help in understanding patients' difficulties.

The exchange of theories and data between psychologists and neuropsychologists has become so fruitful that a journal devoted to this purpose must be welcomed. Cognitive Neuropsychology fits the requirements admirably. It publishes both theoretical and empirical papers, and it interprets "cognition" broadly, so that it is willing to consider papers on topics falling under headings as diverse as perception, attention, language, thinking, memory and action.

Cognitive Neuropsychology will be read both by experimental psychologists and by neuropsychologists. The work reported in the issues reviewed here is both interesting and first-rate. However, most of the papers are about language (13 out of 15 in the issues available for review). Although this is probably a fair reflection of the current high level of interest in language, it is to be hoped that a better balance can be achieved in future.

The predominant research strategy used by cognitive neuropsychological researchers has been to carry out relatively detailed investigations of individual patients. As yet, however, few seem to have tried to take the additional step of arguing that an adequate theory should not only account for a patient's difficulties, but also make clear what (if anything) can be done to alleviate them. It is particularly gratifying to note that the editors of Cognitive Neuropsychology state that they will welcome reports of such work.

Two other features of the journal deserve comment. The policy of encouraging book reviews that turn into interesting scholarly contributions in their own right is most effective, and the idea of reprinting historic papers that are no longer widely known (but deserve to be) is also

This, then, is a journal which has accurately identified the emergence of a distinct field of study, and will rapidly become indispensable to those working in it.

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New neurobiology

Roger Keynes

Journal of Neurogenetics. Editor-in-chief R.N. Rosenberg. Elsevier. 6/yr. Dfl. 242,

Neuroscience Research: The Official Journal of the Japan Neuroscience Society. Editor-in-chief M. Ito. Elsevier. \$111 (institutional), \$55 (individual).

AT a time when it is commonplace to hear complaints about the ever-increasing number of journals, it is comforting to find one, the Journal of Neurogenetics, which seems set to fulfil its editors' motto: "it flies on its own wings".

With the application of the techniques of molecular genetics to neurobiology a profusion of studies is appearing, falling into two broad and overlapping areas: those which primarily deal with genetic factors or mechanisms, and those which are more concerned with using the techniques to investigate related areas, for example neurotransmitter receptors. The stated aim of the Journal of Neurogenetics is directed more towards the first of these, including "the genetic mechanisms underlying early embryonic development, cell differentiation, pattern formation and genetic disorders of the nervous system from microbes to man". That said, it was a little disconcerting to find in a recent issue an article on renal tubular acidosis. Generally, though, the journal sticks admirably to its brief, with articles ranging from analyses of Drosophila and C. elegans mutants to genetic counselling. Production quality is good, as is speed of publication, the delay being normally less than five months from date of acceptance.

As neurobiology differentiates into subdivisions such as neurogenetics, it can be argued that there is, more than ever, a need for eclectic journals which can provide a general view of the subject. A good recent example would be the Journal of Neuroscience, the publication of the American Society for Neuroscience. Perhaps not to be outdone, the Japan Neuroscience Society last year launched its own journal, Neuroscience Research.

The journal's message is one of integration rather than fragmentation of disciplines. Its goal is a noble one — "the integration of various levels of our knowledge towards complete understanding of the brain" - and the intention "to be international in nature, serving neuroscientists throughout the world". The papers cover the entire range of neurobiology, with, in four representative issues, an interesting preponderance of neuroanatomy. Its success will inevitably reflect the success of Japanese neuroscience, whether or not it publishes papers from other parts of the world, and one can only wish it well.

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