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Book reviews

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Research Companion to Organizational Health Psychology. Edited by A.-S. G. Antoniou and C. L. Cooper. (Pp. 720; £150; ISBN 18437766248 hb.) Edward Elgar Publishing: Cheltenham. 2005.

Working hours are becoming longer, jobs are less secure and rarely life-time, and the strong competition worldwide demands increasing levels of adaptability and flexibility for employees. Work should be the means of serving people's needs and well-being, but are the current developments in work life serving this goal? In the book edited by Antoniou and Cooper, 72 academics and professionals from over 50 institutions in Europe, North America and Australia provide papers aimed at increasing our understanding of the conditions for more creative and healthier jobs in modern workplaces.

The title refers to organizational health psychology reflecting the assumption that in current work life the most important influences on employee health are mediated through psychological or psychosocial processes rather than caused by harmful physical or chemical exposures. Occupational health psychology is an established branch within psychology and at least two handbooks of occupational health psychology have been published in the first years of this decade. This new volume provides no guidance about the distinction between organizational health psychology and occupational health psychology, but the content of the book suggests that the first puts greater emphasis on management and organizational issues, adopts a less individual-focused approach, and is more inclusive.

The 42 chapters of the volume are grouped into six parts covering conceptualization, theoretical framework, stress management, stress in specific groups, stress as related to health and well-being, professional burnout and emotional intelligence. While a number of themes from love and healthy organizations to burnout, workaholism and work–family conflict are covered, the main emphasis remains on occupational stress. Indeed, a total of 20 chapters deal with stress from various viewpoints. For example, the reader is provided a description of the complex biological processes in our bodies that are triggered and maintained by stress; an updated review of a leading stress theory on the effects of effort–reward imbalance at work on cardiovascular disease and mental disorders, two health problems which are of great public health relevance in all Western countries; and a synthesis with an objective to integrate all the dominant theories of occupational stress from social comparison models to cybernetic and system theories.

An exciting new area introduced is research on the effects of structural work changes, such as staff reductions (downsizing) and workplace expansion. Currently, such strategies are commonly used by organizations with the aim of ensuring their survival and to increase corporate profitability. However, according to this volume, increasing evidence suggests that such turbulent organizational environments are far from optimal in terms of employee well-being and they may even increase morbidity and unhealthy behaviours among employees remaining at work. Research on temporary employment is another timely issue addressed in this book. The portion of temporary employees currently exceeds that of the unemployed and increased use of a temporary workforce reflects a structure of staffing that comprises a core of permanent employees and a fluctuating number of temporary employees to cope with peaks and troughs in production and services. We are shown that such a structure is not without consequences to employee well-being.

Illustrating the wide variety of orientations represented by the contributors, the volume contains a psychoanalytic-existential analysis of love and work. The main argument in this chapter is that people's choice of a career and an intimate partner share common elements; they

both are hypothesized to be related to unconscious attempts to resolve some basic childhood issues. An example from another end in the range of orientations is probably a review of epidemiological studies linking psychosocial factors and the development of *Actinobacillus actinomycetemcomitans* and other periodontal diseases.

This book covers a large number of different themes within 669 pages and, therefore, most chapters are relatively brief representing condensed descriptions of the essentials (with the reference lists) rather than thorough elaborations. The contributors include both established scientists in the field and relatively new but promising names. I believe that this volume will provide stimulating reading for academic and postgraduate student audience of psychology and medicine.

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Cognition and Intelligence: Identifying the Mechanisms of the Mind. Edited by R. J. Sternberg and J. E. Pretz. (Pp. xii + 345; £17.99; ISBN 0521534798 hb.) Cambridge University Press: Cambridge. 2005.

Nearly 50 years ago, Lee Cronbach appealed to cognitive and differential psychologists to collaborate, rather than ignore one another, to see whether their joint efforts would yield new insights into the nature of intelligence. Although his appeal appeared to have fallen on deaf ears, with the advantage of hindsight, it is now clear that Earl Hunt's analogy with the time it takes supertankers to change direction is nearer the mark. The pioneering work of Hunt himself and of Robert Sternberg in the 1970s has, in the past 20 years, swollen into a proverbial flood of research seeking to understand the cognitive basis of intelligence. This, the latest of Sternberg's edited books, provides a wide-ranging and very readable survey of this work.

So – what have we learned? Is it possible to point to any generally accepted conclusions that promise to stand the test of time? Edited books should surely present a diverse array of opinions, and the book under review is no exception – to the point where it is hard to see that there are any generally accepted conclusions at all. One of the more popular lines of research has been into the relationship between IQ test scores and such apparently simple tasks as reaction time and inspection time (RT and IT). According to the proponents of this research programme, this relationship shows that differences in general intelligence or *g* are due to differences in speed or efficiency of information processing. Here we have, on the one hand, Neubauer and Fink, confident that the relationship is robust, and Anderson claiming that the correlation between IQ and IT scores averages about 0·50 and can even get as high as 0·95. While Arthur Jensen does not even think it necessary to 'reiterate the evidence proving that RT and IT are related to *g*', since 'what ultimately needs to be discovered is the physical basis of differences in cognitive processing speed'. Set against this optimism, Ackerman insists that most studies have failed to show 'more than the most minimal correlations', while Stankov's view is that 'it is hard to understand the importance attached to such low, and frequently insignificant, correlations'. Disagreement and argument are, no doubt, an essential component of scientific advance, but an outsider might be forgiven for wondering whether these writers have been looking at the same evidence.

The relationship between IQ and working memory is the other big discovery. There is actually relatively little dispute that IQ scores correlate moderately well (in the range 0·30 to 0·60?) with performance on simple laboratory tasks described as tests of working memory. The defining feature of such a task, as opposed to simple memory span, is that it requires the simultaneous processing and storage of information. The distinction is illustrated by the difference between forward and backward digit span in the Wechsler tests: the former simply requires one to repeat a string of digits in the order they were read out; the latter requires one to repeat the digits in reverse order – i.e. to hold the string in memory while reading them out from last to first. Backward span correlates more highly with the rest of the Wechsler test than does forward span. So far, so good. But

consensus soon disappears. Advocates of the importance of working memory, here represented in a chapter by Hambrick, Kane and Engle, have argued that the latent factor underlying performance on a battery of working-memory tests may be virtually indistinguishable from the factor extracted from a battery of tests of fluid intelligence, with correlations between the two in the 0·80 to 0·90 range. Sceptics (discussed in a good chapter by Lohman) point out that the raw correlations between scores on working-memory tasks and IQ are rarely greater than 0·50, and more resolute sceptics have argued that such correlations are unsurprising since most, if not all, working-memory tests are indistinguishable from tests that appear in IQ test batteries. This last claim seems not wholly convincing. Where there is certainly room for debate and disagreement is whether working-memory tasks tap into some general process common to performance on any IQ test, as Hambrick *et al*. argue, or whether there are as many components to working memory as some theorists would argue there are to IQ. And, regardless of the position taken on this question, what are the cognitive operations that are actually common to working memory and IQ?

One line of evidence that strengthens the argument for a connection between working memory and IQ is neuroscientific. Functional imaging studies have shown that the dorsolateral prefrontal cortex is implicated in both. Chapters by Neubauer and Fink, and by Newman and Just, review much of this and related evidence – the latter more sceptical about the key role assigned by some to prefrontal cortex. There is always a temptation for psychologists to suppose that neuroscience can provide a solid basis for otherwise distressingly vague psychological theorizing. Differential psychologists seem to be no better able than others to resist this temptation. But there is a danger that we may be misled by the quasi-neural language. Thus, when Newman and Just write: 'fluid intelligence may be the product of an adaptive, flexible neural system … [and] represent the neural system's ability to adapt to dynamic changes in a complex cognitive process', it may be worth asking whether we would be equally impressed by the scientific status of these remarks if one omitted the word neural.

It would be wrong to end on a sceptical note. The nature of cognition and intelligence is an important, but not an easy, topic: if the research of the past 20 years has not answered all the questions that we can ask, it has surely made a start.

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