



Direct Line: +44 (0)20 7679 8540
Departmental Line: +44 (0)20 7679 5307
Fax: +44 (0) 020 7436 4276
E-mail: k.petrides@ucl.ac.uk
Web: www.psychometriclab.com

Dr. K. V. Petrides
London Psychometric Laboratory (UCL)
University College London
26 Bedford Way
London, WC1H 0AP
U.K.

K V Petrides BBA DipPsych MSc PhD CPsychol AFBPsS

Intelligence and Human Abilities: Structure, Origins and Applications

By Colin Cooper

London: Routledge ISBN 978-1848720671/Paperback/258 pp., £29.99

Anyone looking for an up-to-date, comprehensive, and balanced overview of research on human cognitive abilities from a classical perspective would do well to scrutinize *Intelligence and Human Abilities*. Colin Cooper's volume covers all of the key topics, including definitions, factor structure, antecedents, processes, and applications. The treatment is concise, lucid, and even-handed. Despite openly endorsing the London-school, g-centered approach to the study of intelligence, the book wholly avoids the polemical attitude sometimes associated with it. Cooper offers skilful summaries of controversial topics, such as group differences in IQ, that have consistently generated more heat than light in the scientific literature and beyond.

While there are no major weaknesses in the book, some topics and chapters stand out for their clarity and insight. I particularly welcomed the attention on the challenges faced by molecular genetic approaches to the study of individual differences. These

approaches do not seem to be fully mindful of the culs-de-sac that their trailblazing counterparts in the medical sciences have hit, frequently appearing in the form of mysterious conundrums, like the missing heritability problem (Zuk, Hechter, Sunyaev, & Lander, 2012). The short section on molecular genetics is part of an outstanding chapter on the social and biological origins of abilities, which is the longest in the book.

Speaking of outstanding chapters, my favourite was that on applications. It presents a very thorough review with masterly interpretations of evidence from the key areas of education, work, and health. The IQ validities are undoubtedly impressive, however, Cooper rightly reminds us that after over 100 years of research, the mechanisms underlying these relationships remain essentially unknown. Future editions could profitably expand this chapter into mental health, including an evaluation of emerging evidence that IQ may be positively related to depression and anxiety, particularly in clinical samples (Coplan et al., 2012; Penney, Miedema, & Mazmanian, 2015).

I suppose that in light of my main research interests, I should offer a brief comment concerning the chapter on alternative views of intelligence. Overall, I felt the coverage was adequate and sound. Cooper points out that much of this literature essentially falls under the remit of personality (Petrides, Pita, & Kokkinaki, 2007), while the rest is plagued by conceptual and psychometric limitations that are foreign to the standard literature on genuine cognitive abilities.

In the final chapter, Cooper presents a personal appraisal of intelligence research based on his extensive experience. I found myself agreeing with his general evaluation and would go as far as to say that the field of intelligence has arguably been the crowning achievement of psychological research in the 20th century. However, the question that currently looms large over it is “Quo vadis”? Faced with the, as yet unfulfilled, promises

of medical genetic methodologies on which the field has heavily banked and an atheoretical dataclasm showing that IQ predicts everything, from longitudinal changes in brain white matter microstructure to car accidents, it is not immediately clear where we can go from here or what it all means. Could Ian Deary and Robert Plomin turn out to be the last in the line of truly eminent intelligence researchers in the tradition of the London school?

In closing, I would like to draw attention to the research agenda for the field that Cooper sets out in the final chapter, where some of the crucial questions that have been pending for a while are mentioned. Fundamental questions, of which the Flynn effect (or should that be Tuddenham-Lynn-Flynn effect, given Tuddenham, 1948 and Lynn, 1982) is not even the oldest or most important, cannot be indefinitely deferred or ostensibly answered through wave after wave of speculation. It is to be hoped that at least some of these questions will have been convincingly answered by the next edition of this truly excellent book.

References

Coplan, J. D., Hodulik, S., Mathew, S. J., Mao, X., Hof, P. R., Gorman, J. M. & Shungu, D. C. (2012). The relationship between intelligence and anxiety: an association with subcortical white matter metabolism. *Frontiers in Evolutionary Neuroscience*. **3**:8. doi: 10.3389/fnevo.2011.00008

Lynn, R. (1982). IQ in Japan and the United States shows a growing disparity. *Nature*, *5863*, 222-223.

Penney, A. M., Miedema, V. C., & Mazmanian, D. (2015). Intelligence and emotional disorders: Is the worrying and ruminating mind a more intelligent mind? *Personality and Individual Differences, 74*, 90-93.

Petrides, K. V., Pita, R., & Kokkinaki, F. (2007). The location of trait emotional intelligence in personality factor space. *British Journal of Psychology, 98*, 273-289.

Tuddenham, R. D. (1948). Soldier intelligence in World Wars I and II. *American Psychologist, 3*, 54-56.

Zuk, O., Hechter, E., Sunyaev, S. R., & Lander, E. S. (2012). The mystery of missing heritability: Genetic interactions create phantom heritability. *Proceedings of the National Academy of Sciences, 109*, 1193-1198.

K. V. Petrides

London Psychometric Laboratory at UCL