



SIXTH  
EDITION

# PERSONNEL SELECTION

Adding Value Through People – A Changing Picture

**MARK COOK**

WILEY Blackwell

---

# Table of Contents

[Cover](#)

[Title Page](#)

[Preface to the sixth edition](#)

[Preface to the first edition](#)

[CHAPTER 1: Old and new selection methods](#)

[WHY SELECTION MATTERS](#)

[RECRUITMENT](#)

[APPLICATION SIFTING](#)

[IMPROVING APPLICATION SIFTING](#)

[OVERVIEW OF SELECTION METHODS](#)

[WHAT IS ASSESSED IN PERSONNEL SELECTION?](#)

[NATURE OF THE INFORMATION COLLECTED](#)

[WORK PERFORMANCE](#)

[FAIR EMPLOYMENT LAW](#)

[CURRENT SELECTION PRACTICE](#)

[REASONS FOR CHOICE OF SELECTION METHOD](#)

[KEY POINTS](#)

[KEY REFERENCES](#)

[USEFUL WEBSITES](#)

[CHAPTER 2: Validity of selection methods](#)

[RELIABILITY](#)

[VALIDITY](#)

[CRITERION VALIDITY](#)

[CONTENT VALIDITY](#)

[CONSTRUCT VALIDITY](#)

[CONVERGENT/DIVERGENT VALIDITY](#)

[CROSS-VALIDATION](#)

[INCREMENTAL VALIDITY](#)

[DIFFERENTIAL VALIDITY](#)

[MARGINAL TYPES OF VALIDITY](#)

[META-ANALYSIS](#)

[PROBLEMS WITH META-ANALYSIS](#)

[VALIDITY GENERALIZATION ANALYSIS](#)

[CRITICISMS OF VALIDITY GENERALIZATION](#)

[LATEST DEVELOPMENT IN VGA](#)

[KEY POINTS](#)

[KEY REFERENCES](#)

---

[CHAPTER 3: Job description, work analysis and competences](#)

[JOB DESCRIPTION AND PERSON SPECIFICATION](#)

[WORK ANALYSIS METHODS](#)

[SELECTED WORK ANALYSIS TECHNIQUES – AN OVERVIEW](#)

[WORK ANALYSIS AND PERSONALITY](#)

[RELIABILITY AND VALIDITY OF WORK ANALYSIS](#)

[BIAS IN WORK ANALYSIS](#)

[USES OF WORK ANALYSIS](#)

[USING WORK ANALYSIS TO SELECT WORKERS](#)

[SYNTHETIC VALIDATION](#)

[THE FUTURE OF WORK ANALYSIS](#)

[COMPETENCES/COMPETENCY MODELLING](#)

[KEY POINTS](#)

[KEY REFERENCES](#)

[USEFUL WEBSITES](#)

[CHAPTER 4: The interview](#)

[RELIABILITY AND VALIDITY](#)

[REASONS FOR POOR VALIDITY](#)

[IMPROVING THE INTERVIEW](#)

[STRUCTURED INTERVIEWS](#)

[CONSTRUCT VALIDITY OF THE INTERVIEW](#)

[TRUTHFULNESS OF INTERVIEW INFORMATION](#)

[HOW THE INTERVIEWER REACHES A DECISION](#)

[BIAS IN THE INTERVIEW](#)

[LAW AND FAIRNESS](#)

[KEY POINTS](#)

[KEY REFERENCES](#)

[USEFUL WEBSITES](#)

[CHAPTER 5: References and ratings](#)

[REFERENCES](#)

[VALIDITY](#)

[IMPROVING THE REFERENCE](#)

[UNSTRUCTURED REFERENCES](#)

[LAW AND FAIRNESS](#)

[RATINGS](#)

PEER OR CO-WORKER ASSESSMENTS

---

VALIDITY OF PEER RATINGS

KEY POINTS

KEY REFERENCES

CHAPTER 6: Tests of mental ability

OVERVIEW OF MENTAL ABILITY TESTS

INTERPRETING TEST SCORES

THE VALIDITY OF MENTAL ABILITY TESTS

ORGANIZATIONAL PERFORMANCE

*g* OR SPECIFIC COGNITIVE ABILITIES?

MENTAL ABILITY AND THE SUCCESS OF TEAMS

WHY MENTAL ABILITY TESTS PREDICT PRODUCTIVITY

LAW, FAIRNESS, AND MINORITIES

DEALING WITH ADVERSE IMPACT IN MENTAL ABILITY SCORES

OTHER WAYS OF ASSESSING MENTAL ABILITY

KEY POINTS

KEY REFERENCES

USEFUL WEBSITES

CHAPTER 7: Assessing personality by questionnaire

PERSONALITY QUESTIONNAIRES

USING PQs IN SELECTION

QUESTION 1: THE RIGHT PERSONALITY?

QUESTION 2: WILL HE/SHE DO THE JOB WELL?

QUESTION 3: HAS HE/SHE GOT A GOOD ATTITUDE TO WORK? ORGANIZATIONAL CITIZENSHIP

QUESTION 4: WILL HE/SHE BEHAVE BADLY AT WORK?

COUNTERPRODUCTIVE WORK BEHAVIOUR

THE SAGA OF HONESTY TESTS

QUESTION 5: WILL THE TEAM WORK WELL?

COMPLEXITIES OF PQ VALIDITY

IMPROVING PQ VALIDITY

THE PROBLEM OF FAKING

DEALING WITH FAKING

PQs, LAW AND FAIRNESS

KEY POINTS

KEY REFERENCES

USEFUL WEBSITES

## CHAPTER 8: Alternative ways of assessing personality

---

SELF-REPORT

PROJECTIVE TESTS

OTHERS' REPORTS

DEMONSTRATION EVIDENCE

RECORDED EVIDENCE

INVOLUNTARY EVIDENCE

KEY POINTS

KEY REFERENCES

## CHAPTER 9: Biodata and weighted application blanks

WEIGHTED APPLICATION BLANKS

BIODATA

CONSTRUCTING BIOGRAPHICAL MEASURES

VALIDITY

FAKABILITY

BIOGRAPHICAL MEASURES, FAIRNESS AND THE LAW

KEY POINTS

KEY REFERENCES

## CHAPTER 10: Assessment centres

THE PRESENT SHAPE OF ACs

RELIABILITY OF ACs

VALIDITY OF ACs

META-ANALYSES

RESERVATIONS ABOUT AC VALIDITY

THE DIMENSION × EXERCISE PROBLEM

LINE OF RESEARCH 1: TRYING TO FIND DIMENSIONS

LINE OF RESEARCH 2: IMPROVING THE ANALYSIS

LINE OF RESEARCH 3: IDENTIFYING DEFICIENCIES IN AC PRACTICE

ARGUMENT 1: 'NEVER MEANT TO BE'

ARGUMENT 2: THE EXERCISE EFFECT IS NOT RATER ERROR

ARGUMENT 3: ACs ARE REALLY SETS OF KEY TASKS, OR WORK SAMPLES

ARGUMENT 4: THE D×E PROBLEM IS NOT SPECIFIC TO ACs

CONSTRUCT VALIDITY

FAIRNESS AND THE ASSESSMENT CENTRE

KEY POINTS

KEY REFERENCES

## CHAPTER 11: Emotional intelligence and other methods

EMOTIONAL INTELLIGENCE

---

VALIDITY OF EI MEASURES

SITUATIONAL JUDGEMENT TESTS

EDUCATION

WORK SAMPLE TESTS

SELF-ASSESSMENTS

PHYSICAL TESTS

DRUG USE TESTING

SOCIAL NETWORKING WEBSITES

KEY POINTS

KEY REFERENCES

CHAPTER 12: Criteria of work performance

SUPERVISOR RATING

OBJECTIVE CRITERIA

OTHER ASPECTS OF WORK PERFORMANCE

NEW CRITERIA

STRUCTURE OF WORK PERFORMANCE

BIAS AND ASSESSMENT OF WORK PERFORMANCE

INGRATIATION AND REPUTATION

DYNAMIC CRITERIA

CRITERIA, FAIRNESS AND THE LAW

PREDICTOR OR CRITERION?

KEY POINTS

KEY REFERENCES

CHAPTER 13: Minorities, fairness and the law

BRITISH LAW

EUROPEAN UNION LAW

OVERVIEW

ADVERSE IMPACT

QUOTA HIRING

JOB-RELATEDNESS

PROVING SELECTION IS JOB-RELATED

UK PRACTICE

DISABILITY

DIFFERENTIAL VALIDITY AND TEST FAIRNESS

THE SHAPE OF THINGS TO COME

CONCLUSIONS

[KEY POINTS](#)

[KEY REFERENCES](#)

[USEFUL WEBSITES](#)

[CHAPTER 14: The value of good employees](#)

[HOW MUCH DOES WORKER PRODUCTIVITY VARY?](#)

[THE 'STAR' HYPOTHESIS](#)

[HOW MUCH IS A PRODUCTIVE WORKER WORTH?](#)

[CALCULATING THE RETURN ON SELECTION](#)

[PROVING SELECTION REALLY ADDS VALUE](#)

[THE APPLICANT'S PERSPECTIVE](#)

[FIT](#)

[KEY POINTS](#)

[KEY REFERENCES](#)

[CHAPTER 15: Conclusions](#)

[HOW TO SELECT](#)

[THE FUTURE OF SELECTION](#)

[References](#)

[Index](#)

[End User License Agreement](#)

## List of Tables

### Chapter 01

[Table 1.1 Traditional and new\(er\) selection assessment methods.](#)

[Table 1.2 Seven main aspects of applicants assessed in selection.](#)

[Table 1.3 Five categories of qualitatively different information, obtained by selection tests.](#)

[Table 1.4 Three surveys of UK selection, by CIPD \(2006\), IRS \(Murphy, 2006\) and Zibarras & Woods \(2010\).](#)

[Table 1.5 Summary of surveys of selection test use in Europe \(Dany & Torchy, 1994; Schuler \*et al.\*, 2007; König \*et al.\*, 2010\).](#)

### Chapter 02

[Table 2.1 Core and marginal types of validity in selection research.](#)

[Table 2.2 \(Fictitious\) correlations between school subject marks.](#)

[Table 2.3 Ghiselli's \(1973\) meta-analysis of ability test validity.](#)

[Table 2.4 Summary of four meta-analyses of the correlation between interview and mental ability.](#)

[Table 2.5 Validity generalization analysis of the data of Figure 2.4, based on data given by](#)

[Schmidt & Hunter \(1977\).](#)

---

[Table 2.6 VGA of Ghiselli's \(1973\) data on correlation between GMA and work performance for five levels of job complexity, using 'conventional' VGA, and VGA correcting for indirect range restriction.](#)

## Chapter 03

[Table 3.1 Position Analysis Questionnaire's \(PAQ\) six main divisions, and illustrative job elements.](#)

[Table 3.2 Work analysis by Position Analysis Questionnaire, showing choice of tests for plastic injection-moulding setters](#)

[Table 3.3 Illustration of synthetic validation in a local authority \(city\) workforce of 1,500.](#)

[Table 3.4 A personality-based work competency model proposed by Consiglio \*et al.\* \(2013\).](#)

## Chapter 04

[Table 4.1 Summary of three meta-analyses of interview validity, by Wiesner & Cronshaw \(1988\), Huffcutt & Arthur \(1994\) and McDaniel \*et al.\* \(1994\).](#)

[Table 4.2 Summary of three meta-analyses of structured interview validity by Wiesner & Cronshaw \(1988\), Huffcutt & Arthur \(1994\) and McDaniel \*et al.\* \(1994\).](#)

[Table 4.3 Meta-analysis of construct validity of unstructured and structured interviews.](#)

[Table 4.4 Some impression management \(IM\) tactics used in interviews, with examples.](#)

## Chapter 05

[Table 5.1 Survey of 1,331 US HR professionals about information sought in reference requests.](#)

[Table 5.2 Two early meta-analyses of reference check validity by Hunter & Hunter \(1984\) and Reilly & Chao \(1982\).](#)

[Table 5.3 Examples of words relating to five factors in letters of reference.](#)

[Table 5.4 Meta-analysis of peer rating and work performance.](#)

[Table 5.5 Summary of Norton's \(1992\) meta-analysis of peer rating and work performance.](#)

## Chapter 06

[Table 6.1 Six varied items typical of mental ability tests.](#)

[Table 6.2 Correlation between general mental ability and work performance, for nine general types of work.](#)

[Table 6.3 Summary of 14 meta-analyses of general mental ability and work performance, for 12 types of work.](#)

[Table 6.4 Average scores of accountants and lumberjacks conscripted into US Army during the Second World War, and 10th and 90th percentiles.](#)

## Chapter 07

[Table 7.1 A selection of PQ items and formats.](#)

[Table 7.2 The big five personality factors.](#)



[Table 7.3 Meta-meta-analysis of the big five and job performance.](#)

---

[Table 7.4 Personality and specialized work performance.](#)

[Table 7.5 Meta-meta-analysis of the big five and three measures of work performance.](#)

[Table 7.6 Meta-analyses of FFM and 'attitude' aspects of work performance.](#)

[Table 7.7 Summary of meta-analyses of correlations between FFM PQs and counterproductive work behaviours.](#)

[Table 7.8 Some questions of the type found in honesty tests.](#)

[Table 7.9 Meta-analysis of links between team personality and team performance.](#)

## Chapter 08

[Table 8.1 Meta-analysis of projective and PQ measures of entrepreneurial performance.](#)

[Table 8.2 Summary of two meta-analyses of others' reports of personality and work performance.](#)

[Table 8.3 Four sample items from personality tests.](#)

## Chapter 09

[Table 9.1 Some typical biodata items.](#)

[Table 9.2 A sample WAB item, and its scoring, from Mitchell & Klimoski \(1982\).](#)

[Table 9.3 Summary of validity of biodata for nine work-related outcomes.](#)

[Table 9.4 Summary of validity of biodata for six areas of work.](#)

## Chapter 10

[Table 10.1 Results of the AT&T Management Progress Study \(Bray & Grant, 1966\).](#)

[Table 10.2 Summary of three analyses of assessment centre validity.](#)

[Table 10.3 Convergent validity – assessing the same dimension in different exercises – for exercises of high and low relevance to that dimension.](#)

[Table 10.4 Summary of three meta-analyses of AC construct validity, correlating test with AC rating.](#)

## Chapter 11

[Table 11.1 Some \(fictitious\) items for assessing emotional intelligence.](#)

[Table 11.2 A fictitious situational judgement test question.](#)

[Table 11.3 Meta-analysis of criterion and construct validity of SJTs.](#)

## Chapter 12

[Table 12.1 Some examples of counterproductive behaviour, sorted into 11 classes, with number of CWBs in each class.](#)

[Table 12.2 Estimated correlation between four individual types of CPB, and all other types of CPB.](#)

[Table 12.3 Viswesvaran \*et al.\*'s \(2005\) 10 dimensions of effective work performance, with](#)

[examples for an academic psychologist.](#)

---

[Table 12.4 Meta-analysis of absence and four other work-performance measures.](#)

[Table 12.5 Meta-analytic estimates of true correlations between five aspects of work performance.](#)

[Table 12.6 Four meta-analyses of differences in white and African Americans' work performance, assessed objectively and subjectively.](#)

## Chapter 13

[Table 13.1 Key events in the development of fair employment legislation in Britain, USA, and European Union.](#)

[Table 13.2 Actual composition of the British House of Commons following the 2015 election and expected composition, based on the assumption that MPs are selected regardless of gender and ethnicity.](#)

[Table 13.3 White and minority British applicants for graduate recruitment schemes \(Scott, 1997\).](#)

## Chapter 14

[Table 14.1 Correlation between procedural and distributive justice, and five outcomes.](#)

[Table 14.2 Relationship of person–organization fit to six outcomes.](#)

## Chapter 15

[Table 15.1 Summary of the validity of different selection tests for work performance.](#)

[Table 15.2 Summary of 12 selection tests by five criteria.](#)

# List of Illustrations

## Chapter 01

[Figure 1.1 Successive stages in selecting academic staff in a British university.](#)

## Chapter 02

[Figure 2.1 Height plotted against weight, showing a positive correlation of 0.75.](#)

[Figure 2.2 Three types of correlation in an assessment centre with three dimensions \(1 to 3\) rated in each of two exercises \(A and B\).](#)

[Figure 2.3 Schematic representation of the relationship between two predictors, e.g. mental ability test and interview, and work performance, where \(a\) the predictors are not highly correlated and \(b\) they are highly correlated.](#)

[Figure 2.4 Four distributions of validity coefficients, for four combinations of test and criterion \(Ghiselli, 1966b\).](#)

[Figure 2.5 Three funnel plots, of sample size and correlation. The Xs show the actual distribution of correlations in the meta-analysis. In Figure 2.5c the Ms show the presumed missing values, according to trim and fill analysis.](#)

[Figure 2.6 Fictitious data illustrating restriction of range, in data on the correlation between fitness and running speed.](#)

---

[Figure 2.7 Distribution of validity coefficients for 63 sub-samples, each of 68, drawn random from a larger sample of 1455 US postal workers.](#)

[Figure 2.8 Indirect restriction of range. Observable variables are in \*italic\*. True variables are in \*\*bold\*\*. The lines show paths between the variables.](#)

## Chapter 04

[Figure 4.1 Validity of situational and behaviour description interviews for jobs of high, medium and low complexity.](#)

## Chapter 05

[Figure 5.1 Extract from a competence-based reference request.](#)

[Figure 5.2 Schematic representation of the study by Baxter \*et al.\* \(1981\) of letters of reference](#)

[Figure 5.3 A Brunswik lens model of the unstructured reference letter.](#)

[Figure 5.4 Rating formats. \(a\) graphic rating scales; \(b\) \(invented\) example of behaviourally anchored rating scale \(BARS\), for rating occupational psychologists.](#)

## Chapter 06

[Figure 6.1 Distribution of mental ability scores, showing mean, standard deviations, percentiles, and IQs.](#)

[Figure 6.2 Corrected validity of GATB General + Verbal + Numerical composite with work performance, for five levels of job complexity.](#)

[Figure 6.3 Hierarchy of general mental ability, and specific cognitive abilities.](#)

[Figure 6.4 Linear vs. threshold models of the relationship between mental ability and work performance.](#)

[Figure 6.5 Schematic path diagram showing the paths from mental ability to work performance.](#)

## Chapter 07

[Figure 7.1 Quadrant model of extraversion and neuroticism.](#)

[Figure 7.2 \(Partial\) hierarchical model of personality, at three levels, of two factors, five factors, and 30 facets. Only the neuroticism facets are listed.](#)

[Figure 7.3 Effect of directed faking, and applicant status on PQ measures of the big five. Baseline represents averages for unfaked big five, or present employees.](#)

## Chapter 08

[Figure 8.1 A picture similar to those used in the Thematic Apperception Test.](#)

[Figure 8.2 An ink blot similar to those used in Rorschach test.](#)

[Figure 8.3 Links between six generic assessment centre exercises, and FFM, according to experts. √ indicates experts rated that exercise likely to reflect that personality factor.](#)

[Figure 8.4 A letter attributed to Jack the Ripper.](#)

---

## Chapter 09

[Figure 9.1 Results from the first published weighted application blank \(WAB\).](#)

[Figure 9.2 Predictive validity of the Career Profile System.](#)

[Figure 9.3 Schematic representation of the relationship between AIB score and success in selling insurance.](#)

[Figure 9.4 Results obtained with the Aptitude Index Battery \(AIB\) between 1951 and 1954.](#)

## Chapter 10

[Figure 10.1 The dimension  \$\times\$  exercise matrix underlying every assessment centre. XXX denotes influence is assessed by exercise A.](#)

[Figure 10.2 Links between seven generic AC dimensions, and the five-factor model of personality, according to experts.](#)

## Chapter 11

[Figure 11.1 A sample item from an in-tray test.](#)

## Chapter 12

[Figure 12.1 Schematic representation of true work performance, and actual criterion.](#)

[Figure 12.2 Possible hierarchical structure of work performance, suggested by Crites \(1969\).](#)

[Figure 12.3 Average ratings by white and African American supervisors, of white and African American workers.](#)

## Chapter 13

[Figure 13.1 Stages in deciding whether a selection test is legally fair.](#)

[Figure 13.2 Two types of unfair test, showing \(a\) slope difference, and \(b\) intercept difference.](#)

[Figure 13.3 A fair test, in which test scores predict productivity equally accurately for minority and majority applicants.](#)

## Chapter 14

[Figure 14.1 Distribution of productivity for 199 hosiery loopers \(Tiffin, 1943\).](#)

[Figure 14.2 The distribution of employee productivity, showing the percentile points used in Rational Estimate technique to measure it.](#)

[Figure 14.3 Favourability ratings of nine selection methods, across ten surveys.](#)

---

# Personnel Selection

## Adding Value Through People – A Changing Picture

SIXTH EDITION

Mark Cook

**WILEY** Blackwell

This edition first published 2016  
© 2016 John Wiley & Sons, Ltd.

---

Edition history: John Wiley & Sons, Ltd. (1e, 1988; 2e, 1993; 3e, 1998; 4e, 2004; 5e, 2009)

*Registered Office*

John Wiley & Sons, Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK

*Editorial Offices*

350 Main Street, Malden, MA 02148-5020, USA

9600 Garsington Road, Oxford, OX4 2DQ, UK

The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK

For details of our global editorial offices, for customer services, and for information about how to apply for permission to reuse the copyright material in this book please see our website at [www.wiley.com/wiley-blackwell](http://www.wiley.com/wiley-blackwell).

The right of Mark Cook to be identified as the author of this work has been asserted in accordance with the UK Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, except as permitted by the UK Copyright, Designs and Patents Act 1988, without the prior permission of the publisher.

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books.

Designations used by companies to distinguish their products are often claimed as trademarks. All brand names and product names used in this book are trade names, service marks, trademarks or registered trademarks of their respective owners. The publisher is not associated with any product or vendor mentioned in this book.

**Limit of Liability/Disclaimer of Warranty:** While the publisher and author have used their best efforts in preparing this book, they make no representations or warranties with respect to the accuracy or completeness of the contents of this book and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. It is sold on the understanding that the publisher is not engaged in rendering professional services and neither the publisher nor the author shall be liable for damages arising herefrom. If professional advice or other expert assistance is required, the services of a competent professional should be sought.

*Library of Congress Cataloging-in-Publication Data*

Names: Cook, Mark, 1942– author.

Title: Personnel selection : adding value through people – a changing picture / Mark Cook.

Description: Sixth edition. | Chichester, West Sussex, UK : John Wiley & Sons, 2016. | Includes bibliographical references and index.

Identifiers: LCCN 2015039086 (print) | LCCN 2016000497 (ebook) | ISBN 9781118973592 (cloth) | ISBN 9781118973585 (pbk.)

ISBN 9781118973561 (ePub) | ISBN 9781118973578 (Adobe PDF)

Subjects: LCSH: Employee selection.

Classification: LCC HF5549.5.S38 C66 2016 (print) | LCC HF5549.5.S38 (ebook) | DDC 658.3/112–dc23

LC record available at <http://lcn.loc.gov/2015039086>

A catalogue record for this book is available from the British Library.

---

## Preface to the sixth edition

Every chapter of this sixth edition has been revised to incorporate new research and new ideas, so the amount of change in each chapter gives an indication of much new research has been reported in each area. The chapters on personality and assessment centres have needed the most revision. In order to keep the book within a manageable and affordable length a lot of older material has had to be removed, but I have tried to keep some historically important material. [Chapter 11](#) covers a new topic, the contribution of social networking sites to selection. Two chapters have needed much less revision. One is [Chapter 9](#), on biodata, where conventional paper and pencil measures may have been supplanted by interactive equivalents, which, however, do not seem to have been researched much, if at all. The other is [Chapter 5](#), on the letter of reference, which has never been researched adequately, despite being so widely used. Every chapter has been rewritten even where there is not all that much new research to describe.

Established truths, or beliefs, continue to be questioned. Issues formerly described as finally settled and not needing any further discussion have been reopened, notably differential validity (whether the correlation between test and work performance might be different for different sections of the population, most particularly for white and non-white Americans). Another ‘closed’ issue that has been reopened is the importance, or unimportance, of specific abilities compared with general mental ability. There certainly seems to be a trend for things that were formerly described confidently as *not a problem* to be appearing perhaps to pose a problem after all.

There is growing awareness of how different selection tests correlate, which tends to cast doubt on approaches that emphasize the paramount importance of matching the test to the job. Emphasis on identifying separate aspects of work performance, notably organizational citizenship, counterproductive work behaviour and adaptability, runs in parallel with the suggestion that there might be a tendency for all measures of work performance to be positively correlated, the ‘monolithic’ hypothesis.

To keep the list of references to a reasonable length, references are not necessarily given for points that are not central to selection, e.g. heritability, or personality theory.

The key references sections at the end of each chapter are selected to be accessible, meaning they are written in English, and so far as possible obtainable through PsychInfo or other online systems. This tends to mean journal articles are included, whereas chapters in books are not.

Certain types of material I have generally not included, including simulations of work using students and ‘Monte Carlo’ simulations in which sets of data are generated according to certain rules, then analysed as if they were ‘real’ data. I have always thought these an example of *getting out what you put in*, and not very useful.

One area that might be moving towards becoming important, but also controversial, could be the role of commercial interests in general, and test publishers in particular. To declare my interests in this area, I have been involved in the publication of psychological tests in the past, but am not now.

I would like to thank Swansea University for all their help with library and other facilities, and Karen Howard for her invaluable continuing support.





---

## Preface to the first edition

When I first proposed writing this book, I thought it self-evident that personnel selection and productivity are closely linked. Surely an organization that employs poor staff will produce less, or achieve less, than one that finds, keeps and promotes the right people. So it was surprising when several people, including one anonymous reviewer of the original book proposal, challenged my assumption, and argued that there was no demonstrated link between selection and productivity.

Critics are right, up to a point – there has never been an experimental demonstration of the link. The experiment could be performed, but it might prove very expensive. First, create three identical companies. Second allow company A to select its staff by using the best techniques available, require company B to fill its vacancies at random (so long as the staff possess the minimum necessary qualifications), and require company C to employ the people company A identified as least suitable. Third, wait for a year and then see which company is doing best, or – if the results are very clear-cut – which companies are still in business. No such experiment has been performed, although fair employment laws in the USA have caused some organizations to adopt at times personnel policies that are not far removed from the strategy for company B.

Perhaps critics only meant to say that the outline overlooked other more important factors affecting productivity, such as training, management, labour relations, lighting and ventilation, or factors which the organization cannot control such as the state of the economy, technical development, foreign competition, and political interference. Of course all of these affect productivity, but this does not prove that – other things being equal – an organization that selects, keeps and promotes good employees will not produce more, or produce better, than one that does not.

Within-organization factors that affect productivity are dealt with by others writings on industrial/organizational psychology. Factors outside the organization, such as the state of world trade, fall outside the scope of psychology.

*Swansea, 1995*

---

# CHAPTER 1

## Old and new selection methods

### *We've always done it this way*

## WHY SELECTION MATTERS

Clark Hull is better known, to psychologists at least, as an animal learning theorist, but very early in his career he wrote a book on aptitude testing (Hull, 1928), and described ratios of output of best to worst performers in a variety of occupations. Hull was the first psychologist to ask how much workers differ in productivity, and he discovered the principle that should be written in letters of fire on every HR manager's office wall: *the best is twice as good as the worst*.

Human resource managers sometimes find they have difficulty convincing colleagues that HR departments also make a major contribution to the organization's success. Because HR departments are neither making things, nor selling things, some colleagues think they do not add any value to the organization. This represents a very narrow approach to how organizations work, which overlooks the fact that an organization's most important asset is its staff. Psychologists have devised techniques for showing how finding and keeping the right staff adds value to the organization. Rational Estimate technique (described in detail in [Chapter 14](#)) estimates how much workers doing the same job vary in the value of their contribution. One 'rule of thumb' this research generated states that *The value of a good employee minus the value of a poor employee is roughly equal to the salary paid for the job*. If the salary for the job in question is £50,000, then a good employee, in the top 15%, is worth £50,000 more each year than one in the bottom 15%. Differences in value of the order of £50,000 per employee mount up across an organization. Hunter and Hunter (1984) generated a couple of examples, for the public sector in the USA.

- A small employer, the Philadelphia police force (5,000 employees), could save \$18 million a year by using psychological tests to select the best.
- A large employer, the US Federal Government (4 million employees), could save \$16 billion a year. Or, to reverse the perspective, the US Federal Government was losing \$16 billion a year, at 1980s prices, by not using tests.

Some critics see a flaw in such calculations. Every company in the country cannot employ the *best*, for example, computer programmers; someone has to employ *the rest*. Good selection cannot increase national productivity, only the productivity of employers that use good selection methods to grab more than their fair share of talent. At present, employers are – largely – free to do precisely that. The rest of this book explains *how*.

## RECRUITMENT

### Traditional methods

[Figure 1.1](#) summarizes the successive stages of recruiting and selecting an academic for a British university. The *advertisement* attracts applicants, who complete and return an *application form*. Some applicants' *references* are taken up; the rest are excluded from further consideration. Applicants (As)

with satisfactory references are shortlisted, and invited for *interview*, after which the post is filled. ~~The employer tries to attract as many As as possible, then pass them through a series of filters, until the number of surviving As equals the number of vacancies.~~

# ADVERTISEMENT

---

APPLICANTS

Consider  
further

REFERENCES

Consider  
further

INTERVIEW

Select

Reject

Reject

Reject

## Recruitment sources

There are many ways employers can try to attract applicants: advertisements, agencies – public or private, word of mouth, ‘walk-ins’ (people who come in and ask if there are any vacancies), job fairs and the Internet. Employers should analyse recruiting sources carefully to determine which find good employees who stay with them. Employers also need to check whether their recruitment methods are finding a representative applicant pool, in terms of gender, ethnicity, and disability. Newman and Lyon (2009) investigate targeted recruiting, through the wording of advertisements for job. They suggest that saying the organization is ‘results oriented’ will tend to attract more As high in conscientiousness, and saying the organization is ‘innovative’ will attract more As high in mental ability. Later chapters will describe research showing As high in conscientiousness and mental ability tend to make better employees. Newman and Lyon suggest the right advertisement can attract such applicants, both overall and from minorities, so meeting the twin aims of many employers: good employees *and* a representative workforce.

## Realistic job previews

Any organization can paint a rosy picture of what is really a boring and unpleasant job because they fear no one would apply otherwise. In the USA realistic job previews (RJPs) are widely used to tell applicants what being, for example, a call-centre worker is really like: fast-paced, closely supervised routine to the point of being boring. Earnest, Allen and Landis’s (2011) analysis confirms the results of several earlier reviews that there is a very modest link with reduced turnover, suggesting RJPs may be worth using, given that RJPs cost employers very little whereas turnover costs them a lot. Earnest *et al.* suggest RJPs work by making As see the employer as more honest.

## Informal recruitment

Applicants are sometimes recruited by word of mouth, usually through existing employees. Besides being cheaper, the grapevine finds employees who stay longer (low *turnover*) possibly because they have a clearer idea what the job really involves. Zottoli and Wanous (2000) report informal recruits on average do slightly better work; the difference is small ( $d = 0.08$ ; page 31) but is achieved very cheaply. However, fair employment agencies, for example the (British) Equality and Human Rights Commission, generally frown on informal recruitment; they argue recruiting an all-white workforce’s friends is unfair because it tends to perpetuate an all-white workforce. Weller *et al.* (2009) report data from the German Socio-Economic Panel Study, nearly 3,000 people, representative of the whole German working population, tracked over five years. Weller *et al.* confirm that informal recruitment results in lower turnover: more employees recruited through agencies or advertisement leave in the first two years, and leave sooner, departures peaking at 9 months compared with 17 months for employees recruited through informal contacts.

## New technology and recruitment

Advertising, making applications, sifting applications and even assessment can now be carried out electronically, which can make the whole process far quicker. People even talk of making ‘same-day offers’. More and more jobs are advertised on the Internet, through the employer’s own website or through numerous recruitment sites. People seeking jobs can post their details on websites for

potential employers to evaluate, which gives the job seeker an opportunity that did not exist before. Most employers now use electronic application systems, eliminating the conventional paper application form. Internet recruitment can greatly increase the number of As, which is good for the employer if it broadens the field of high-calibre As, but it does also create work sorting through a mountain of applications.

## APPLICATION SIFTING

The role of the application form (AF), or its new technology equivalent, is to act as first filter, choosing a relatively small number of applications to process further, called *sifting*. Sifting can take up a lot of time in HR departments so any way of speeding it up will be very valuable, so long as it is fair and accurate. Research suggests sifting is not always done very effectively. Machwirth, Schuler and Moser (1996) used *policy capturing* analysis, which works back from the decisions HR make about a set of applications to infer how HR decides. Machwirth *et al.* showed what HR *do* often differ from what they *say*. Managers said they sifted on the basis of proven ability and previously achieved position, but in practice rejected applicants because the application looked untidy or badly written. McKinney *et al.* (2003) analysed how US campus recruiters used grade point average (GPA; college course marks) to select for interview. Some chose students with high marks, which is the logical use of the information, given that GPA does predict work performance to some extent, and that it is linked to mental ability, which also predicts work performance. A second large group ignored GPA altogether. A third group selected for lower GPA, screening out any As with high grades, which does not seem a good way to sift, given the link between work performance and mental ability. The choice of strategy seemed essentially idiosyncratic, and not linked to type of job or employer.

### Accuracy and honesty

Numerous surveys report that alarming percentages of AFs, résumés and CVs contain information that is inaccurate, or even false. These surveys often seem to have a 'self-serving' element, being reported by organizations that offer to verify information supplied by As; not much independent research has been reported. Goldstein (1971) found many applicants for nursing vacancies exaggerated both previous experience and salary. More seriously, a quarter gave a reason for leaving that their previous employer did not agree with, and 17% listed as their last employer someone who denied ever having employed them. McDaniel, Douglas, and Snell (1997) surveyed marketing, accounting, management and computing professionals, and found that 25% to 33% admitted misrepresenting their experience or skills, inflating their salary, or suppressing damaging information, such as being sacked. Keenan (1997) asked British graduates which answers on their application forms they had 'made up ... to please the recruiter'. Hardly any admitted to giving false information about their degree, but most (73%) admitted they were not honest about their reasons for choosing that employer, and 40% felt no obligation to be honest about their hobbies and interests. Electronic media, such as the Internet, do not bypass these problems. It is just as easy to lie through a keyboard as it is on paper or in person.

## RESEARCH AGENDA

---

- The accuracy of CV and application form information.
- What sort of information is wrongly reported.
- What sort of people report false information.
- Why people report wrong information.
- Whether the amount of incorrect information is increasing.
- The role of careers advice, coaching, self-help books and websites.

## Fairness and sifting

Equal opportunities (EO) agencies in the USA have produced long lists of questions that application forms should not ask for one reason or another. Some are obvious: ethnicity, gender, and disability (because the law forbids discrimination in all three). Others are less obvious: for example AFs should not ask about driving offences, arrests or military discharge, because some minorities have higher rates of these, so the question may create indirect discrimination. Questions about availability over holidays or weekends may discourage some religious minorities. A succession of surveys (reviewed by Kethley & Terpstra, 2005) have consistently shown that most US employers seem unaware of, or unconcerned by, this guidance and continue to ask questions the agencies say they should avoid. Kethley and Terpstra review 312 US Federal cases involving AFs, and find complaints centred on sex (28%), age (25%), and race (12%). Some questions listed as ‘inadvisable’ – military discharge, marital status, arrest – have never been the subject of a court case. Internet recruitment and selection could raise another set of ‘fairness’ issues, because not everyone has access to the Internet. In 2014 a UK government-run recruitment system caused some embarrassment – to itself and the government – by advertising vacancies as suitable for ‘recent graduates’, alleged to be a code word for ‘young’.

## Bias in sifting

Many studies have used the *paper applicant* method, which prepares sets of equally suitable As who differ in one key feature – gender, age, having a beard, etc. – then has HR staff rate their suitability. This is an easy type of research to do, and one that usually ‘gets results’, by finding evidence of bias:

- Davison and Burke (2000) reviewed 49 studies of gender bias, and found both male and female sifters biased against female As. The less job information is given, the greater the bias.
- Ding and Stillman (2005) reported New Zealand data showing overweight female As tend to be sifted out.
- Correll, Benard and Paik (2007) find women with children tend to be sifted out, but men with children are not, and may even be favoured.

Paper applicant research has a flaw, however: the sifters know they are being scrutinized by psychologists, so may be on their best behaviour. Also they are not really hiring As, and will not have to work with the people they ‘select’.

Research on sifting in the USA had reached the reassuring conclusion that it seemed free of racial bias, but a study by Bertrand and Mullainathan (2004) suggested there may be a problem after all.

They used a different approach, called the *audit* technique. They sent their 'paper applicants' to real employers, applying for real jobs, and counted how many were shortlisted for interview. Choice of first name identified A as white or African American. (Americans will assume 'Brad' and 'Carrie' are white, while 'Aisha' and 'Leroy' are African American). For every 10 'white' As called for interview there were only 6.7 'African Americans'; African Americans were being sifted out by ethnicity. Bertrand and Mullainathan could argue their data show what is really happening in the real US job market, which justifies the slightly unethical practice of sending employers fake job applications. The International Labour Organization seems to approve, for it publishes a manual on how to conduct 'natural experiments' to test for discrimination. Some research, described in [Chapter 4](#), takes this method a step further, by accepting invitations to interview, and noting how the interview proceeds. The audit method is in one respect even easier than the paper person method, because HR do not have to agree to participate. Hoque and Noon (1999) wrote to British employers enquiring about possible vacancies, not applying for a specific job, calling themselves 'Evans', implying a white person, or 'Patel', implying a South Asian person. 'Evans' got on average slightly longer and more helpful replies. McGinnity and Lunn (2011) find Irish applicants in Ireland twice as likely as African, Asian or German applicants to be interviewed. McGinnity and Lunn note the effect seemed stronger than found elsewhere and suggest this may reflect the low number of non-Irish people in Ireland, and a strong feeling of national identity. The data were collected between March and September 2008, just before the financial crisis that started the recession; a replication today would be interesting. In the Netherlands, applicants with Arab-sounding names are four times less likely to be called back by the employer (Derous, Ryan & Nguyen, 2012). Agerström *et al.* (2012) get the same result in Sweden. It is sometimes argued that providing more information about people will avoid 'snap' judgements based on apparent race or nationality, but Agerström *et al.* find that providing information about Erik's coldness and lack of commitment or Hassan's warmth and high commitment did not prevent discrimination. Research has widened to include other possibly discriminated-against classes of applicant.

## **Social class**

Jackson (2009) confirms the continuing importance of social class in Britain. Applicants with high-status names (Charles Bartle-Jones vs Gary Rodgers) or with high-status pastimes (polo vs darts), or who have been to public (i.e. private) rather than state schools get (slightly) more favourable responses from employers.

## **Pregnancy**

Morgan *et al.* (2013) list four elements of some US employers' perception of pregnant women as job applicants: lower competence, lack of commitment, inflexibility, and as needing 'accommodation' (changes in working conditions or hours etc.). Morgan *et al.* employ a variant of the 'audit' approach in which women go into a department store and ask if it has any jobs, and to complete an application form. Sometimes they wear a pregnancy prosthesis that makes them look about five months pregnant and they are provided with four different scripts to counter one of the four stereotypes listed above: for example, 'I have the help I need so I can work whenever you need me'. The scripts had some effect in reducing discrimination.

## **Age**

Ng and Feldman (2012) list six common stereotypes of older workers: that they are less motivated,



- **[click Jean-Paul Sartre: Basic Writings book](#)**
- [read online The Political Philosophy of Benjamin Franklin \(The Political Philosophy of the American Founders\)](#)
- **[Black Coffee \(Hercule Poirot, Book 7\) here](#)**
- [download \*The Humanure Handbook: A Guide to Composting Human Manure \(3rd Edition\)\*](#)
- [War, So Much War here](#)
  
- <http://korplast.gr/lib/Jean-Paul-Sartre--Basic-Writings.pdf>
- <http://academialanguagebar.com/?ebooks/Where-Were-You---America-Remembers-The-JFK-Assassination.pdf>
- <http://cambridgebrass.com/?freebooks/Black-Coffee--Hercule-Poirot--Book-7-.pdf>
- <http://korplast.gr/lib/The-Humanure-Handbook--A-Guide-to-Composting-Human-Manure--3rd-Edition-.pdf>
- <http://www.1973vision.com/?library/War--So-Much-War.pdf>