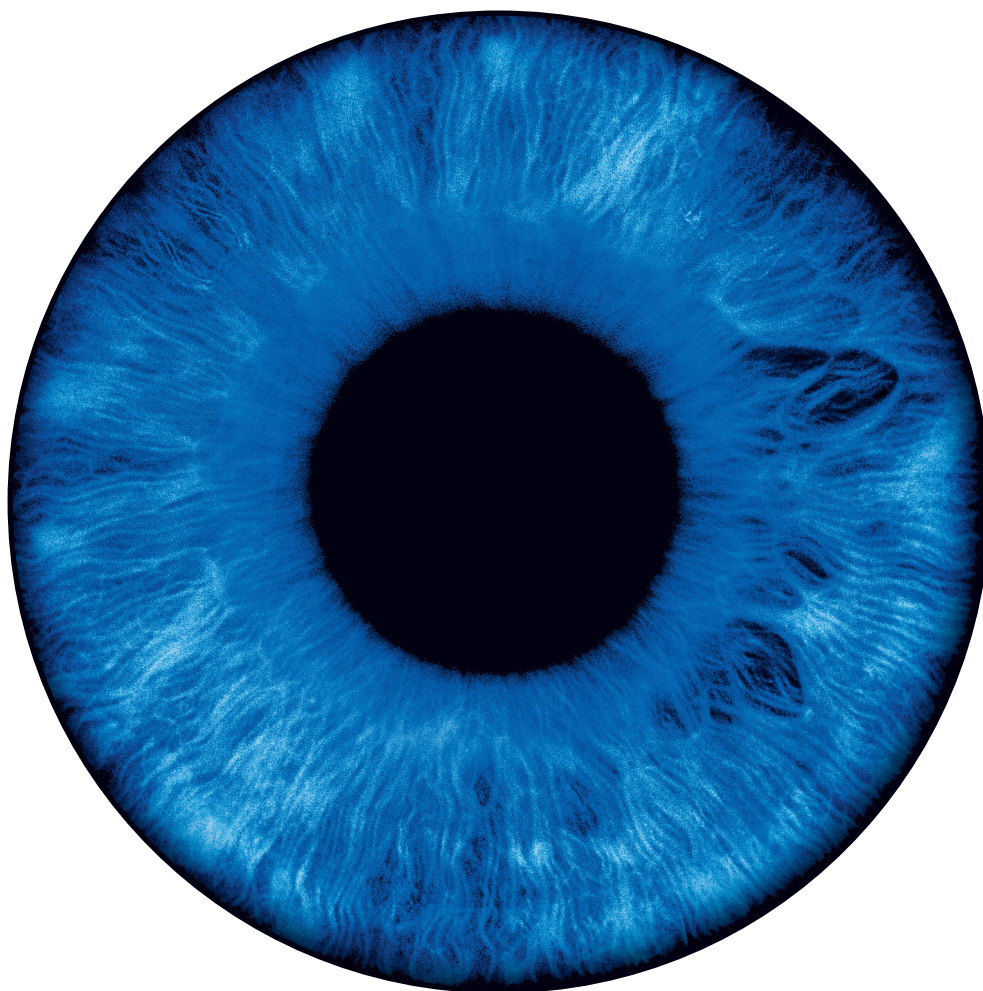




PSYCHOLOGY AS

FOR AQA A



CARDWELL CLARK MELDRUM

FOURTH EDITION

William Collins' dream of knowledge for all began with the publication of his first book in 1819. A self-educated mill worker, he not only enriched millions of lives, but also founded a flourishing publishing house. Today, staying true to this spirit, Collins books are packed with inspiration, innovation and practical expertise. They place you at the centre of a world of possibility and give you exactly what you need to explore it.

Collins. Do more.

Published by HarperCollinsPublishers Limited
77–85 Fulham Palace Road
Hammersmith
London W6 8JB

Browse the complete Collins catalogue
at **www.collinseducation.com**

© HarperCollinsPublishers Limited 2008

Psychology for A Level first published 1996

First AS edition published 2000

Second edition first published 2003

Third edition first published 2008

Reprint 10 9 8 7 6 5 4 3 2 1

ISBN 978-0-00-725503-0

The authors assert the moral right to be identified as the authors of this work.

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, without the prior permission of the Publisher or a licence permitting restricted copying in the United Kingdom issued by the Copyright Licensing Agency Ltd, 90 Tottenham Court Road, London W1T 4LP.

British Cataloguing in Publication Data.

A cataloguing record for this publication is available from the British Library.

Commissioned by Marie Insall

Project managed by Hugh Hillyard-Parker

Edited by Rosamund Connelly

Cover design by Oculus

Internal design template by Jordan Publishing Design

Typesetting by Hugh Hillyard-Parker

Cartoons by Mike Parsons, Barking Dog Art, Gloucestershire

Illustrations on pp. 150, 153 and 171 by Oxford Designers and Illustrators Ltd

Index compiled by Christine Boylan

Production by Simon Moore

Printed and bound by

Acknowledgements

Mike Cardwell acknowledges his enormous debt to his ever-patient wife Denise. She provides the secure emotional base that allows him the luxury of long hours spent staring at a computer screen and 'doing' psychology.

Liz Clark would like to thank her husband, Charley, for his continued support and patience through both the planned and unplanned periods of disruption to home life during this latest major editing project. Also, to family and friends near and far for always being there to provide those all-important words of support and encouragement when deadlines loom and threaten to take over one's entire life. Finally, for children of friends and colleagues who are studying AS psychology, using our book – there's nothing like some robust and focused feedback from a lively group of psychology students to trigger significant improvements to this latest edition!

Claire Meldrum once again would like to thank Stuart upon whose encouragement and steadfast support she can always depend. Thanks also go to her past students and colleagues for their insights and constructive comments over many years.

The editors would also like to thank the staff at HarperCollins, particularly Marie Insall whose lively, hands-on approach has cheered us on our way and kept us on our toes! Marie's attention to detail, commitment and enthusiasm for this book has been an inspiration throughout. We also wish to thank Hugh Hillyard-Parker, who once again is responsible for the book's editorial production.

Mike Cardwell, Liz Clark and Claire Meldrum
April 2008

Contents

Chapter 1	Psychology, psychologists and research methods	2
	<i>Liz Clark, Graham Davies</i>	
Topic 1	What is psychology?	3
Topic 2	Research methods and techniques	12
Chapter 2	Investigation design, data analysis and presentation	36
	<i>Graham Davies (revised by Liz Clark)</i>	
Topic 1	Investigation design	37
Topic 2	Data analysis and presentation	62
Chapter 3	Memory	78
	<i>Jane Willson (revised by Claire Meldrum)</i>	
Topic 1	Models of memory	79
Topic 2	Memory in everyday life	95
Chapter 4	Early social development	116
	<i>Cara Flanagan (revised by Mike Cardwell)</i>	
Topic 1	Attachment	117
Topic 2	Attachment in everyday life	137
Chapter 5	Stress	148
	<i>Simon Green (revised by Mike Cardwell)</i>	
Topic 1	Stress as a bodily response	149
Topic 2	Stress in everyday life	157
Chapter 6	Social influence	180
	<i>Claire Meldrum</i>	
Topic 1	Social influence	181
Topic 2	Social influence in everyday life	203
Chapter 7	Psychopathology (Abnormality)	216
	<i>Pamela Prentice, Jane Willson (revised by Claire Meldrum)</i>	
Topic 1	Defining and explaining psychological abnormality	217
Topic 2	Treating abnormality	237
Chapter 8	Preparing for the AS examination	250
	<i>Paul Humphreys, Mike Cardwell</i>	
Answers to activities		272
Glossary		279
References		284
Index		292

Using the book

This book provides detailed coverage of all aspects of Specification A of the AS psychology course offered by the Assessment and Qualifications Alliance (AQA).

What's new in A-level psychology?

The most important change is that the Qualifications Curriculum Authority (QCA) has classified psychology as a science and this is reflected in the new AQA specification.

How has this affected the new specification?

Since psychology is a science, students will now study psychological research and scientific methodology. This has been incorporated into the specification as *How Science Works*, which is a set of core concepts that enable the student to understand and contextualize science for themselves, and also to appreciate how scientists investigate scientific phenomena in order to explain the world about us. These concepts are shown in detail in the subject specification published by AQA (www.aqa.org.uk).

We like to think of *How Science Works* as a thread of principles that run throughout your entire AS psychology course and that hold all the key elements together. Thus, *How Science Works* isn't something that can be studied in isolation, but rather is intrinsic to all aspects of the study of psychology.

The other significant change in the new specification is that research methods are now studied in the context of specific areas of psychology rather than in isolation.

How are these changes reflected in this book?

How Science Works



We have woven *How Science Works* into the main text – from Chapter 1 to Chapter 8 – and into the key features of the book and we flag up its presence by using an icon (shown above), so that you can see exactly when you are practising these skills.

Research Methods



To enable you to understand psychological research fully, we first take a look at the role it plays in the context of psychology and the work undertaken by psychologists (Chapter 1). We then develop this further in Chapter 2, where we provide an in-depth look at specific types of research method. Finally, we incorporate the study of research methods into the specific areas of psychology of the AS course: Cognitive, Developmental, Biological, Social and Individual Differences. In each chapter, you'll find research methods flagged up by an icon (shown above) whenever it occurs in the main text and in individual features.

What are the benefits of using this book?

- **A full coverage of the new AQA specification at exactly the right depth** – delivering all the content and up-to-date research to ensure complete coverage
- **Bringing psychology to life** with our 'Psychology in context' feature that looks at psychology in your everyday world
- **Even more student support and exam preparation** with exam-style practice and in-depth guidance from experienced examiners
- **A strong focus on *How Science Works* and Research Methods** to develop essential evaluation and analysis skills
- **A student-friendly approach** with topic maps, engaging activities and visual features – written by teachers and examiners who understand the needs of psychology students.

AQA (A) AS specification and examination

The specification

The AS-level specification is designed to be midway between the skills required for GCSE and the full A-level (A2), and to take account of the target age (17+) of the majority of students who will be taking this exam.

The AQA (A) AS-level course is organized into two assessment units:

- **Unit 1:** Cognitive Psychology, Developmental Psychology and Research Methods
- **Unit 2:** Biological Psychology, Social Psychology and Individual Differences

You will learn about the five core areas of psychology and also about research methods within the context of each of them. Each of these core areas is represented by a topic that will give you a good introduction to that area of psychology. The five core areas and their related topics are as follows:

Core area	Topic
■ Cognitive Psychology	Memory
■ Developmental Psychology	Early social development
■ Biological Psychology	Stress
■ Social Psychology	Social influence
■ Individual Differences	Psychopathology (Abnormality)

The exam

All areas of this specification are compulsory – this means that you must cover everything in this book. The specification entries are very carefully worded and questions will tend to reflect that wording. We have endeavoured to use the same wording as the specification, wherever possible, to make it easier for you to track your route through each topic. When questions are set, the question-setter will attempt to sample (eventually) all areas of the specification. Therefore, it is unwise to leave out any areas, even small ones, simply because they do not appeal to you.

There is no choice of questions in the examination; every question is compulsory. There will not necessarily be a question on everything that appears in the AQA specification. However, there will be a set of questions on every area (i.e. Cognitive, Developmental, Biological, and so on), so a good proportion of the specification will be covered in every examination.

The examination will test:

- your knowledge and understanding (known as ‘Assessment Objective 1’ or AO1)
- your analysis and evaluation skills (known as AO2)
- the degree of knowledge, understanding and appreciation that you show of *How Science Works* (across both units, and known as AO3).

You will find more information on these skills and how they are assessed in Chapter 8.

Several entries on the AQA specification are preceded by the words ‘including’ or ‘e.g.’. The word ‘including’ indicates prescribed material on which questions may be asked, whereas the use of ‘e.g.’ is merely illustrative of appropriate subject material. We have covered all prescribed material in this book, and have endeavoured, wherever appropriate, to cover all the examples mentioned in the specification as well.

Do, please, let us know, care of the Publisher, what you think of the book. Feedback from readers is enormously helpful and we always pay close attention to it when we come to write the next edition of the book. We do hope you enjoy the course!

Mike Cardwell, Liz Clark, Claire Meldrum



Overview of the book

Key features

Psychology in context

Designing a research project RESEARCH METHODS

Imagine that you have been commissioned to undertake some research to find out if there is any link between playing violent computer games and levels of aggression in children.

Think of as many different ways as possible of researching this topic and write brief notes about what each study would involve.


For example:

- 1 How many participants would you wish to include in the study?
- 2 How would they be selected?
- 3 How would you decide what counts as aggression?

This activity will revise some of the material you studied in Chapter 1, so you may wish to look back at Topic 2 of Chapter 1 before you start this activity.

When you have completed this activity, discuss your ideas with other students in your psychology class and/or your teacher.

Please keep your notes as we will be returning to your ideas later in this chapter.



See at a glance how this book delivers the specification content by the **Explaining the specification** table at the start of each chapter.

Immediately engage with new ideas through **Psychology in context** at the start of each topic.

RESEARCH METHODS **Activity** **Case studies** HOW SCIENCE WORKS

Case study research typically involves the in-depth study over time of a single 'case' (individual or small group), usually undertaken within a real-life context. Alternatively, as with the Czech twins described on the opposite page, an exceptional or unique circumstance may be studied in order to give insight into circumstances that would be impossible to recreate artificially.

Read the advantages and weaknesses of case studies on pp. 31–2, and then answer the following questions, remembering to *elaborate* your answers:

- 1 Suggest two advantages of studying extreme cases, such as the Czech twins or Genie, as a way of learning about the effects of privation.
- 2 Suggest two weaknesses associated with studying extreme cases, such as the Czech twins or Genie, as a way of learning about the effects of privation.
- 3 Suggest two ethical issues that might apply to such studies, and suggest how the researchers might have dealt with each of these.

Answers are given on p. 275 ►

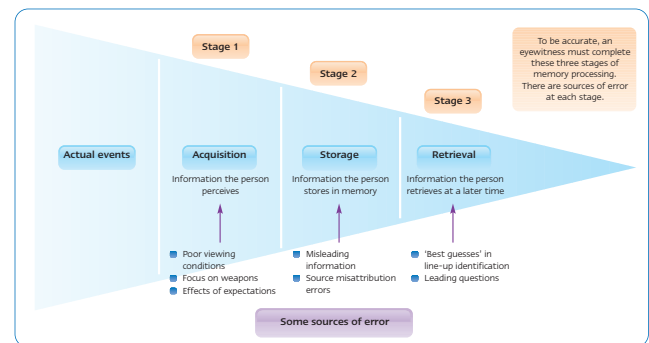
Get to grips with **key research studies**, which are clearly broken down into aims, procedures, findings, conclusions and evaluations of the research. Many of the key studies feature a further analysis section, which enables you to further develop important analytical skills.

Working memory in chess <small>A study by Robbins <i>et al.</i> (1996)</small>	
Aim	To study the role of the central executive in remembering chess positions by investigating the effect of generating random letter strings.
Procedure	Twenty chess players were asked to memorize in 10 seconds the positions of 16 chess pieces from a real game. The procedure was repeated 20 times using a different game each time. While memorizing the positions, participants either: <ul style="list-style-type: none">■ simultaneously engaged the central executive by generating random letter sequences, concentrating to avoid any meaningful combinations (such as H, G, V), or■ simultaneously, carried out an articulatory suppression task (saying 'the, the, the' in time with a metronome) After 10 seconds, the participants' memory was tested by asking them to arrange chess pieces on another board to match those they had just seen.
Findings	<ul style="list-style-type: none">■ Participants in the articulatory suppression condition performed well in recalling the positions of the chess pieces.■ Participants in the letter generation condition performed poorly.
Conclusion	<ul style="list-style-type: none">■ The impaired performance of those generating the letter sequences demonstrated that the central executive played a role in remembering chess positions.■ The good performance of participants in the articulatory suppression condition indicated that the phonological loop was not involved in remembering the chess positions.
Evaluation	<ul style="list-style-type: none">■ This well-designed study enables us to conclude that the different tasks (articulatory suppression and letter sequence generation) did cause the difference in performance.■ Generating meaningless letter sequences has been claimed by many cognitive psychologists as a valid way of engaging the central executive as it requires considerable attention.
FURTHER ANALYSIS	In another condition of this experiment, participants' visuo-spatial scratchpad was suppressed by requiring them to press keys systematically on a calculator while they were memorizing the chess positions. This resulted in the participants performing as poorly in the memory test as those who had experienced a suppressed central executive. Therefore, Robbins and colleagues concluded that both the central executive and the visuo-spatial scratchpad are involved in recalling chess positions.

EXPLAINING THE SPECIFICATION

Specification content	The specification explained
Attachment	In this part of the specification you are required to explain the nature and origins of the emotional bond between parent and child, and what happens when this bond is broken. To do this you need to be able to:
Explanations of attachment, including learning theory, and evolutionary perspective, including Bowlby	<ul style="list-style-type: none">■ Describe and evaluate at least two explanations of attachment – these should include learning theory and Bowlby's explanation of attachment.■ Offer outline descriptions of these explanations, which means being able to précis each explanation in about 50 words.
Types of attachment, including insecure and secure attachment and studies by Ainsworth	<ul style="list-style-type: none">■ Outline the characteristics of secure and insecure attachment, including the difference between them.■ Describe and evaluate Ainsworth's research using the Strange Situation, and link this to different types of attachment.
Cultural variations in attachment	<ul style="list-style-type: none">■ Describe and evaluate research into cultural differences in attachment. The most obvious study that does this is by van IJzendoorn and Kroonenberg (1988). Studies of cultural differences in childrearing methods tend to explain why there are differences in attachment.
Disruption of attachment, failure to form attachment (privation) and the effects of institutionalization	<ul style="list-style-type: none">■ Describe and evaluate research showing what happens when the attachment bond is disrupted (e.g. separation or deprivation).■ Describe and evaluate research showing what happens when the attachment fails to form (privation).■ Describe and evaluate research showing the effects of institutionalization (e.g. growing up in an orphanage) on development of the attachment bond.■ Be aware of the difference between bond disruption and privation.
Attachment in everyday life	In this part of the specification you are required to explain how being cared for outside the home affects the development of the child, and how research in this area has informed childcare practices. To do this you need to be able to:
The impact of different forms of day care on children's social development, including the effects on aggression and peer relations	<ul style="list-style-type: none">■ Describe and evaluate research into the impact of at least two different types of day care (e.g. childminding and day nurseries) on children's social development. Because aggression and peer relations are named here (note the use of the term 'including'), these should be the areas of social development covered.
Implications of research into attachment and day care for childcare practices	<ul style="list-style-type: none">■ Comment on how psychological research into attachment and day care might shape our approach to the care of children. This should not be speculative or subjective, but based on research (which you should be able to describe and evaluate) that you have studied.

Practise as you learn, using the **Activities** throughout the book.



Psychological material is made even more accessible through the frequent use of **diagrams, tables** and **pictures**.

Each stage represents the focus for pleasure (libido) from different parts of the body.	
1 Oral stage (0–18 months)	Pleasure gained, for example, from eating and sucking. Weaning is the most important developmental achievement.
2 Anal stage (18–36 months)	Pleasure gained from expelling or retaining faeces. Bowel and bladder control are important achievements.
3 Phallic stage (3–6 years)	At this most vital stage, the child becomes aware of its gender and the focus is on the genitals. At this stage, the Oedipus complex occurs for boys and the Electra complex for girls, when an unconscious rivalry develops between the child and its same-sex parent for the affection of its opposite-sex parent. At this time, boys experience castration anxiety and girls experience penis envy. According to Freud, this complex is resolved when the boy, repressing his desire for his mother, identifies strongly with his father and when the girl sublimates her penis envy into a desire to have a baby. Successful (normal) development through this stage requires the development of a firm gender identity. One of Freud's most famous case studies concerns a young boy who is in this stage of development (see case study 'Little Hans') below.
4 Latency stage (6 years to puberty)	The focus is on social rather than psychosexual development. This is sometimes seen as the calm before the storm of adolescence.
5 Genital stage (puberty to maturity)	If the conflicts experienced during the earlier stages have been satisfactorily resolved, the greatest pleasure comes from mature heterosexual relationships.

For each topic in Chapters 3 to 7, the **Eye on the exam** provides an examiner's commentary on key issues when answering questions in this area.

A **Check your understanding** feature at the end of each topic will help you review what you have just read and help you pinpoint any areas you need to revisit.

Eye on the exam

'Outline two explanations of how people sometimes resist pressures to conform' (3 marks + 3 marks)

When faced with a question like this which requires two explanations, each with its own mark allocation, provide two separate accounts. The two explanations do not have to be exactly the same length but each must earn its own 3 marks. In other words, you cannot compensate for one weak explanation by providing a better, more detailed second one.

Material from the chapter that you might use to answer this question includes: desire for deindividuation or control, being confident or having made a prior commitment that differs from the majority opinion, finding someone who thinks the same as you do (see pp. 203–4).

For more exam advice, visit www.collinseducation.com/psychologyweb

CHECK YOUR UNDERSTANDING

Check your understanding of social influence in everyday life by answering these questions. Try to do this from memory first. You can check your answers by looking back through Topic 2.

- 1 What do you understand by the term 'independent behaviour'?
- 2 How many participants in Asch's line-length study of conformity acted independently throughout the procedure (see Topic 1)?
- 3 Outline three explanations that have been proposed for people resisting pressures to conform.
- 4 Outline three explanations that have been proposed for people resisting pressures to obey authority.
- 5 In what way have levels of moral reasoning been linked to the likelihood that a person will obey?
- 6 Explain the terms: 'internal locus of control' and 'external locus of control'.
- 7 According to Blass, under what circumstances were participants with an internal locus of control most likely to resist obedience pressures?
- 8 What gender differences (if any) did Milgram find in his research on obedience?

- 9 Outline the procedures and findings of the study by Sistrunk and McDavid (1971) that investigated gender differences in conformity.
- 10 What conclusion did Sistrunk and McDavid draw from their research?
- 11 What cultural differences have been found in people's responses to pressures to conform?
- 12 In what way did research into social influence (e.g. by Milgram and Zimbardo) affect how psychologists have addressed ethical issues when they have carried out research subsequently? (See also Chapter 2, p. 63, to help you answer the question.)
- 13 How should minorities behave if they are to be influential and bring about social change?
- 14 What is meant by the foot-in-the-door technique as a means of changing behaviour and whose research on social influence demonstrated its effectiveness?
- 15 What implications does Zimbardo's research on conformity to social roles have for the training of those in positions of power?

A visual overview of the key points in the chapter content is provided by the **Chapter summary** – ideal for revision.

Understand key concepts and terms by using the **Glossary** of key terms at the back of the book.

Glossary

Abnormality: see psychological abnormality or psychopathology.

Aim: the intended purpose of an investigation, i.e. what the research investigation in question is actually trying to discover.

Alternative hypothesis (may be referred to as the **experimental hypothesis** in an experiment): predicts that something other than chance alone has produced the results obtained; in a well-designed experiment this should be the effects of the independent variable.

Anxiety: a state of apprehension, worry or fear.

Attachment: a strong emotional and reciprocal bond between two people, especially between an infant and its caregiver(s). Attachments serve to maintain proximity between infant and caregiver because each experiences distress when separated.

Aversion therapy: a behavioural treatment that aims to rid the individual of an undesirable habit (e.g. smoking) by pairing the habit with unpleasant (aversive) consequences.

Bar chart: a series of vertical bars of equal width used to illustrate the frequencies of a non-continuous variable displayed on the x-axis. It is superficially similar to a histogram.

Behaviour categories (or behavioural categories): categorizing behaviour is a process carried out in observational research where the investigator(s) classify examples of the behaviour to be observed. For example, behaviours in a discussion group might include categories of 'giving advice', 'asking for advice', 'seemingly friendly' and 'seemingly unfriendly'.

Behavioural approach to psychopathology: a view that abnormal behaviours are maladaptive, learned responses which can be replaced by more adaptive responses.

Benzodiazepines (BZs): anti-anxiety drugs often used for the short-term relief of severe anxiety.

Beta-blockers: used in the treatment of high blood pressure (hypertension), beta blockers reduce activity in the sympathetic nervous system.

Biological (somatic) therapies: an approach to the treatment of mental disorders that relies on the use of physical or chemical methods. Biological therapies include drug treatment, electroconvulsive therapy and psychosurgery.

Biological approach to (or biomedical model of) psychopathology: a view of abnormality that sees mental disorders as

being caused by abnormal physiological processes such as genetic and biochemical factors. Abnormality according to this model is seen as an illness or disease.

Capacity: the amount of information that can be stored in memory at any particular time.

Case study: case study research typically involves the in-depth study over time of a single individual or small group and is usually undertaken within a real-life context.

Catharsis: in psychoanalysis, catharsis is the process whereby the expression of an emotion removes its pathological effect – the release of pent-up emotion that happens when a client recalls and relives a repressed earlier emotional catastrophe and re-experiences the tension and unhappiness.

Central executive: the most important component of Baddeley's working memory model, it controls attention.

Chemotherapy: treatment by using drugs.

Classical conditioning: a form of learning where a neutral stimulus is paired with a stimulus that already produces a response, such that over time, the neutral stimulus also produces that response.

Cognitive approach to psychopathology: a view that stresses the role of cognitive processes (such as logical or irrational thought processes) in abnormal functioning.

Cognitive behavioural therapy (CBT): a technique that involves helping clients to identify their negative, irrational thoughts and to replace these with more positive, rational ways of thinking.

Cognitive development: the changes that take place throughout one's life with respect to mental abilities, including memory, perception, language and intelligence.

Cognitive Interview/Cognitive Interview Schedule (CI): a method for questioning witnesses which requires them to recreate the context, recall all details, recall events in different orders, and use different perspectives to aid memory recall.

Conditioning: a learning process in which an organism's behaviour becomes dependent on a learned association with an existing stimulus (classical conditioning) or on the consequences of that behaviour (operant conditioning).

Conformity: a result of social influence where people adopt the behaviours, attitudes and values of the majority members of a reference group.

Confounding variable: an uncontrolled variable that produces an unwanted effect on the dependent variable and so distorts the findings by obscuring any effect of the independent variable.

Content analysis: a systematic research technique for analyzing transcripts of interviews and other documents that involves formally categorizing and counting how often things in the text (such as words or ideas) occur.

Correlation: a term that refers to the extent to which values on (usually two) different variables co-vary.

Correlation coefficient: a descriptive statistic with a numerical value on a scale between -1 and +1. It demonstrates the strength and direction of any relationship that exists between two sets of data. The sign of the coefficient tells us if the relationship is positive or negative. The numerical part describes the magnitude of the relationship.

Correlational analysis: a technique used to test a hypothesis using an association that is measured between two variables that are thought likely to co-vary (e.g. height and weight).

Counterbalancing: a technique used in a repeated measures design to overcome the impact of order effects, practice, boredom and fatigue on performance in an experiment. It involves ensuring that each condition is equally likely to occur in a particular order within the study. If there are only two conditions, then each is equally likely to be carried out first or second by participants.

Counterconditioning: a therapeutic technique for treating phobias. A phobic patient is helped to relax while imagining the feared situation (going from the least feared to the most feared situation). The relaxation response is incompatible with the fear previously associated with the situation. This leads to the fear being extinguished.

Critical period: a period of time during development when the brain is open to a particular type of experience, resulting in the development of a particular characteristic. Outside this 'window of opportunity', such development is no longer possible.

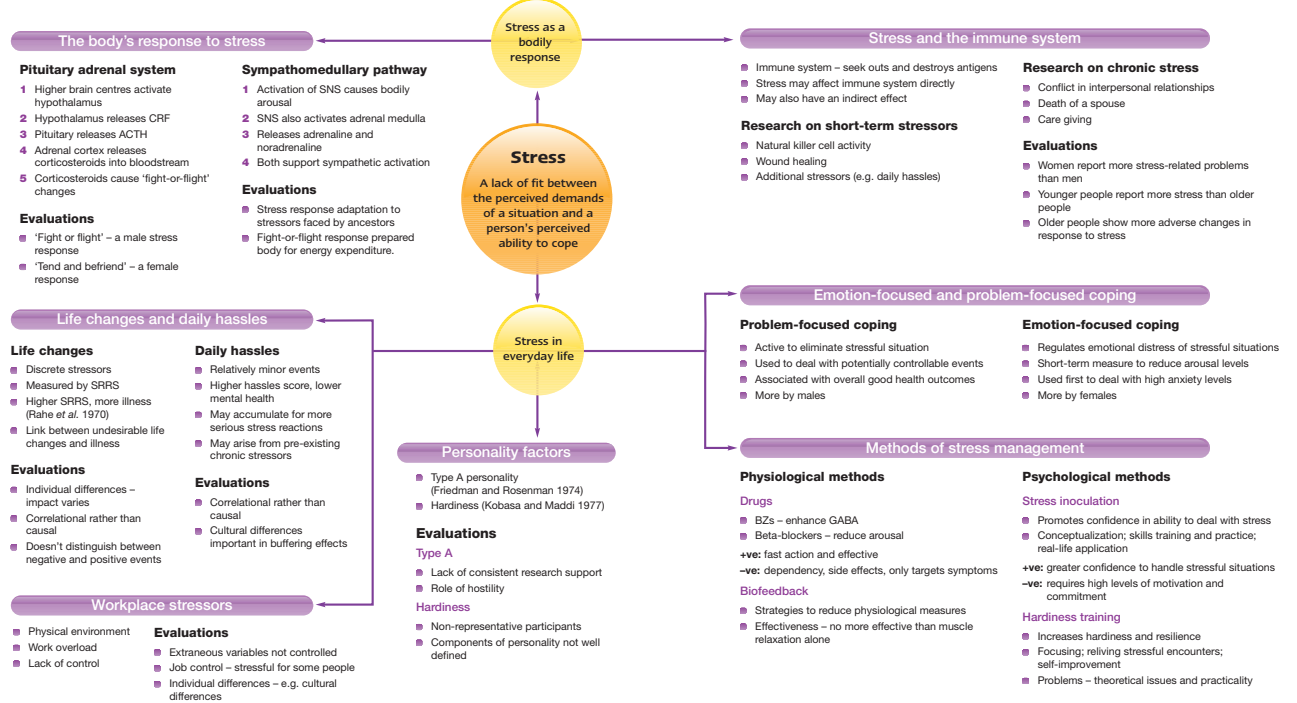
Cross-cultural variation: variations between people of different cultures. A culture is a set of beliefs and customs, e.g. about child-rearing practices, that bind a group of people together.

Cultural relativism: the idea that judgements about definitions of human behaviour (e.g. abnormal behaviour) cannot be made in absolute terms but only within the context of a given culture.

Daily hassles: relatively minor events arising out of day-to-day living, such as the everyday concerns of work, caring for others and commuting.

Day care: a form of care for infants and children, offered by someone other than close family, taking place outside the home. Day

Chapter 5: Summary



Credits

Text permissions

The following permission to reproduce material is gratefully acknowledged. Numbers refer to pages:

American Psychological Association (21/table); Allyn & Bacon (45/Fig. 2.3); Holt, Rinehart & Winston (45/Fig. 2.4); Blackwell Publishers (46/Table 2.3, 48/Table 2.4, 55–7/Table 2.5); Social Trends (62/Graph B). Academic Press (72/diary extract; Dept of Psychology, Temple University, Philadelphia (85/Fig. 3.1); Academic Press Ltd (90/graph); Child Development (127/Table 4.1); Elsevier (158/Table 5.1); Blackwell Publishers (189/Zimbardo interview); New York Times (191); The American Psychology Association (194/Table 6.2); John Wiley & Sons Ltd (230/Table 7.3); American Medical Association (235/Fig. 7.4).

Whilst every effort has been made to contact the copyright holders, this has not proved possible in every case.

Photographs

The publishers would like to thank the following for permission to reproduce photographs. The page number is followed, where necessary, by T (top), B (bottom), C (centre), L (left) or R (right).

Rex (3), Getty Images (6, 7, 8), Photos.com (9, 10), iStockphoto (12), Photos.com (13, 14), Alexandra Milgram (15, 16), Getty Images (18), Rex (21), iStockphoto (24), Rex (27), Photos.com (29), Isopress/Rex (37), Photos.com (40), Philip Zimbardo (53), Photos.com (57), iStockphoto (59, 60), Topfoto (74, 79L), Rex (79R), iStockphoto (80), Photos.com (81), iStockphoto (94, 99), Corbis (100), iStockphoto (101, 104, 106 both, 110, 112), Rex (117), Science Photo Library (119, 120), iStockphoto (121, 128), Mary Evans (129), iStockphoto (131), Photos.com (132), Rex (134), Photos.com (138), iStockphoto (141), Rex (144), Photos.com (145), Rex (149L&R), iStockphoto (149C), Rex (149), iStockphoto (150), Photos.com (152, 155, 156), Rex (157), iStockphoto (158L), Getty Images (158R), iStockphoto (160 all, 162 both, 167), Photos.com (168, 172), Rex (174), Photos.com (175), iStockphoto (176), Getty Images (181T), Photos.com (181C), iStockphoto (181B), Science Photo Library (184), Getty Images (187 both), Philip Zimbardo (188), Getty Images (190, 191T), Reuters (191B), Alexandra Milgram (193, 194, 196), Shout pictures (199), Photos.com (200), Getty Images (201), Edinburgh City Council (203), Rex (204, 217 all), iStockphoto (218), Reuters (219), Rex (219, 220 both), Photofusion (224T), Hugh Hillyard-Parker (224B), Photos.com (230), iStockphoto (232, 233), Science Photo Library (238 both), Getty Images (239), Science Photo Library (240), iStockphoto (241, 243), Rex (244, 250), Photos.com (267, 268, 269, 270, 271).

Author biographies

Mike Cardwell

Mike Cardwell is Senior Lecturer in Psychology at Bath Spa University, where he teaches courses in social psychology, and a former Chief Examiner for A-level psychology. Mike is also an Editor of the journal *Psychology Review* and a regular contributor to student conferences. Although psychology takes up most of his time, he still avidly follows the fortunes of his home-town football teams, Premier League Liverpool and Marine of the Unibond League.

Liz Clark

Although a psychologist at heart and also by training, and someone who is passionate about learning and good teaching, Liz Clark has worked in healthcare education for the past 22 years. Whilst Head of Distance Learning at the Royal College of Nursing (RCN), she was responsible for developing and delivering a range of distance learning degree programmes for qualified nurses, as well as bite-sized chunks of learning for the RCN Learning Zone to support RCN members' personal and professional development. Liz Clark currently works at The Open University (OU) and is the Deputy Director for the OU-RCN Strategic Alliance.

The experience of creating effective and highly accessible learning resources that can be studied with the minimum of teacher support contributed to the original ideas and vision behind the first edition of this book published in the mid 1990s.

The editors and the publisher believe that AS-level students deserve texts that intrigue, support and challenge, and above all that kindle their curiosity to find out more and embark on a journey of lifelong learning.

Claire Meldrum

Claire Meldrum has taught A-level psychology for many years, in both schools and colleges. She has written AS revision and examination guides, and has contributed to books on applied psychology for nurses and social workers.