RICHARD GROSS
& NANCY KINNISON

PSYCHOLOGY

for Nurses and Health Professionals

Second edition

CRC Press
Taylor & Francis Group

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To Libbey Starr, granddaughter number five, as adorable and beautiful as the other four. What a fortunate Poppa I am!

Richard Gross

To Theresa and Michael and their families, who light up my life.

Nancy Kinnison

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Preface

The basic approach that we adopted in the first edition of *Psychology for Nurses and Health Professionals* has been retained: psychological theory and research is interpreted and digested through the eyes of an imaginary student, Surena, whose 'From my diary' extracts (indicated by the pen icon in the margin) provide the scenarios that relate to the chapter. Surena does not make her 'appearance' until Chapter 3, when she begins to use the book to help her understand her experiences in her placements. As in your own practice, these do not follow the sequence of the chapters. To help you find your way around the book, we have provided a 'map' in the form of a grid on page xv that shows how Surena's placements and the chapters are related.

Throughout each chapter, Surena makes notes indicated by the notebook icon in the margin. In keeping with the increased emphasis on reflective practice (RP) in higher education, in this edition Surena refers more to RP theories to help her structure and analyse her own. Sometimes she reflects on her feelings about and behaviour towards her patients or applies the psychological material to the patients' and her own behaviour. As she gains experience, she comments on or evaluates the psychological material itself or reflects on ethical and social issues.

Note that in all chapters the psychology content includes critical evaluation of theory and research, which shows the additional higher level academic skills you are expected to develop during your course. To that end, a recurring feature is the 'Time for Reflection...' breaks. These are designed to encourage you to think about the text that follows and to have questions (if not always answers) in your mind to help you understand and digest the studies and theories that you read about. So, instead of just reading in a rather passive way, you will adopt a more critical approach, equipped with some idea of what to expect and what to look out for.

Sometimes the questions are quite specific, and the answers are given directly in the text that immediately follows. At other times, the questions are more general and abstract, and the answers unfold throughout the next few paragraphs. Another kind of question will require you to reflect on your own experiences and views on a particular issue; in these cases, of course, there is no 'correct answer'.

Occasionally, these 'Time for Reflection...' breaks appear as 'Research Questions...'; here, you are asked to think about methodological issues arising from a particular piece of research described in the text.

Frequent references are made to *Psychology: The Science of Mind and Behaviour* (2010), written by one of us (Richard Gross), pointing you in the direction of more detailed discussion of a particular theory or study or discussion of something that space does not allow in the present text at all.

Other features include 'Key Study' and 'Critical Discussion' boxes. Every chapter opens with an introduction and overview, which tells you what is covered in the chapter and sets the scene, and ends with a comprehensive summary, useful for revision.

Based on reviewers' comments, we have changed the number and order of chapters as they appeared in the first edition. We believe the order is more logical and gives the book greater overall coherence. While dropping three chapters from the first edition, much of the material has been moved into other chapters. In addition, there is a brand new chapter on neuropsychological and genetic aspects of illness and a substantial amount of updating and reordering of material – both within and between chapters.

Finally, Richard Gross has produced an easily accessible Web site. This includes additional material to complement the textbook as well as ways of assessing your knowledge and understanding.

It seems self-evident that to provide holistic care for patients, all health professionals need to have a theoretical knowledge and understanding of psychology. Knowing how to apply it is less obvious, and, of course, there is no one best or correct way to do it. We believe that our approach is supremely relevant to the evolving demands of patient care and hope that you will find it both useful and enjoyable. The 'for' in the title explicitly relates to nurses and allied health professionals in their different roles; implicitly, and as demonstrated throughout the book, it also relates to you as an individual.

Richard Gross and Nancy Kinnison

Free web resources

PowerPoint chapter summaries, MCQs and extension material are available to download from the CRC Press website: http://www.crcpress.com/product/isbn/9781444179927.

Acknowledgements

The authors thank Naomi Wilkinson for commissioning this second edition while still at Hodder Education and for taking the project with her when she moved to Taylor & Francis (United Kingdom). They also thank Ed Curtis, project editor at Taylor & Francis (Florida), for his support and guidance, as well as Dennis Troutman at diacriTech in New Hampshire and Paul Abraham and Dhayanidhi Karunanidhi at diacriTech in Chennai, India.

As with the first edition, Richard thanks Nancy for providing what he could not – the essential ability to 'translate' psychological theory into the language of nursing practice.

Nancy's thanks extend further to Alison and Michael Stuckey for their enduring support, to Laura-Jane Harris for her collaboration on the scenarios and to the care practitioners and patients for sharing so generously with me their thoughts, experiences and feelings on which they are based. For reasons of confidentiality you must remain anonymous – but you know who you are...

Nancy owes a very special debt of gratitude to Richard for his general textbook (an unrivalled reference throughout my teaching career) and for his patient guidance and encouragement during our further work on this edition. Again, it has been a privilege and a pleasure.

Authors

Richard Gross studied psychology and philosophy at Nottingham University, followed by a master's degree in the sociology of education and mass communications at Leicester University School of Education. After completing a postgraduate certificate in education, he taught psychology for more than 25 years on a variety of further and higher education courses, including 'A' level, access to higher education, and nursing diploma and degree courses. He has published a number of psychology textbooks, including *Psychology: The Science of Mind and Behaviour* (1st edition 1987, now in its 6th edition [2010]), *Key Studies in Psychology* (6th edition, 2012), *Themes, Issues and Debates in Psychology* (3rd edition, 2009), and *Being Human: Psychological and Philosophical Perspectives* (2012).

Nancy Kinnison worked as a staff nurse in Cornwall following her general training at the Royal Devon and Exeter Hospital. Her experience included gynaecology, dermatology and children's wards and casualty. During this time, she obtained the diploma in nursing (Part A–theory) and then became a night sister at the Royal Cornwall Hospital (Treliske). Following her divorce, she obtained a degree in sociology and social administration (health care) at Southampton University and then a postgraduate teaching certificate at Garnett College in London. Throughout this time she was an 'agency nurse' working in hospitals in Cornwall, Southampton and Roehampton (London). While teaching in London (where she was fortunate to meet Richard Gross), she taught sociology, psychology and health education and also piloted and managed the new BTEC National Diploma in Health Studies. Later, she moved to Bath College of Further Education to take a position that included teaching psychology on the postgraduate diploma in nursing, run in collaboration with Bath Royal United Hospital.

Table of diary extracts

Diary entry	Title	Page	Chapter no. and title
1.	Year 1/Community/District Nurse	41	3. Psychological aspects of illness
2.	Year 1/Community/District Nurse	216	10. Social cognition and health behaviour
3.	Year 1/Community/District Nurse	297	13. Death and dying
4.	Year 1/Community (Health Visitor)	326	14. Early experience and social development
5a.	Year 1/Community (Health Visitor)	349	15. Cognitive development
5b.	Year 1/Children's Ward	353	15. Cognitive development
6.	Year 1/Orthopaedic Ward	172	8. Conformity and group influence
7.	Year 1/Orthopaedic Ward	188	9. Obedience
8.	Year 2/Surgical Ward	386	17. Adolescence
9.	Year 2/Surgical Ward	367	16. Development of the self-concept
10.	Year 2/Surgical Ward	128	6. Attitudes and attitude change
11.	Year 3/Medical Ward	76	4. Stress: Definitions and causes
12.	Year 2/Medical Ward	276	12. Substance use and abuse
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14.	Year 2/Elderly Care Ward	146	7. Prejudice and discrimination
15.	Year 3/Elderly Care Ward	248	11. Neuropsychological and genetic aspects of illness
16.	Year 3/Elderly Care Ward	102	5. Stress: Effects and methods of coping
17.	Year 2/Teaching Block	420	19. Late adulthood

1

What is psychology?

Introduction and overview

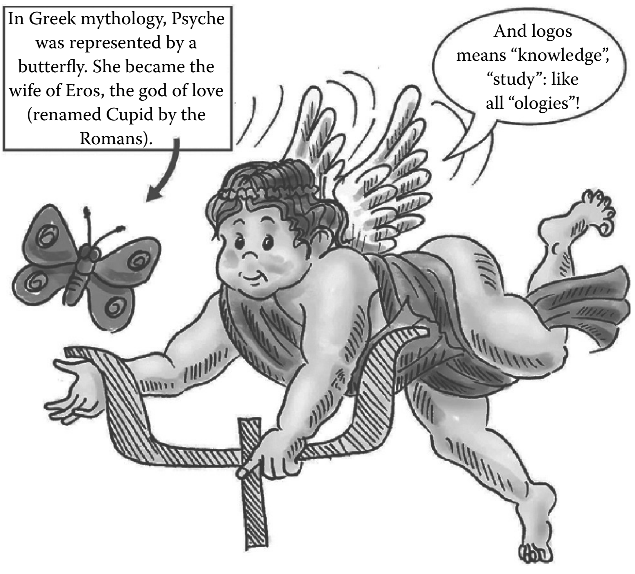
The opening chapter in any textbook is intended to 'set the scene' for what follows, and this normally involves defining the subject or discipline. In most disciplines, this is usually a fairly simple task. With psychology, however, it is far from straightforward. Definitions of psychology have changed frequently during its relatively short history as a separate field of study. This reflects different, and sometimes conflicting, theoretical views regarding the nature of human beings and the most appropriate methods for investigating them. While most psychologists would consider themselves to be scientists, they disagree about exactly what science involves and the appropriateness of using certain scientific methods to study human behaviour.

A brief history

The word 'psychology' is derived from the Greek words *psyche* (mind, soul or spirit) and *logos* (knowledge, discourse or study). Literally, then, psychology is the 'study of the mind'.

The emergence of psychology as a separate discipline is generally dated at 1879, when Wilhelm Wundt opened the first psychological laboratory at the University of Leipzig in Germany. Wundt and his co-workers were attempting to investigate 'the mind' through *introspection* to analyse conscious thought into its basic elements, much as chemists analyse compounds into elements. This attempt to identify the structure of conscious thought is called *structuralism*.

Wundt and his co-workers recorded and measured the results of their introspections under *controlled conditions*, using the same physical surroundings, the same 'stimulus' (such as a clicking metronome), the same verbal instructions to each participant and so on. This emphasis on measurement and control marked the separation of the 'new psychology' from its parent discipline of philosophy.


In Greek mythology, Psyche was represented by a butterfly. She became the wife of Eros, the god of love (renamed Cupid by the Romans).
And logos means "knowledge", "study": like all "ologies"!

Philosophers had discussed 'the mind' for thousands of years. For the first time, *scientists* (Wundt was a physiologist by training) applied some of scientific investigation's basic methods to the study of mental processes. This was reflected in James's (1890) definition of psychology as

> **the Science of Mental Life, both of its phenomena and of their conditions … The Phenomena are such things as we call feelings, desires, cognition, reasoning, decisions and the like.**

However, by the early twentieth century, the validity and usefulness of introspection were being seriously questioned, particularly by American psychologist John B. Watson. Watson believed that the results of introspection could never be proved or disproved, since if one person's introspection produced different results from another's, how could we ever decide which was correct? *Objectively*, of course, this is impossible: we cannot 'get behind' an introspective report to check its accuracy. Introspection is *subjective*, and only the individual can observe his/her own mental processes.

Consequently, Watson (1913) proposed that psychologists should confine themselves to studying *behaviour*, since only this is measurable and observable by more than one person. Watson's form of psychology was known as *behaviourism*, which claimed that the only way psychology could make any claim to being scientific was to emulate the natural sciences (physics and chemistry) and adopt its own objective methods. Watson (1919) defined psychology as

> **that division of Natural Science which takes human behaviour – the doings and sayings, both learned and unlearned – as its subject matter.**

Especially in America, behaviourism (in one form or another) remained the dominant force in psychology up until the late 1950s. The emphasis on the role of *learning* (in the form of *conditioning*) was to make that topic one of the central areas of psychological research as a whole (see Box 2.2).

In the late 1950s, many British and American psychologists began looking to the work of computer scientists to try to understand more complex behaviours that, they felt, had been either neglected altogether or greatly oversimplified by learning theory (conditioning). These complex behaviours were what Wundt, James and other early scientific psychologists had called *mind* or mental processes. They are now called *cognition* or *cognitive processes*, including perception, attention, memory, problem-solving, decision-making, language and thinking in general.

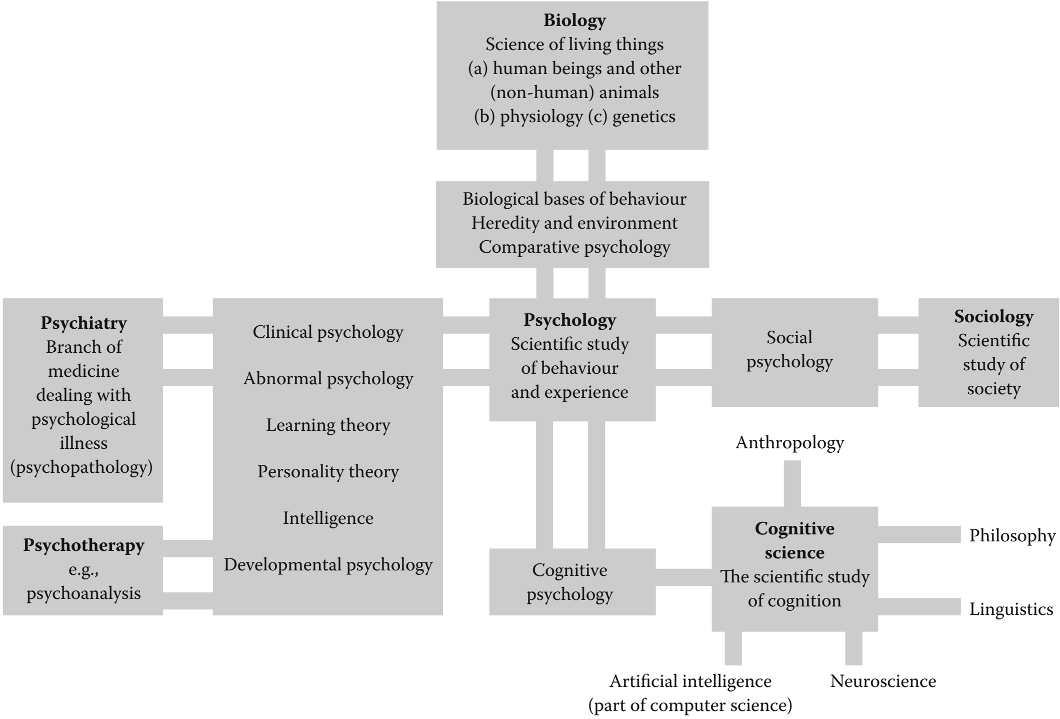
Cognitive psychologists see people as *information-processors*, and cognitive psychology has been heavily influenced by computer science, with human cognitive processes being compared with the operation of computer programs (the *computer analogy*). Cognitive psychology now forms part of *cognitive science*, which emerged in the late 1970s (see Figure 1.1).

Despite the fact that cognitive processes can only be *inferred* from what a person does (they cannot be observed literally or directly), they are now accepted as valid subject matter for psychology, provided they can be made 'public' (as in memory tests or problem-solving tasks). What people say and do

Psychoanalytic theory and Gestalt psychology

- In 1900, Sigmund Freud, a neurologist living in Vienna, first published his *psychoanalytic theory* of personality in which the *unconscious* mind played a crucial role. In parallel with this theory, he developed a form of psychotherapy called *psychoanalysis*. Freud's theory (which forms the basis of the *psychodynamic* approach) represented a challenge and a major alternative to behaviourism (see Chapter 2).
- A reaction against both structuralism and behaviourism came from the *Gestalt* school of psychology, which emerged in the 1920s in Austria and Germany. Gestalt psychologists were mainly interested in perception, which they believed could not be broken down in the way that Wundt proposed, and behaviourists advocated for behaviour. Gestalt psychologists identified several 'laws' or *principles of perceptual organisation* (such as 'the whole is greater than the sum of its parts'), which have made a lasting contribution to our understanding of the perceptual process (see Gross, 2010, for a detailed discussion).

Figure 1.1 The relationship between psychology and other scientific disciplines.


Biology
Science of living things
(a) human beings and other
(non-human) animals
(b) physiology (c) genetics
Biological bases of behaviour
Heredity and environment
Comparative psychology
Psychiatry
Branch of medicine dealing with psychological illness (psychopathology)
Clinical psychology
Abnormal psychology
Learning theory
Personality theory
Intelligence
Developmental psychology
Psychotherapy
e.g., psychoanalysis
Psychology
Scientific study of behaviour and experience
Social psychology
Sociology
Scientific study of society
Anthropology
Cognitive psychology
Cognitive science
The scientific study of cognition
Philosophy
Linguistics
Artificial intelligence
(part of computer science)
Neuroscience

informs us *about* their cognitive processes; however, the processes themselves remain inaccessible to the observer.

The influence of both behaviourism and cognitive psychology is reflected in Clark and Miller's (1970) definition of psychology as

> the scientific study of behaviour. Its subject matter includes behavioural processes that are observable, such as gestures, speech and physiological changes, and processes that can only be inferred, such as thoughts and dreams.

Similarly, Zimbardo (1992) states that 'Psychology is formally defined as the scientific study of the behaviour of individuals and their mental processes'.

Classifying the work that psychologists do

Despite behaviourist and cognitive psychology's influence on psychology's general direction in the past 90 years or so, much more goes on within psychology than has been outlined so far. There are other theoretical approaches or orientations, other aspects of human (and non-human) activity that constitute the special focus of study and different kinds of work that different psychologists do.

A useful, but not hard and fast, distinction can be made between the *academic* and *applied* branches of psychology. Academic psychologists carry out research and are attached to a university or research establishment, where they will also teach undergraduates and supervise the research of postgraduates. Research is both *pure* (done for its own sake and intended, primarily, to increase our knowledge and understanding) and *applied* (aimed at solving a particular problem). Applied research is usually funded by a government institution like the Home Office, National Health Service (NHS) or the Department for Children, Schools and Families or by some commercial or industrial institution. The range of topics that may be investigated is as wide as psychology itself, but they can be classified as focusing either on the processes or *mechanisms* underlying various aspects of behaviour or more directly on the *person* (Legge, 1975).

Process approach

The process approach is divided into three main areas: physiological, cognitive and comparative psychology.

Physiological (or bio)psychology (Chapters 3–5 and 11)

Physiological (or bio)psychologists are interested in the physical basis of behaviour, how the functions of the *nervous system* (in particular the brain) and the *endocrine* (*hormonal*) system are related to and influence behaviour and mental processes. For example, are there parts of the brain specifically concerned with particular behaviours and abilities (*localisation of brain function*)? What role do hormones play in the experience of emotion and how are these linked to brain processes?

A fundamentally important biological process with important implications for psychology is *genetic transmission*. The *heredity and environment* (or *nature–nurture*) issue draws on what geneticists have discovered about the characteristics that can be passed from parents to offspring, how this takes place and how genetic factors interact with environmental ones (see Gross, 2010). Other topics within physiological psychology include motivation and stress (an important topic within *health psychology*).

Cognitive psychology

As seen earlier (page 3), cognitive (or mental) processes include *attention*, *memory*, *perception*, *language*, *thinking*, *problem-solving*, *decision-making*, *reasoning* and *concept-formation* (‘higher-order’ mental activities). Social psychology (classified here as belonging to the person approach) is heavily cognitive in flavour: for example, many social psychologists study the mental processes we use when trying to explain people’s behaviour (for *social cognition*, see Chapter 10). Also, Piaget’s theory (again, belonging to the person approach) is concerned with *cognitive development* (see Chapter 15).

Comparative psychology

Comparative psychology is the study of the behaviour of non-human animals, aimed at identifying similarities and differences between species. It also involves studying non-human animal behaviour to gain a better understanding of human behaviour. The basis of comparative psychology is *evolutionary theory*. Research areas include classical and operant conditioning (see Box 2.2) and evolutionary explanations of human behaviour (see Gross, 2010).

Person approach

Social psychology (Chapters 6–9)

Some psychologists would claim that 'all psychology is social psychology', because all behaviour – public and private – take place within a social context. However, other people usually have a more immediate and direct influence on us when we are actually in their presence (as in *conformity* and *obedience* – see Chapters 8 and 9). Social psychology is also concerned with attitudes and attitude change (see Chapter 6), and prejudice and discrimination (Chapter 7).

Developmental psychology (Chapters 14–19)

Developmental psychologists study the biological, cognitive, social and emotional *changes* that occur in people over time. One significant change within developmental psychology during the past 30 years or so is the recognition that development is not confined to childhood and adolescence, but is a lifelong process (the *lifespan approach*). It is now generally accepted that development continues beyond childhood and adolescence into adulthood and late adulthood (see Figure 1.2).

Figure 1.2 Three generations of the same family.

Individual differences

This is concerned with the ways in which people can differ from one another, including *personality* (see Chapter 5), *intelligence* and *psychological abnormality*. Major mental disorders include dementia (see Chapter 11), schizophrenia, depression, anxiety disorders and eating disorders. *Abnormal psychology* is closely linked with *clinical psychology*, one of the major *applied* areas of psychology (see discussion in page 9). Psychologists who study abnormality and clinical psychologists are also concerned with the effectiveness of different forms of treatment and therapy. Each major theoretical approach has contributed to both the explanation and treatment of mental disorders (see Chapter 2).

Comparing the process and person approaches

In practice, it is very difficult to separate the two approaches. However, there are important relative differences between them.

Some important differences between the process and person approaches

- The *process approach* is typically confined to the laboratory (where experiments are the method of choice). It makes far greater experimental use of non-human animals and assumes that psychological processes (particularly learning) are essentially the same in all species and that any differences between species are only *quantitative* (differences of degree).
- The *person approach* makes much greater use of field studies (such as observing behaviour in its natural environment) and of non-experimental methods (e.g. correlational studies, see Chapter 3). Typically, human participants are studied and it is assumed that there are *qualitative* differences (differences in kind) between humans and non-humans.

Areas of applied psychology

Discussion of the person/process approaches has been largely concerned with the *academic* branch of psychology. Since the various areas of applied psychology are all concerned with people, they can be thought of as the *applied* aspects of the person approach.

According to Hartley and Branthwaite (1997), most applied psychologists work in four main areas: *clinical*, *educational* and *occupational psychology* and *government service* (such as *forensic* [or *criminological*] psychologists). In addition, Coolican et al. (2007) identify *counselling, sport*, *health* and *environmental psychologists.* Hartley and Branthwaite argue that the work psychologists do in these different areas has much in common: it is the *subject matter* of their jobs that differs, rather than the skills they employ. Consequently, they consider an applied psychologist to be a person who can deploy specialised skills appropriately in different situations (see Box 1.1).

Box 1.1 Seven major skills (or roles) used by applied psychologists.

- *The psychologist as counsellor*: Helping people to talk openly, express their feelings, explore problems more deeply and see these problems from different perspectives. Problems may include school phobia, marriage crises and traumatic experiences (such as being the victim of a hijacking), and the counsellor can adopt a more or less directive approach (see Chapter 2, page 31).
- *The psychologist as colleague*: Working as a member of a team and bringing a particular perspective to a task, namely drawing attention to the human issues, such as the point of view of the individual end user (be it a product or a service of some kind).
- *The psychologist as expert*: Drawing upon psychologists' specialised knowledge, ideas, theories and practical knowledge to advise on issues ranging from incentive schemes in industry to appearing as an 'expert witness' in a court case.
- *The psychologist as toolmaker*: Using and developing appropriate measures and techniques to help in the analysis and assessment of problems. These include questionnaire and interview schedules, computer-based ability and aptitude tests and other *psychometric tests* (mental measurement) (see Chapter 6).
- *The psychologist as detached investigator*: Many applied psychologists carry out evaluation studies to assess the evidence for and against a particular point of view. This reflects the view of psychology as an objective science, which should use controlled experimentation whenever possible (see pages 12–15).
- *The psychologist as theoretician*: Theories try to explain observed phenomena, suggesting possible underlying mechanisms or processes. They can suggest where to look for causes and how to design specific studies that will produce evidence for or against a particular point of view. Results from applied psychology can influence theoretical psychology and vice versa.
- *The psychologist as agent for change*: Applied psychologists are involved in helping people, institutions and organisations, based on the belief that their work will change people and society for the better. However, some changes are much more controversial than others, such as the use of psychometric tests to determine educational and occupational opportunities and the use of behaviour therapy and modification techniques to change abnormal behaviour (see Chapters 2 and 5).

Source: Based on Hartley, J., Branthwaite, A., *The Applied Psychologist*, Open University Press, Buckingham, 2000.

TIME FOR REFLECTION …

- Which, if any, of the skills identified by Hartley and Branthwaite do you consider to be relevant to nursing (or allied health professions)?
- How do they apply (it might be useful to think in terms of whether they apply *formally* or *informally*, *implicitly* or *explicitly*)?
- Are there any major skills that are used in nursing (or allied health professions) that *are not* included by Hartley and Branthwaite?

The major functions of the clinical psychologist

The functions of a clinical psychologist include the following:

- Assessing people with learning difficulties, administering psychological tests to brain-damaged patients, devising rehabilitation programmes for long-term psychiatric patients and assessing elderly people for their fitness to live independently (see Chapter 11).
- Planning and carrying out programmes of therapy, usually *behaviour therapy/modification* or *psychotherapy* (group or individual) in preference to, or in addition to, behavioural techniques (see Chapter 2).
- Carrying out research into abnormal psychology, including the effectiveness of different treatment methods ('outcome' studies); patients are usually adults, many of whom will be elderly, in psychiatric hospitals, psychiatric wards in general hospitals and psychiatric clinics.
- Involvement in community care, as psychiatric care in general moves out of the large psychiatric hospitals.
- Teaching other groups of professionals, such as nurses, psychiatrists and social workers.

Clinical psychology

Clinical psychologists are the largest single group of psychologists, both in the United Kingdom (Coolican et al., 2007) and in the United States (Atkinson et al., 1990). A related group is 'counselling psychologists', who tend to work with younger clients in colleges and universities rather than in hospitals.

Clinical psychologists work largely in health and social care settings, including hospitals, health centres, community mental health teams, child and adolescent mental health services and social services. They usually work as part of a team with, for example, social workers, medical practitioners and other health professionals. Most work in the NHS, but some work in private practice (see Figure 1.3).

Psychotherapy is usually carried out by psychiatrists (medically qualified doctors specialising in psychological medicine) or psychotherapists (who have

Figure 1.3 Assessing elderly clients in a residential setting.

undergone special training, including their own psychotherapy). In all its various forms, psychotherapy is derived from Freud's psychoanalysis (see Chapter 2) and is distinguished both from behavioural treatments and from physical (somatic) treatments (those based on the medical model – see Chapter 3 and Gross, 2010).

Forensic psychology

This is a branch of psychology that attempts to apply psychological principles to the criminal justice system. Areas of research interest include jury selection, the presentation of evidence, eyewitness testimony, improving the recall of child witnesses, false memory syndrome and recovered memory, offender profiling, stalking, crime prevention, devising treatment programmes (such as anger management) and assessing the risk of releasing prisoners.

Educational psychology

Educational psychologists are mostly employed by local education authorities, working in schools, colleges, child and family centre teams (previously called 'child guidance'), the School Psychological Service, hospitals, day nurseries, nursery schools, special schools (day and residential) and residential children's homes. Their functions include the following:

- Administering psychometric tests (particularly intelligence/IQ tests)
- Planning and supervising remedial teaching
- Planning educational programmes for children and adolescents with special educational needs (including the visually impaired and autistic)
- Advising parents and teachers how to deal with children and adolescents with behaviour problems and/or learning difficulties

Occupational (work or organisational) psychology

Occupational psychologists are involved in the selection and training of individuals for jobs and vocational guidance, including administration of aptitude tests and tests of interest. (This overlaps with the work of those trained in *personnel management*.)

Health psychology

This is one of the newer fields of applied psychology.

Health psychologists work in various settings such as hospitals, academic health research units, health authorities and university departments. They may deal with problems identified by health care agencies, including NHS trusts and health authorities, health professionals (such as general practitioners, nurses and rehabilitation therapists) and employers outside the health care system.

The breadth of health psychology

- The use of psychological theories and interventions to prevent damaging behaviours (such as smoking, drug abuse and poor diet) and to change health-related behaviour in community and workplace settings.
- Promoting and protecting health by encouraging behaviours such as exercise, healthy diet and health checks/self-examination.
- Health-related cognitions: Investigating the processes that can explain, predict and change health and illness behaviours (see Chapter 3).
- The nature and effects of communication between health care practitioners and patients, including interventions to facilitate adherence (such as taking medication), preparing patients for stressful medical procedures and so on (see Chapters 3 and 9).
- Psychological aspects of illness: Looking at the psychological impact of acute and chronic illness on individuals, families and carers (see Chapters 3 and 4).

Language of psychology

TIME FOR REFLECTION …

- What, if anything, has come as a surprise to you regarding what goes on in the name of ‘psychology’?

As in all sciences, there is a special set of technical terms (jargon) to get used to, and this is generally accepted as an unavoidable feature of studying the subject. But over and above this jargon, psychologists use words that are familiar to us from everyday speech in a *technical way*, and it is in these instances that ‘doing psychology’ can become a little confusing.

Some examples of this are ‘behaviour’ and ‘personality’. For a parent to tell a child to ‘behave yourself’ is meaningless to a psychologist’s ears: behaving is something we are all doing all the time (even when we are asleep). Similarly, to say that someone ‘has no personality’ is meaningless because, as personality refers to what makes a person unique and different from others, you cannot help but have one!

Some of the technical terms used throughout the book are defined in the Glossary (pages 439–456).

Formal versus informal psychology

Legge (1975) and others distinguish between *formal* and *informal psychology* (or professional versus amateur, scientific versus non-scientific).

Our common-sense, intuitive or 'natural' understanding is unsystematic and does not constitute a body of knowledge. This makes it very difficult to 'check' an individual's 'theory' about human nature, as does the fact that each individual has to learn from his/her own experience. So part of the aim of formal psychology is to provide such a systematic body of knowledge.

However, rather than negating or invalidating our everyday, common-sense understanding, Legge (1975) believes that most psychological research should be aimed at demonstrating 'what we know already', and then going one step further. Only the methods of science, he believes, can provide us with the public, communicable body of knowledge that we are seeking. According to Allport (1947), the aim of science is 'understanding, prediction and control above the levels achieved by unaided common sense', and this is meant to apply to psychology as much as to the natural sciences.

What do we mean by 'science'?

TIME FOR REFLECTION ...

- What do you understand by the term 'science'?
- What makes a science different from non-science?
- Are there different kinds of science and, if so, what do they have in common?

Asking this question is a necessary first step for considering the appropriateness of attempting to scientifically study human behaviour.

Major features of science

Most psychologists and philosophers of science would probably agree that for a discipline to be called a science, it must possess certain characteristics. These are summarised in Figure 1.4.

What is 'scientific method'?

The account shown in Figure 1.4 of what constitutes a science is non-controversial. However, it fails to tell us how the *scientific process* takes place, the sequence of 'events' involved (such as where the theory comes from in the first place and how it is related to observation of the subject matter) or the exact relationship between theory construction, hypothesis testing and data collection.

Collectively, these 'events' and relationships are referred to as (the) *scientific method*. Table 1.1 summarises some common beliefs about both science and scientific method, together with some alternative views.

Figure 1.4 A summary of the major features of a science.

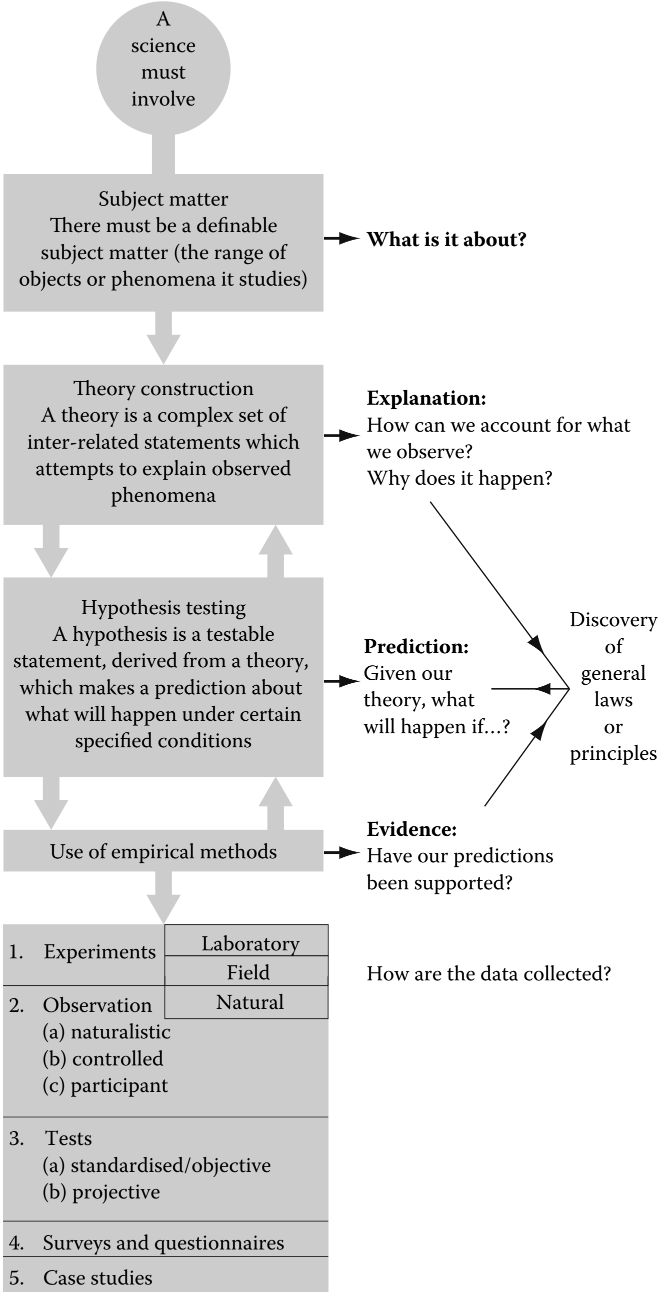

A science must involve
Subject matter
There must be a definable subject matter (the range of objects or phenomena it studies)
What is it about?
Theory construction
A theory is a complex set of inter-related statements which attempts to explain observed phenomena
Explanation:
How can we account for what we observe?
Why does it happen?
Hypothesis testing
A hypothesis is a testable statement, derived from a theory, which makes a prediction about what will happen under certain specified conditions
Prediction:
Given our theory, what will happen if...?
Discovery of general laws or principles
Use of empirical methods
Evidence:
Have our predictions been supported?
1. Experiments
Laboratory
Field
Natural
2. Observation
(a) naturalistic
(b) controlled
(c) participant
3. Tests
(a) standardised/objective
(b) projective
4. Surveys and questionnaires
5. Case studies
How are the data collected?

Table 1.1 Some common beliefs and alternative views about 'science' and 'scientific method'.

Common beliefs		**Alternative views**	
λ	Scientific discovery begins with simple, unbiased, unprejudiced observation: the scientist simply 'samples' the world without any preconceptions, expectations or predetermined theories	λ	There is no such thing as 'unbiased' or 'unprejudiced' observation. Observation is always selective, interpretative, prestructured and directed: we must have at least some idea of what we are looking for, otherwise we cannot know when we have found it. Goldberg (2000) cites a philosophy professor who asserted that what we call 'data' (that which is given) should more accurately be called 'capta' (that which is taken)
ν	From the resulting sensory evidence ('data'/sense data), generalised statements of fact will take shape: we gradually build up a picture of what the world is like based on a number of separate 'samples'	ν	'Data' do not constitute 'facts': evidence usually implies measurements, numbers and recordings, which need to be interpreted in the light of a theory. Facts do not exist objectively and cannot be discovered through 'pure observation' 'Fact' = data + theory (Deese, 1972)
σ	The essential feature of scientific activity is the use of empirical methods, through which the sensory evidence is gathered: what distinguishes science from non-science is performing experiments and so on	σ	Despite the central role of data collection, data alone do not make a science. Theory is just as crucial, because without it data have no meaning (see preceding point)
τ	The truth about the world (the objective nature of things, what the world is 'really like') can be established through properly controlled experiments and other ways of collecting 'facts': science can tell us about reality as it is independent of the scientist or the activity of observing it	τ	Scientific theory and research reflect the biases, prejudices, values and assumptions of the individual scientist as well as of the scientific community s/he belongs to. Science is not value-free (see Gross, 2010)

Table 1.1 ***(Continued)*** Some common beliefs and alternative views about 'science' and 'scientific method'.

Common beliefs		**Alternative views**	
υ	Science involves the steady accumulation of knowledge: each generation of scientists adds to the discoveries of previous generations	υ	Science involves an endless succession of long, peaceful periods ('normal science') and 'scientific revolutions' (Kuhn, 1962; see Table 2.1)
		ι	Science has a warm, human, exciting, argumentative, creative 'face' (Collins, 1994)
Source:	Based on Medawar, P.B., *The Art of the Soluble*, Penguin Books, Harmondsworth, 1963; Popper, K., *Objective Knowledge: An Evolutionary Approach*, Oxford University Press, Oxford, 1972.		

Scientific study of human behaviour

Social nature of science: The problem of objectivity

'Doing science' is part of human behaviour. When psychologists study what people do, they are engaging in some of the very same behaviours they are trying to understand (such as thinking, perceiving, problem-solving and explaining). This is what is meant by the statement that psychologists are part of their own subject matter, which makes it even more difficult for them to be objective than other scientists.

According to Richards (1996), it may be impossible for any scientist to achieve complete objectivity. One reason for this relates to the social nature of scientific activity. As Rose (1997) says,

> How biologists, or any scientists, perceive the world is not the result of simply holding a true reflecting mirror up to nature: it is shaped by the history of our subject, by dominant social expectations and by the patterns of research funding.

According to Richardson (1991), science is a very *social* business. Research must be qualified and quantified to enable others to replicate it: in this way, the procedures, instruments and measures become standardised, so that scientists anywhere in the world can check the truth of reported observations and findings. This implies the need for universally agreed conventions for reporting these observations and findings.

However, even if there are widely accepted ways of 'doing science', 'good science' does not necessarily mean 'good psychology'. Is it valid to study human behaviour and experience as part of the natural world, or is a different kind of approach needed altogether? After all, it is not just psychologists who observe, experiment and theorise (Heather, 1976).

The Psychology experiment as a social situation

To regard empirical research in general, and the experiment in particular, as objective involves two related assumptions:

1. Researchers influence the participant's behaviour (the outcome of the experiment) only to the extent that they decide what hypothesis to test, how the variables are to be operationalised (defined in a way that allows them to be measured), what design to use (e.g. randomly allocating each participant to one experimental condition or testing every participant under each condition) and so on.
2. The only factors influencing the participant's performance are the objectively defined variables manipulated by the experimenter.

TIME FOR REFLECTION ...

- Try to formulate some arguments against these two assumptions.
- What do the experimenter and participant bring with them to the experimental situation that is not directly related to the experiment, and how may this (and other factors) influence what goes on in the experimental situation (see Gross, 2010)?

Experimenters are people too: The problem of experimenter bias

Some examples of experimenter bias

- According to Valentine (1992), experimenter bias has been demonstrated in various experiments, including reaction time, animal learning, verbal conditioning, personality assessment, person perception, learning and ability as well as in everyday life situations.
- What these experiments consistently show is that if one group of experimenters has one hypothesis about what it expects to find and another group has the opposite hypothesis, *both* groups will obtain results that support their respective hypotheses. The results *are not* due to the mishandling of data by biased experimenters: the experimenters' bias somehow creates a changed environment, in which participants actually behave differently.
- In a natural classroom situation, children whose teachers were told they would show academic 'promise' during the next academic year showed significantly greater IQ gains than children for whom such predictions were not made (although this latter group also made substantial improvements). In fact, the children were *randomly* allocated to the two conditions. But the teachers' expectations actually produced the predicted improvements in the 'academic promise' group, demonstrating a *self-fulfilling prophecy* (Rosenthal and Jacobson, 1968).

TIME FOR REFLECTION ...

- Try to explain the findings from the studies described in Box 'Some examples of experimenter bias'.
- How could experimenter expectations actually bring about the different performances of the two groups of children?

Participants are psychologists too: Demand characteristics

Instead of seeing the person being studied as a passive responder to whom things are done ('subject'), Orne (1962) stresses what the person *does*, implying a far more *active* role. Participants' performance in an experiment could be thought of as a form of *problem-solving behaviour*. At some level, they see the task as working out the true purpose of the experiment and responding in a way that will support the hypothesis being tested.

In this context, the cues that convey the experimental hypothesis to participants represent important influences on their behaviour, and the sum total of those cues are called the *demand characteristics* of the experimental situation. These cues include all explicit and implicit communications during the actual experiment (Orne, 1962). This tendency to identify the demand characteristics is related to the tendency to play the role of a 'good' (or 'bad') experimental participant.

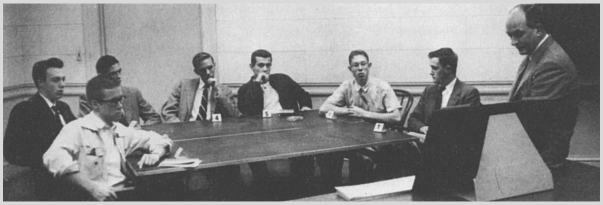
Not only is the experiment a social situation, but science itself is a *culture-related phenomenon*. This represents another respect in which science cannot claim complete objectivity (Moghaddam et al., 1993).

Problem of representativeness

Traditional, mainstream experimental psychology adopts a *nomothetic* ('law-like') approach. This involves generalisation from limited samples of participants to 'people in general', as part of the attempt to establish general 'laws' or principles of behaviour.

TIME FOR REFLECTION ...

- The photograph below captures a fairly typical scene as far as participant characteristics in mainstream psychological research are concerned. It depicts one of Asch's famous conformity experiments (see Chapter 8, pages 174–177).
- What are the most apparent characteristics of the experimental participants, and how are they similar to/different from those of Asch (who is pictured furthest right)?



Despite the fact that Asch's experiments were carried out in the early 1950s, very little has changed as far as participant samples are concerned. In American psychology at least, the typical participant is a psychology undergraduate, who is obliged to take part in a certain number of studies as a course requirement and who receives 'course credits' for doing so (Krupat and Garonzik, 1994).

Mainstream British and American psychology has implicitly equated 'human being' with 'member of Western culture'. Despite the fact that the vast majority of research participants are members of Western societies, the resulting findings and theories have been applied to 'human beings', as if culture made no difference (they are 'culture-bound and culture-blind') (Sinha, 1997). This *Anglocentric* or *Eurocentric bias* (a form of *ethnocentrism*) is matched by the *androcentric* or *masculinist bias* (a form of *sexism*), according to which the behaviours and experiences of men are taken as the standard against which women are judged (see Gross, 2009).

In both cases, while the bias remains implicit and goes unrecognised (and is reinforced by psychology's claim to be objective and value-free), research findings are taken as providing us with an objective, scientifically valid account of what 'women/people in general are like'. Once we realise that scientists, like all human beings, have prejudices, biases and values, their research and theories begin to look less objective, reliable and valid than they did before.

Problem of artificiality

Criticisms of traditional empirical methods (especially the laboratory experiment) have focused on their *artificiality*, including the often unusual and bizarre tasks that people are asked to perform in the name of science. Yet, we cannot be sure that the way people behave in the laboratory is an accurate indication of how they are likely to behave outside it (Heather, 1976).

What makes the laboratory experiment such an unnatural and artificial situation is the fact that it is almost totally structured by one 'participant' – the experimenter. This relates to *power differences* between experimenters and their 'subjects', which is as much an *ethical* as a practical issue (see Gross, 2009).

Traditionally, participants have been referred to as 'subjects', implying something less than a person, a dehumanised and depersonalised 'object'. According to Heather (1976), it is a small step from reducing the person to a mere thing or object (or experimental 'subject') to seeing people as machines or machine-like ('mechanism' = 'machine-ism' = mechanistic view of people). This way of thinking about people is reflected in the popular definition of psychology as the study of 'what makes people tick'.

Problem of internal versus external validity

If the experimental setting (and task) is seen as similar or relevant enough to everyday situations to allow us to generalise the results, we say that the study has high *external* or *ecological validity*. But what about *internal validity*? Modelling itself on natural science, psychology attempts to overcome the

Box 1.2 Some difficulties with the notion of experimental control

- While it is relatively easy to control the more obvious *situational variables*, this is more difficult with *participant variables*, either for practical reasons (such as the availability of these groups) or because it is not always obvious exactly what the relevant variables are. Ultimately, it is down to the experimenter's judgement and intuition: what she/he believes it is important (and possible) to control (Deese, 1972).
- If judgement and intuition are involved, then control and objectivity are matters of degree, whether in psychology or physics (see Table 1.1).
- It is the *variability/heterogeneity* of human beings that makes them so much more difficult to study than, say, chemicals. Chemists do not usually have to worry about how two samples of a particular chemical might differ from each other, but psychologists need to allow for *individual differences* between participants.
- We cannot just assume that the IV (or 'stimulus' or 'input') is identical for every participant, definable in some objective way, independent of the participant and exerting a standard effect on everyone.
- Complete control would mean that the IV alone was responsible for the DV, so that experimenter bias and the effect of demand characteristics were irrelevant. But even if complete control were possible (even if we could guarantee the *internal validity* of the experiment), a fundamental dilemma would remain. The greater the degree of control over the experimental situation, the more different it becomes from real-life situations (the more artificial it gets and the lower its *external validity*).

problem of the complexity of human behaviour by using experimental control. This involves isolating an independent variable (IV) and ensuring that *extraneous variables* (variables other than the IV likely to affect the dependent variable [DV]) do not affect the outcome (see Coolican, 2004). But this begs the crucial question: *how do we know when all the relevant extraneous variables have been controlled?* (See Box 1.2).

To discover the relationships between variables (necessary for understanding human behaviour in natural, real-life situations), psychologists must 'bring' the behaviour into a specially created environment (the laboratory), where the relevant variables can be controlled in a way that is impossible in naturally occurring settings. However, in doing so, they construct an artificial environment and the resulting behaviour is similarly artificial – it is no longer the behaviour they were trying to understand!

Conclusions

During the course of its life as a separate discipline, definitions of psychology have changed quite fundamentally, reflecting the influence of different theoretical approaches. Initially through the influence of behaviourism, psychology has taken the natural sciences as its model (*scientism*). In this chapter, we have highlighted some of the major implications of adopting methods of investigating the natural world and applying them to the study of human behaviour and experience. Ultimately, whatever a particular science may claim to have discovered about the phenomena it studies, scientific activity remains just one more aspect of human behaviour.

CHAPTER SUMMARY

- Early psychologists, such as Wundt, attempted to study the mind through *introspection* under controlled conditions, aiming to analyse conscious thought into its basic elements (*structuralism*).
- Watson rejected introspectionism's *subjectivity* and replaced it with *behaviourism*. Only by using the methods of natural science and studying observable behaviour could psychology become a true science.
- *Gestalt psychologists* criticised both structuralism and behaviourism, advocating that 'the whole is greater than the sum of its parts'. Freud's *psychoanalytic theory* was another major alternative to behaviourism.
- *Cognitive psychologists* see people as *information processors*, based on the *computer analogy*. Cognitive processes, such as perception and memory, are an acceptable part of psychology's subject matter.
- *Academic* psychologists are mainly concerned with conducting *research* (*pure* or *applied*), which may focus on underlying *processes/mechanisms* or on the *person*.
- The process approach consists of physiological, cognitive and comparative psychology, while the person approach covers developmental and social psychology and individual differences.
- Most applied psychologists work in clinical, counselling, forensic, educational or occupational psychology. Newer fields include health and sport psychology.
- A distinction is commonly made between *informal/common-sense* and *formal/scientific psychology*. The latter aims to go beyond common-sense understanding and to provide a public, communicable body of knowledge.
- A science must possess a definable subject matter, involve theory construction and hypothesis testing and use empirical methods for data collection. However, these characteristics fail to describe the scientific process or scientific method.
- Science is a very *social* activity and consensus among the scientific community is paramount. This detracts from psychology's claim (or that of any other science) to *objectivity*.
- Environmental changes are somehow produced by experimenters' expectations (*experimenter bias*), and *demand characteristics* influence participants' behaviours by helping to convey the experimental hypothesis. The experiment is a social situation and science itself is *culture related*.
- The *artificiality* of laboratory experiments is largely due to their being totally structured by experimenters. Also, the higher an experiment's *internal validity*, the lower its *external validity* becomes.

2 Theoretical approaches

Introduction and overview

Different psychologists make different assumptions about what particular aspects of a person are worthy of study, and this helps to determine an underlying model or image of what people are like. In turn, this model or image determines a view of psychological normality, the nature of development, preferred methods of study, the major cause(s) of abnormality and the preferred methods and goals of treatment.

An approach is a perspective that is not as clearly outlined as a theory. As we shall see, all the major approaches include two or more distinguishable theories but, within an approach, they share certain basic principles and assumptions that give them a distinct 'flavour' or identity. The focus here is on the *behaviourist*, *psychodynamic*, *humanistic* and *biological* approaches (see Gross, 2010, for a discussion of the cognitive, evolutionary and social constructionist approaches).

Behaviourist approach

Basic principles and assumptions

As we saw in Chapter 1, Watson revolutionised psychology by rejecting the introspectionist approach and advocating the study of observable behaviour. What was revolutionary when he first delivered his 'behaviourist manifesto' (Watson, 1913; see Box 2.1) has become almost taken-for-granted, 'orthodox' psychology. Belief in the importance of empirical methods, especially the experiment, as a way of collecting data about humans (and non-humans) that can be quantified and statistically analysed is a major feature of *mainstream psychology* (see Gross, 2010).

Box 2.1 Watson's (1913) 'behaviourist manifesto'

Watson's article, 'Psychology as the behaviourist views it', is often referred to as the 'behaviourist manifesto', a charter for a truly scientific psychology. Three features of this 'manifesto' deserve special mention.

1. Psychology must be purely *objective*, excluding all subjective data or interpretations in terms of conscious experience. This redefines psychology as the 'science of behaviour' (rather than the 'science of mental life').
2. The goals of psychology should be to *predict* and *control* behaviour (as opposed to describing and explaining conscious mental states), a goal later endorsed by Skinner's *radical behaviourism* (see below).
3. There is no fundamental (*qualitative*) distinction between human and non-human behaviour. If, as Darwin had shown, humans evolved from more simple species, then it follows that human behaviour is simply a more complex form of the behaviour of other species (the difference is merely *quantitative* – one of degree). Consequently, rats, cats, dogs and pigeons became the major source of psychological data. Since 'psychological' now meant 'behaviour' rather than 'consciousness', non-humans that were convenient to study, and whose environments could easily be controlled, could replace people as experimental subjects.

Source: Based on Fancher, R.E., *Pioneers of Psychology*, Norton, New York, 1979; Watson, J.B., *Psychol. Rev.*, 20, 158–177, 1913.

According to Skinner (1987),

> **'Radical' behaviourists … recognise the role of private events (accessible in varying degrees to self-observation and physiological research), but contend that so-called mental activities are metaphors or explanatory fictions and that behaviour attributed to them can be more effectively explained in other ways.**

For Skinner, these more effective explanations of behaviour come in the form of the *principles of reinforcement* derived from his experimental work with rats and pigeons (see Box 2.2). What is 'radical' about Skinner's radical behaviourism is his rejection of thoughts, feelings and other private events as possible explanations (i.e. causes) of behaviour. According to Nye (2000), Skinner's ideas are also radical because he applied the same type of analysis to covert behaviour (thoughts and feelings) occurring 'within the skin' as he did to overt, publicly observable behaviours: in both cases, they can be translated into the language of reinforcement theory. He stressed the importance of identifying *functional relations* (cause-and-effect connections) between environmental conditions and behaviours.

Box 2.2 Basic principles and assumptions made by the behaviourist approach

Figure 2.1 B.F. Skinner (1904–1990).

- Behaviourists emphasise the role of environmental factors in influencing behaviour, to the near exclusion of innate or inherited factors. This amounts essentially to a focus on *learning*. The key form of learning is *conditioning*, either *classical*, which formed the basis of Watson's behaviourism, or *operant*, which is at the centre of Skinner's radical behaviourism (Figure 2.1).
- *Classical conditioning* is also known as *Pavlovian*, after Pavlov, the Russian physiologist, who famously discovered that dogs learn to salivate at anything that has become associated with food. For example, if a bell is rung (the conditioned stimulus) repeatedly just before the dog is given food (the unconditioned stimulus), the dog will eventually salivate when it hears the bell (without food having to be given). Salivating to food is an unconditioned response (i.e. unlearned), but it becomes a conditioned response to the bell. In both cases, salivation is an *automatic* response (hence, this form of learning is also known as *respondent* conditioning). The learner is responding *passively* to environmental events.
- *Operant conditioning* is also known as *instrumental* conditioning. This denotes the fact that the animal's behaviour is instrumental in producing certain *consequences*. In Skinner's experiments with rats, for example, they had to press a lever to receive a *positive reinforcement* (a food pellet) or a *negative reinforcement* (the switching off of an electric shock), or lever pressing would result in an electric shock (*punishment*). Reinforcement (positive or negative) makes the behaviour that produced it *more likely* to be repeated, while punishment makes it *less likely* to be repeated. Here, the learner is *actively* influencing what happens to it by manipulating its environment.
- Behaviourism is often referred to as 'S–R' psychology ('S' standing for 'stimulus' and 'R' for 'response'). However, only in classical conditioning is the stimulus seen as triggering a response in a predictable, automatic way, and this is what is conveyed by 'S–R' psychology.
- Both types of conditioning are forms of *associative learning*, whereby associations or connections are formed between stimuli and responses that did not exist before learning took place.
- The mechanisms proposed by a theory should be as simple as possible. Behaviourists stress the use of *operational definitions* (defining concepts in terms of observable, measurable events).
- The aim of a science of behaviour is to *predict* and *control* behaviour (see Box 2.1).

Theoretical contributions

Behaviourism made a massive contribution to psychology, at least up to the 1950s, and explanations of behaviour in conditioning terms recur throughout the subject (see Gross, 2010). For example, apart from learning and conditioning, imagery as a form of organisation in memory and as a memory aid is based on the principle of association, and the interference theory of forgetting is largely couched in stimulus–response terms. Language, moral and gender development have all been explained in terms of conditioning. The behaviourist approach also offers one of the major models of abnormal behaviour.

Theorists and researchers critical of the original, 'orthodox' theories have modified and built on them, making a huge contribution in the process. One noteworthy example is Bandura's (1971) *social learning theory* (renamed *social cognitive theory* in 1989).

Practical contributions

TIME FOR REFLECTION ...

- Try to think of examples of your work (including patients' and colleagues' behaviour, as well as your own) where behaviourist principles (such as reinforcement) and assumptions might help explain what happens.

The emphasis on experimentation, operational definitions and the measurement of observable events has been a major influence on the practice of scientific psychology in general (what Skinner, 1974, called the 'science of behaviour'). This is quite unrelated to any views about the nature and role of mental events. Other, more 'tangible', contributions include the following:

- *Behaviour therapy* and *behaviour modification* (based on classical and operant conditioning, respectively) as major approaches to the treatment of abnormal behaviour and one of the main tools in the clinical psychologist's 'kit bag' (see Box 1.4, page 9).
- *Behavioural neuroscience*, an interdisciplinary field of study, using behavioural techniques to understand brain function and neuroscientific techniques to throw light on behavioural processes.
- *Behavioural pharmacology*, which involves the use of *schedules/contingencies of reinforcement* to assess the behavioural effects of new drugs that modify brain activity (schedules of reinforcement refer to how often and regularly/predictably reinforcements are given following some desired behaviour); most importantly, the research has illustrated how many behavioural effects of drugs are determined as much by the current behaviour and reinforcement contingencies as by the effects of the drug on the brain (Leslie, 2002; see also Chapter 12).
- *Biofeedback* as a non-medical treatment for stress-related symptoms, derived from attempts to change rats' autonomic physiological functions through the use of operant techniques (see Chapter 5).

An evaluation of behaviourism

TIME FOR REFLECTION …

- Do you agree with Skinner's claim that thoughts and other 'covert behaviours' do not *explain* our behaviour (because they cannot *determine* what we do)?

Skinner's claim that human behaviour can be predicted and controlled in the same way as the behaviour of non-humans is usually accepted only by other behaviour analysts. Possessing language allows us to communicate with each other and to think about 'things' that have never been observed (and may not even exist), including rules, laws and principles (Garrett, 1996). While these can only be expressed in or thought about in words, much of our behaviour is governed by them. According to Garrett, when this happens 'behaviour is now shaped by what goes on inside their [people's] heads … and not simply by what goes on in the external environment'. So, what people *think* is among the important variables determining what they do and say – the very *opposite* of what Skinner's radical behaviourism claims.

Behaviour analysts recognise the limitations of their approach. For example, Leslie (2002) admits that 'operant conditioning cannot provide a complete account of psychology from a behavioural perspective, even in principle'. Similarly, O'Donohue and Ferguson (2001) acknowledge that the science of behaviour cannot account for creativity, as in music, literature and science.

Psychodynamic approach

The term 'psychodynamic' denotes the active forces within the personality that motivate behaviour and the inner causes of behaviour (in particular the *unconscious conflict* between the different structures that compose the whole personality). While Freud's was the original psychodynamic theory, the approach includes all those theories based on his ideas, such as those of Jung (1964), Adler (1927) and Erikson (1950). Freud's *psychoanalytic theory* is psychodynamic, but the psychodynamic theories of Adler, Jung and Erikson are not psychoanalytic. So the two terms *are not* synonymous. However, because of their enormous influence, Freud's ideas will be emphasised in the rest of this section.

Basic principles and assumptions

Freud's concepts are closely interwoven, making it difficult to know where a description of them should begin (Jacobs, 1992). Fortunately, Freud himself stressed the acceptance of certain key theories as essential to the practice of *psychoanalysis*, the form of psychotherapy he pioneered and from which most others are derived (see Box 2.3 and page 28).

Box 2.3 Major principles and assumptions of psychoanalytic theory

Figure 2.2 Sigmund Freud (1856–1939).

- Much of our behaviour is determined by unconscious thoughts, wishes, memories and so on. What we are consciously aware of at any one time represents the tip of an iceberg: most of our thoughts and ideas are either not accessible at that moment (*preconscious*) or are totally inaccessible (*unconscious*). These unconscious thoughts and ideas can become conscious through the use of special techniques, such as *free association*, *dream interpretation* and *transference* – the cornerstones of psychoanalysis.
- Much of what is unconscious has been made so through *repression*, whereby threatening or unpleasant experiences are 'forgotten', locked away from our conscious awareness. This is a major form of *ego defence* (see Chapter 5). Freud (1914) (see Figure 2.2) singled out repression as a special cornerstone 'on which the whole structure of psychoanalysis rests'. Repression is closely related to *resistance*, interpretation of which is another key technique used in psychoanalysis.
- According to the theory of *infantile sexuality*, the sexual instinct or drive is active from birth and develops through a series of five *psychosexual stages*. The most important of these is the *phallic stage* (spanning the ages 3 to 5/6), during which all children experience the *Oedipus complex*. This refers to the 'family romance', which in the case of boys refers to their 'falling in love' with their mother and becoming jealous of their father, whom they also fear will punish them through castration.
- Freud used the German word *trieb*, which translates as 'drive', rather than *instinkt*, which was meant to imply that experience played a crucial role in determining the 'fate' of sexual (and aggressive) energy.
- Related to infantile sexuality is the general *impact of early experience* on later personality (see Chapter 14). According to Freud (1949), '… the child is psychologically father of the man and … the events of its first years are of paramount importance for its whole subsequent life'.

Theoretical contributions

As with behaviourist accounts of conditioning, many of Freud's ideas and concepts (such as 'respression' and 'unconscious') have become part of the vocabulary of mainstream psychology.

Freud's contribution is extremely rich and diverse, offering theories of motivation, dreams and the relationship between sleep and dreams, moral and gender development, aggression, abnormality and forgetting. Psychoanalytic theory also influenced Adorno et al.'s (1950) theory of the authoritarian personality (a major account of prejudice; see Chapter 7).

Finally, Freud's theories have stimulated the development of alternative theories, often resulting from the rejection of some of his fundamental principles and assumptions, but reflecting his influence enough for them to be described as psychodynamic.

Some major alternative psychodynamic theories

TIME FOR REFLECTION ...

- Repeat the exercise suggested for the behaviourist approach (see page 23).

- *Ego psychology*, promoted by Freud's daughter, Anna, focused on the mechanisms used by the *ego* (the rational, decision-making part of the personality) to deal with the world, especially the ego defence mechanisms. Freud, by contrast, stressed the influence of the *id*'s innate drives (especially sexuality and aggression) and is often described as an instinct theorist (but see the fourth entry in Box 2.3). (The id represents the infantile, pleasure-seeking part of the personality.) The ego, as well as the id, originates in basic human inheritance and has its own developmental course. It uses neutralised (non-sexual) energy, which makes possible an interest in objects and activities that are not necessarily related to underlying sexual and aggressive drives.
- Erik Erikson, trained by Anna Freud as a child psychoanalyst, also stressed the importance of the ego as well as the influence of social and cultural factors on individual development. He pioneered the *lifespan approach* to development, proposing eight *psychosocial stages*, in contrast with Freud's five psychosexual stages that end with physical maturity (see Chapters 13 and 17 through 19).
- Two of Freud's original 'disciples', Carl Jung and Alfred Adler, broke ranks with Freud and formed their own 'schools' (*analytical psychology* and *individual psychology* respectively). Jung attached relatively little importance to childhood experiences (and the associated personal unconscious) but considerable importance to the *collective* (or *racial*) *unconscious*, which stems from the evolutionary history of human beings as a whole.
- Like Jung, Adler rejected Freud's emphasis on sexuality, stressing instead the *will to power* or *striving for superiority*, which he saw as an attempt to overcome feelings of inferiority faced by all children as they grow up. He also shared Jung's view of the person as an *indivisible unity* or whole and Erikson's emphasis on the *social* nature of human beings.
- The *object relations school* (the 'British school') was greatly influenced by Melanie Klein's (1932) emphasis on the infant's earliest (pre-Oedipal) relationships with its mother. It places far less emphasis on the role of instincts and more on the *relationship with particular love objects* (especially the mother). Fairbairn (1952), for example, saw the aim of the libido as *object-seeking* (as opposed to pleasure-seeking), and this was extended by Bowlby (1969) in his *attachment theory* (see Chapter 14).

Practical contributions

The current psychotherapy scene is highly diverse, with only a minority using Freudian techniques, but as Fancher (1996) points out,

> **Most modern therapists use techniques that were developed either by Freud and his followers or by dissidents in explicit reaction against his theories. Freud remains a dominating figure, for or against whom virtually all therapists feel compelled to take a stand.**

Both Rogers, the major humanistic therapist (see pages 30 and 31), and Wolpe, who developed *systematic desensitisation* (a major form of behaviour therapy), were originally trained in Freudian techniques. Perls, the founder of *Gestalt therapy*; Ellis, the founder of *rational emotive therapy*; and Berne, who devised *transactional analysis*, were also trained psychoanalysts.

Even Freud's fiercest critics concede his influence, not just within world psychiatry but in philosophy, literary criticism, history, theology, sociology, and art and literature generally. Freudian terminology is commonly used in conversations between therapists well beyond Freudian circles, and his influence is brought daily to therapy sessions as part of the cultural background and experience of nearly every client (Jacobs, 1992).

Many mental health practitioners (including psychotherapists, counsellors and social workers), although not formally trained as psychoanalysts, have incorporated elements of Freudian thought and technique into their approaches to helping their patients (Nye, 2000).

An evaluation of the psychodynamic approach

- A criticism repeatedly made of Freudian (and other psychodynamic) theories is that they are unscientific because they are *unfalsifiable* (incapable of being disproved) (Eysenck, 1985; Popper, 1959).
- According to Kline (1984, 1989), the theory comprises a collection of hypotheses, some of which are more easily tested than others, some of which are more central to the theory than others and some of which have more supporting evidence than others.
- According to Zeldow (1995), the history of science reveals that those theories that are the richest in explanatory power have proved the most difficult to test empirically. For example, Einstein's general theory of relativity is still untestable. Eysenck, Popper and others have criticised psychoanalytic theory for being untestable. But even if this were true,

  > **… the same thing could (and should) be said about any psychological hypotheses involving complex phenomena and worthy of being tested … psychoanalytic**

> **theories have inspired more empirical research in the social and behavioural sciences than any other group of theories …. (Zeldow, 1995)**

- Freud's theory provides methods and concepts that enable us to interpret and 'unpack' underlying *meanings* (it has great *hermeneutic strength*); these meanings (both conscious and unconscious) cannot be measured in any precise way. Freud offers a way of understanding that is different from theories that are easily testable, and it may actually be *more* appropriate for capturing the nature of human experience and action (Stevens, 1995; see also Chapter 1). According to Fancher (1996), 'His ideas about repression, the importance of early experience and sexuality, and the inaccessibility of much of human nature to ordinary conscious introspection have become part of the standard Western intellectual currency'.
- Reason (2000) believes it is time to re-acknowledge Freud's greatness as a psychologist. Like James, he had a rare gift for describing and analysing the phenomenology of mental life. Perhaps Freud's greatest contribution was in recognising that apparent trivia we now commonly call 'Freudian slips' are 'windows on the mind'.

Humanistic approach

Basic principles and assumptions

Although the term 'humanistic psychology' was coined by Cohen (1958), a British psychologist, this approach emerged mainly in the United States during the 1950s. Maslow (1968), in particular, gave wide currency to the term 'humanistic' in America, calling it a 'third force' (the other two being behaviourism and Freudianism). However, Maslow did not reject these approaches but hoped to unify them, thus integrating both subjective/private and objective/public aspects of the person.

Theoretical contributions

Maslow's *hierarchy of needs* (see Gross, 2010) distinguishes between motives shared by both humans and non-humans and those that are uniquely human and can be seen as an extension of the psychodynamic approach. Freud's id would represent physiological needs (at the hierarchy's base), Horney (a major critic of the male bias in Freud's theory) focused on the need for safety and love (corresponding to the next two levels) and Adler (see discussion on page 27) stressed esteem needs (at the fourth level). Maslow added self-actualisation to the peak of the hierarchy (Glassman, 1995).

Box 2.4 Some basic principles and assumptions of the humanistic approach

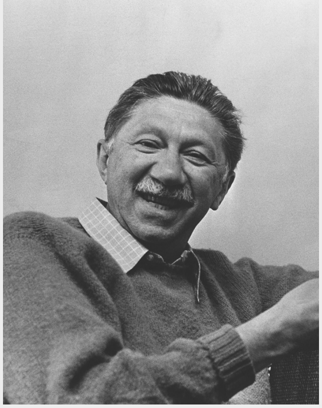


Figure 2.3 Abraham M. Maslow (1908–1970).

- Both the psychoanalytic and behaviourist approaches are *deterministic*. People are driven by forces beyond their control, either unconscious forces from within (Freud) or reinforcements from without (Skinner). Humanistic psychologists believe in free will and people's ability to choose how they act.
- A truly scientific psychology must treat its subject matter as fully human, which means acknowledging individuals as interpreters of themselves and their world. Behaviour, therefore, must be understood in terms of the individual's *subjective experience*, from the perspective of the actor (a *phenomenological approach*, which explains why this is sometimes called the 'humanistic-phenomenological' approach). This contrasts with the *positivist* approach of the natural sciences, which tries to study people from the position of a detached observer. Only the individual can explain the meaning of a particular behaviour and is the 'expert' – not the investigator or therapist.
- Maslow (Figure 2.3) argued that Freud supplied the 'sick half' of psychology, through his belief in the inevitability of conflict, neurosis, innate self-destructiveness and so on, while he (and Rogers) stressed the 'healthy half'. Maslow saw *self-actualisation* at the peak of a hierarchy of needs, while Rogers talked about the *actualising tendency*, an intrinsic property of life, reflecting the desire to grow, develop and enhance our capacities. A fully functioning person is the ideal of growth. Personality development naturally moves towards healthy growth, unless it is blocked by external factors, and should be considered the norm.
- Maslow's contacts with Wertheimer and other Gestalt psychologists (see Chapter 1) led him to stress the importance of understanding the *whole person*, rather than separate 'bits' of behaviour.

Source: Based on Glassman, W.E., *Approaches to Psychology*, Open University Press, Buckingham, 1995.

According to Rogers (1951), while awareness of being alive is the most basic of human experiences, we each fundamentally live in a world of our own creation and have a unique perception of the world (the *phenomenal field*). It is our *perception* of external reality that shapes our lives (*not* external reality itself). Within our phenomenal field, the most significant element is our sense of *self*, 'an organised consistent gestalt, constantly in the process of forming and reforming' (Rogers, 1959). This view contrasts with those of many other self theorists, who see it as a central, unchanging core of personality (see Chapter 16).

Practical contributions

TIME FOR REFLECTION …

- Repeat the exercise as for the behaviourist and psychodynamic approaches.

By far the most significant practical influence of any humanistic psychologist is Rogers' *client-* (or *person-*)*centred therapy* (see Gross, 2010). Originally (in the 1950s), it was called 'client-centred' therapy (CCT), but since the mid-1970s, it has been known as 'person-centred' therapy (PCT): 'psychotherapy is the releasing of an already existing capacity in a potentially competent individual' (Rogers, 1959).

The change in name was meant to reflect more strongly that the person, in his/her full complexity, is the centre of focus. Also, Rogers wanted to convey that his assumptions were meant to apply broadly to almost all aspects of human behaviour – not just to therapeutic settings. For example, he saw many parallels between therapists and teachers – they are both 'facilitators' of an atmosphere of freedom and support for individual pursuits. According to Nye (2000),

> A wide range of individuals – psychotherapists, counsellors, social workers, clergy and others – have been influenced by Rogers' assumptions that, if one can be a careful and accurate listener, while showing acceptance and honesty, one can be of help to troubled persons.

Nurses can be added to this list, especially in relation to their use of therapeutic conversation (see Chapter 3, Box 3.1).

Rogers helped develop research designs that enable objective measurement of the self-concept and ideal self and their relationship over the course of therapy (see Chapter 16) as well as methodologies for exploring the importance of therapist qualities. These innovations continue to influence therapeutic practice, and many therapists are now concerned that their work should be subjected to research scrutiny.

By emphasising the therapist's personal qualities, Rogers opened up psychotherapy to psychologists and contributed to the development of therapy provided by non-medically qualified therapists (*lay therapy*). This is especially significant in the United States, where (until recently) psychoanalysts had to be psychiatrists (medically qualified). Rogers originally used the term 'counselling' as a strategy for silencing psychiatrists who objected to psychologists practising 'psychotherapy'. In the United Kingdom, the outcome of Rogers' campaign has been the evolution of a counselling profession whose practitioners are drawn from a wide variety of disciplines, with neither psychiatrists nor psychologists dominating. Counselling skills are used in various settings throughout education, the health professions, social work, industry and commerce, the armed services and international organisations (Thorne, 1992).

An evaluation of the humanistic approach

- According to Wilson et al. (1996), the humanistic approach is not an elaborate or comprehensive theory of personality, but should be seen as a set of uniquely personal theories of living created by humane people optimistic about human potential. It has wide appeal to those who seek an alternative to the more mechanistic, deterministic theories.
- Like Freud's theory, many of its concepts are difficult to test empirically (such as self-actualisation) and it cannot account for the origins of personality. Since it describes but does not explain personality, it is subject to the *nominal fallacy* (Carlson and Buskist, 1997) and so cannot really be called a theory.
- Nevertheless, for all its shortcomings, the humanistic approach represents a counterbalance to the psychodynamic (especially Freudian) and the behaviourist approaches and has helped to bring the 'person' back into psychology. Crucially, it recognises that people help determine their own behaviour and are not simply slaves to environmental contingencies or to their past. The self, personal responsibility and agency, choice and free will are now legitimate issues for psychological investigation.

Biological approach

Basic principles and assumptions

Theoretical and practical contributions

We noted in Chapter 1 that biopsychology forms part of the process approach (Legge, 1975) and that a crucially important biological process with important implications for psychology is *genetic transmission* (see Box 2.5). For

Box 2.5 Basic principles and assumptions made by the biopsychological approach

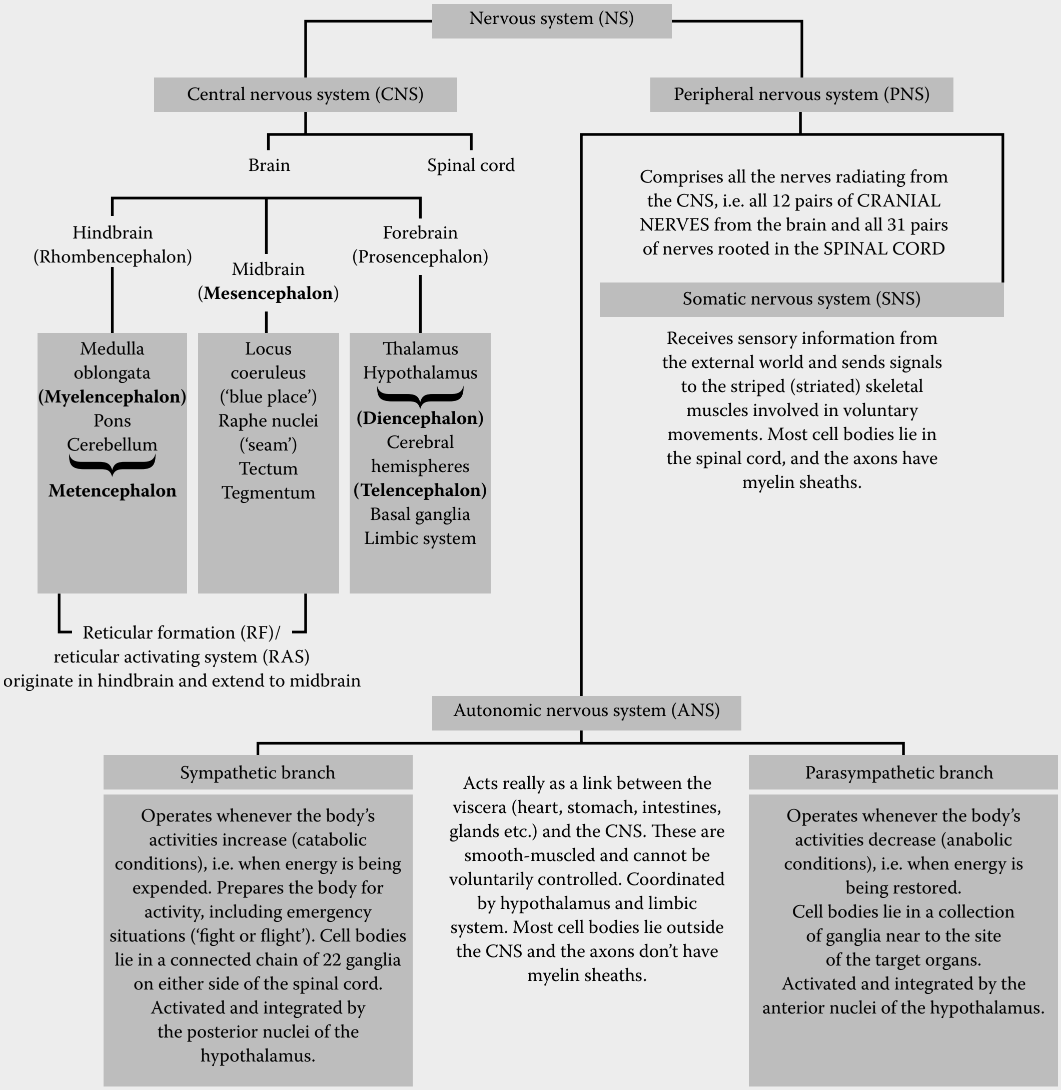
Toates (2001) identifies four strands of the application of biology to understanding behaviour:

1. How things work in the 'here and now', i.e. the immediate *determinants* of behaviour. In some cases, a biological perspective can provide clear insights into what determines people to act in a particular way. For example, when someone treads on a thorn (a cause) and cries out in pain soon afterwards (an effect), we know the pathways of information in the body that mediate between such causes and effects. What this example shows is that behaviour is an integral part of our biological make-up.
2. We inherit *genes* from our parents and these genes play a role in determining the structure of our body; through this structure, and perhaps most obviously through that of our *nervous system* (NS), genes play a role in behaviour.
3. A combination of genes and environment affects the growth and maturation of our body, with the main focus being the NS and behaviour. Development of the *individual* is called *ontogenesis*.

Box 2.5 Basic principles and assumptions made by the biopsychological approach (*Continued*)

4. The assumption that humans have evolved from simpler forms, rooted in Darwin's (1859) theory of *evolution*, relates to both the physical structure of our body and our behaviour: we can gain insight into behaviour by considering how it has been shaped by evolution. Development of *species* is called *phylogenesis* (Figure 2.4).

Figure 2.4 Major subdivisions of the human nervous system (including the main subdivisions of the brain).


Nervous system (NS)
Central nervous system (CNS)
Peripheral nervous system (PNS)
Brain
Spinal cord
Hindbrain (Rhombencephalon)
Midbrain (**Mesencephalon**)
Forebrain (Prosencephalon)
Medulla oblongata (**Myelencephalon**)
Pons
Cerebellum
Metencephalon
Locus coeruleus ('blue place')
Raphe nuclei ('seam')
Tectum
Tegmentum
Thalamus
Hypothalamus
(Diencephalon)
Cerebral hemispheres
(Telencephalon)
Basal ganglia
Limbic system
Reticular formation (RF)/ reticular activating system (RAS) originate in hindbrain and extend to midbrain
Comprises all the nerves radiating from the CNS, i.e. all 12 pairs of CRANIAL NERVES from the brain and all 31 pairs of nerves rooted in the SPINAL CORD
Somatic nervous system (SNS)
Receives sensory information from the external world and sends signals to the striped (striated) skeletal muscles involved in voluntary movements. Most cell bodies lie in the spinal cord, and the axons have myelin sheaths.
Autonomic nervous system (ANS)
Sympathetic branch
Operates whenever the body's activities increase (catabolic conditions), i.e. when energy is being expended. Prepares the body for activity, including emergency situations ('fight or flight'). Cell bodies lie in a connected chain of 22 ganglia on either side of the spinal cord. Activated and integrated by the posterior nuclei of the hypothalamus.
Acts really as a link between the viscera (heart, stomach, intestines, glands etc.) and the CNS. These are smooth-muscled and cannot be voluntarily controlled. Coordinated by hypothalamus and limbic system. Most cell bodies lie outside the CNS and the axons don't have myelin sheaths.
Parasympathetic branch
Operates whenever the body's activities decrease (anabolic conditions), i.e. when energy is being restored. Cell bodies lie in a collection of ganglia near to the site of the target organs. Activated and integrated by the anterior nuclei of the hypothalamus.

example, *behaviour geneticists* attempt to quantify how much of the variability of any given trait (e.g. intelligence, aggressiveness or schizophrenia) can be attributed to

1. Genetic differences between people (*heritability*)
2. *Shared environments* (i.e. between-family variation, such as socio-economic status)
3. *Non-shared environments* (within-family variations, such as how parents treat each children differently) (Pike and Plomin, 1999)

The two major methods used by behaviour geneticists to determine how much each of these factors contributes to individual differences are twin studies and adoption studies. These same – and related – methods are also used to determine if, and to what extent, a *disease* may be heritable.

RESEARCH QUESTION ...

- The most basic method used to determine the heritability of a disease involves studying the relatives of patients with a particular disorder to determine if they are at greater risk of developing the disorder than would be expected by chance alone. This method is called *familial aggregation* and is very similar to *family resemblance* studies used to study individual differences in intelligence and schizophrenia.
- If, say, the children of a parent (or both parents) with schizophrenia are significantly more likely to become schizophrenic themselves compared with their cousins or unrelated children, what conclusions could you draw regarding what causes schizophrenia?

At first sight, such findings suggest that schizophrenia is largely caused by genetic factors. However, as the genetic similarity between people increases, so does the similarity of their environments: parents and offspring usually live in the same households, whereas unrelated people do not. In other words, family resemblance/familial aggregation studies *confound* (or confuse) genetic and environmental influences.

One way of overcoming this problem is to compare the rates of schizophrenia among monozygotic (identical) twins reared together with those for monozygotic (MZ) twins reared apart (MZsRA). This helps to *disentangle* the effects of genetic and environmental factors. Studies of MZsRA represent one kind of *adoption study*.

Biopsychology is the study of the biological bases, or the physiological correlates, of behaviour and is a branch of *neuroscience* (or the brain sciences), the study of the NS. Biopsychology is also sometimes referred to as ‘psychobiology’, ‘behavioural neuroscience’, and ‘physiological psychology’. But Pinel (1993) prefers the term ‘biopsychology’, because it denotes a biological approach to the study of psychology, where psychology 'commands centre stage': biopsychologists are not interested in biology for its own sake, but for what it can tell them about behaviour and mental (cognitive) processes.

From both an ontogenetic and a phylogenetic perspective, 'the ultimate purpose of the nervous system is to produce and control behaviour' (Pinel, 1993). In general terms,

1. The kind of behaviour an animal is capable of depends very much on the kind of body it possesses; for example, humans can flap their arms as much as they like but they will never fly (unaided) – arms are simply not designed for flying, while wings are. However, we are very skilled at manipulating objects (especially small ones), because that is how our hands and fingers have developed during the course of evolution.
2. The possession of a specialised body is of very little value unless the NS is capable of controlling it: of course, evolution of the one usually mirrors evolution of the other.
3. The kind of NS also determines the extent and nature of the learning a species is capable of. As you move along the phylogenetic (evolutionary) scale, from simple, one-celled amoebae, through insects, birds and mammals, to primates (including ourselves – *Homo sapiens*), the NS gradually becomes more complex. At the same time, behaviour becomes increasingly the product of learning and environmental influence, rather than instinct and other innate, genetically determined factors.

As noted in Chapter 3, the influence of the biological approach can be seen very clearly in the *biomedical model* of illness and disease. The influence of the biological approach is also seen in the concept of addiction, which is based on the *addiction-as-disease model* (see Chapter 12).

According to the biomedical model, disease is something that 'happens to' the individual, originating from either inside or outside the body. While disease may have psychological consequences, there are no psychological causes (i.e. people are just passive victims of forces beyond their control). Similarly, stress is something that inflicts itself on helpless individuals from the outside but that can have very real bodily effects; these include psychophysiological disorders such as hypertension, coronary heart disease and stomach ulcers (see Chapters 4 and 5).

- One major account of how stress makes people ill is Selye's (1956) General Adaptation Syndrome; this describes the interaction between the sympathetic branch of the autonomic nervous system (see Figure 2.4) and the endocrine (hormonal) system.
- Another explanation describes how stressors affect the immune system and is central to *psychoneuroimmunology* (PNI). PNI is defined as the study of psychological factors on the immune system (Ogden, 2004) and so represents a branch of 'mind–body medicine' (but see section on 'Evaluation of the biological approach').