PSYCHOLOGY FOR HEALTH CARE

PSYCHOLOGY FOR HEALTH CARE

Key Terms and Concepts

Bridget Adams and Barbara Bromley

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Foreword © Sally Kendall

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CONTENTS

<i>List of figures and tables</i>	vii
<i>Acknowledgements</i>	ix
<i>Foreword</i>	x
<i>Preface</i>	xii
<i>Using this book</i>	xiv
<i>Handy headings</i>	xvii
<i>Historical background</i>	xviii
1 Aggression and aggression management	1
2 Anxiety and depression	15
3 Attitudes, attitude change and persuasion	28
4 Behaviourism and behaviour therapies	40
5 Biopsychology and physical interventions	56
6 Cognitive psychology and cognitive therapies	78
7 Health beliefs, lifestyle and health promotion	95
8 Humanistic psychology and counselling	115
9 Language and therapeutic communication	128
10 Loss and grief therapy	147
11 Memory and response to memory changes	160
12 Mind and altered states of consciousness	174
13 Pain and pain management	192
14 Perception and response to perceptual changes	208
15 Perception of self and others	226
16 Planning, playing and problem-solving	246

17	Psychodynamic psychology and psychotherapies	263
18	Research, statistics and psychometrics	279
19	Social psychology, groups and social skills	298
20	Stress and stress management	317
	<i>Appendix: Using a library</i>	336
	<i>Bibliography</i>	339
	<i>Index</i>	360

LIST OF FIGURES AND TABLES

Figures

1.1	Model of variables and processes in affective aggression	5
1.2	Determinants of anger arousal	5
1.3	Aggression in hospital: a case example for discussion	11
1.4	Reciprocity negotiation	13
3.1	Three-component model of attitude	29
3.2	Labelling	32
3.3	Communication variables	34
3.4	Persuasion	35
4.1	Behaviour modification programme: a case example for discussion	44
4.2	Modelling	49
4.3	Operant conditioning: reinforcement of the stimulus–response (S–R) unit	52
4.4	Social learning theory	54
5.1	Left hemisphere of brain	58
5.2	Inside the brain	59
5.3	Inheritance of eye colour or other single-gene characteristic	65
5.4	Motor and sensory pathways	67
5.5	Visual pathways	68
5.6	Auditory pathways	69
5.7	The nervous system	72
6.1	Catastrophising	83
6.2	Cognitive appraisal model	85
7.1	Health belief model	99
7.2	Protection motivation theory	100
7.3	Theory of reasoned action	100
7.4	Theory of planned behaviour	100
7.5	Health action process approach	101
8.1	Styles of therapy	117

viii PSYCHOLOGY FOR HEALTH CARE

9.1	Facial expressions	134
10.1	Poems of loss and grief	154
12.1	EEG wave traces in sleep	188
14.1	The colours of the spectrum and the relative sensitivity curves believed to be typical of the three main types of cone found in the human retina	212
14.2	Colour vision: colour of objects	213
14.3	Figure-ground reversal	216
15.1	Self-concept	240
15.2	Sexuality – a poem for discussion	243
17.1	Penis envy	275
18.1	Normal (Gaussian) distribution curve	288
19.1	Sociograms	314
20.1	Factors in stress	319
20.2	Physiological arousal systems	324
20.3	Stress and performance	328
A.1	Outline of the Dewey Decimal Classification	337

Tables

1.1	Ethological classification of aggression	8
4.1	Reinforcement schedules	53
7.1	Dimensions of health	97
12.1	Stages of a normal sleep cycle	189

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FOREWORD

Health-care practitioners, managers, researchers and educationalists are all engaging in their field of practice during a period in which the health service itself has been undergoing turbulent change. The changes have resulted from policy decisions that have emphasised issues such as cost-efficiency, clinical effectiveness, care in the community and evidence-based practice. Within these very broad based issues are specific implications for quality improvement (such as the introduction of the named nurse concept and the increase in audit-based activity), all of which have taken place within an evolving organisational context.

Coupled with complex service delivery issues is the way in which health itself has been defined and refined. Health is no longer perceived to be merely the absence of disease but rather a much more holistic understanding of the integration of physical, social and psychological factors that interplay with the individual in society, families and communities. These relationships are increasingly recognised and understood by users as well as health practitioners, so that appropriate and effective health care has become as much a matter of conceptual and theoretical interpretation within the context of health care as the application and implementation of knowledge.

It is against this background that users of the health service come with their health needs seeking health advice, treatment for disease, counselling or rehabilitation to mention but a few. Health-care professionals are expected to provide, and be accountable for, the most clinically effective and cost-effective care for which they have research evidence, in order to meet user's needs swiftly and appropriately – what has been termed doing the right thing in the right way. It is clearly evident that health practitioners in the twenty-first century and beyond require a wide and expanding knowledge base in order to plan and deliver care that is of demonstrably high quality.

In order better to understand issues of health, illness, disability, death, dying and so on, there is no doubt that health practitioners require a sound knowledge base in psychology. It is, however, both impractical and inappropriate for all health professionals to undertake diplomas and degrees in psychology. This volume provides the means by which any health practitioner can either learn for the first time, undertake revision or extend her knowledge in relation to psychology for health care. For example, for the health visitor who is engaged in health promotion, there is a complete chapter on health beliefs, lifestyle and health promotion. This chapter enables her to revise the major models of health promotion and to consider their relative limitations, to

appreciate the relative merits of teaching and learning approaches, to understand the relationship between different psychological schools and health behaviour, and to engage in further reading if necessary.

A further example is the junior doctor dealing with death and dying with relatively little experience. The chapter on loss and grief helps him to understand the significance of attachment behaviour and loss, the different staging models that have been developed to understand the process of dying, the limitations of these and what it really means for patients and their relatives.

Likewise, the chapter on research provides both the novice and the more experienced researcher with definitions of research terms, which are often confusingly presented in the research literature, as well as examples of tools to measure psychological constructs such as attitudes.

Using this book, these health professionals can access the information they require easily and extend and expand their knowledge base rapidly. While the authors would encourage readers to follow up the extensive references and deepen their knowledge of health-care psychology, the book nevertheless provides well-organised discussion on a wide range of psychology topics that will be meaningful to most health practitioners.

In conclusion, this volume will be an extremely valuable tool for the development of high-quality health care. As technological advance in medicine extends our capability to prolong life and to prevent the onset of many major diseases, the psychological aspects of care will take on an increasingly important role. In the past, there have been complaints from the public, and research studies demonstrate that the people delivering health care have not paid sufficient attention to psychological need, especially in such domains as communication, anxiety and pain management. It is already obvious that simply to 'reassure the patient' is not enough, but within this era of evidence-based practice it is surely incumbent on health professionals to utilise the knowledge in volumes such as this in order to ensure that the quality of practice meets the highest expectations.

PROFESSOR SALLY KENDALL
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PREFACE

I keep six honest serving-men
(They taught me all I knew);
Their names are What and Why and When
And How and Where and Who

from *The Elephant's Child*
by Rudyard Kipling

This book is for new students and experienced professionals who are undertaking a course of study in health care that includes psychology, health psychology, counselling or interpersonal skills. No previous knowledge of psychology is assumed.

The 'human condition' is examined in the research and practice of psychology, which requires many disciplines and has produced a myriad of reports. Approaches are often complex and may be contradictory. A person looking for information on any of the branches of the subject may have a hard time tracking it down and then taking in what is written.

We have devised this book as an introduction to some of the main discoveries and thoughts that are relevant to health care. We have tried to guide readers in finding where to look for information and define, where we can, the terms used by the pioneers in this vast study, and the meanings of what seem at first difficult concepts. The text is as simple and plain as we can make it and illustrates applications to practice with examples.

Many concepts in psychology are named using invented words. These are sometimes common words to which a special meaning applies. Examples are 'complex' used as a noun in psychodynamic literature and 'iconic' to refer to a style of thinking. Others may be derived by combining words or parts of words, from Greek, Latin or other languages. For example, the word PSYCHOLOGY combines *psyche*, the Latin for soul, spirit or mind (from a similar Greek word), with *logos*, the Greek for word, study or reasoning. The pronunciation or stresses may not be obvious, and we have shown these when we think it may help. Psyche, for example, when used on its own, is pronounced with two syllables as 'sigh-key'.

Some sources that we cite may be difficult to obtain. We include references where the subject may be found in more readily accessible secondary sources, if we think that this will be helpful or where criticisms and applications are

included, but readers are encouraged to unearth the primary sources when undertaking an in-depth study.

Psychology for Health Care: Key Terms and Concepts will be useful for nurses, midwives, health visitors, occupational therapists, physiotherapists, medical students, doctors, ambulance personnel, psychologists, psychotherapists, counsellors and all other health-care professionals. It may also be of interest to patients and clients and their relatives, friends and helpers.

This book will additionally have a useful contribution to make to access, diploma and degree level courses in psychology, health psychology and health studies.

USING THIS BOOK

This book can be used as an introductory text that will provide a stepping stone to psychology, health psychology and specialist textbooks and journals. It can also serve as a glossary for a quick reference to individual terms or as a comprehensive revision aid. The content is not restricted to health psychology in its usual mainstream sense but includes a wide range of terms and concepts that all contribute to an understanding of the psychological needs of people requiring health care.

The table of contents shows that there are 20 main chapters relating to how the main approaches or perspectives within psychology contribute to an understanding of the terms and concepts. Six main perspectives of behavioural, biological, cognitive, humanistic, psychodynamic and social psychology represent fundamentally different ways of looking at the human condition. A number of other perspectives can be seen to be related to these or to have been derived from them. These perspectives can be defined as follows.

Behaviourism aims to explain, predict and control behaviour by exploring the extent to which environment determines behaviour. The key assumption of the school of behaviourism is that learning takes place by conditioning and that this learned behaviour can be described in terms of stimulus–response units (S–R units). A related approach is **social learning theory**, which is an extension and development of behavioural principles that takes social interaction into consideration (see Chapter 4).

Biopsychology combines biology and psychology and is the perspective that helps us to understand behaviour and mental experience by examining what is happening physiologically in the body, particularly in the brain and nervous system (see Chapter 5). A related approach is **ethology**, which is the study of animals in their natural habitat. Also related to this is **comparative psychology**, which uses laboratory studies of animals in order to reveal underlying principles of behaviour. Biopsychology may also be combined with social psychology to give a **biosocial** or **biopsychosocial** perspective, often referred to in relation to health care.

Cognitive psychology is chiefly concerned with the experimental investigation of those mental processes to do with knowing and understanding. Areas for enquiry include attention, perception, memory, thinking, problem-solving and language. A related field is **cybernetics**, which is the science of systems of control and communications that uses special-purpose models, most of which can be applied by computer programs (see Chapter 6).

Humanistic (or phenomenological) psychology focuses on the wholeness of experience and emphasises the searching for personal meanings and essences of experience as they appear to an individual (see Chapter 8).

Psychodynamic psychology is based on the belief that it is possible to interpret what is going on in the unconscious mind, based on elaborate schematic theories of the structure and dynamics of emotional development (see Chapter 17).

Social psychology covers all those areas of human behaviour concerned with interaction and communication in everyday social settings and can be considered to be an academic discipline in its own right as well as a subdivision of psychology. The main topics are language and communication, interpersonal perception and attributions, attitudes and attitude change, conformity and obedience, group structures and processes, and organisations (see Chapter 19). Social psychology may also be combined with biology to give a **biosocial** or **biopsychosocial** approach. Allied to this is **ethnography**, the qualitative study of a group of people including the language and cultural norms. This kind of study aims to describe and analyse the ways in which these people use their language to represent concepts and categorise the meaning of their world in a cultural context.

Other approaches, such as **lifespan development**, **developmental psychology** or **the psychology of individual differences**, have developed from the basic perspectives and integrate relevant themes.

Each chapter in this book opens with a note to introduce the area, followed by a selection of published definitions. These show how opinions differ and how definitions have changed with time. In psychology, it is important to realise that there may be no definite answers but sometimes only suggestions.

A summary is given of some of the more important arguments in each area, with indications of where these might be relevant to practice. We hope that this will give an appropriate context to the individual terms and concepts that follow. The key terms and concepts are then arranged alphabetically in each chapter, with a brief definition in most cases and a fuller account where this is needed to explain a particular concept. Cross-references are given where the same, or a similar, item appears in another chapter. Terms that are defined elsewhere in the book are given in italics if their meaning is not obvious.

Also included is a page of 'Handy headings', which gives a short summary of some of the most useful terms. The historical background sets the scene for all that follows.

Different pathways through the text may be useful for different purposes.

Overview of the different perspectives: Historical background – Research, statistics and psychometrics – Behaviourism and behaviour therapies – Biopsychology and physical interventions – Cognitive psychology and cognitive therapies – Humanistic psychology and counselling – Psychodynamic psychology and psychotherapies – Social psychology, groups and social skills – Handy headings.

Sections with a strong biological basis: Biopsychology and physical interventions – Mind and altered states of consciousness – Aggression and aggression management – Anxiety and depression – Pain and pain management – Stress and stress management.

Sections with a strong cognitive basis: Cognitive psychology and cognitive therapies – Memory and response to memory changes – Perception and response to perceptual changes – Planning, playing and problem-solving.

Sections with a strong social basis: Social psychology, groups and social skills – Attitudes, attitude change and persuasion – Health beliefs, lifestyle and health promotion – Language and therapeutic communication – Perception of self and others.

Main therapeutic approaches: Language and therapeutic communication – Behaviourism and behaviour therapies – Biopsychology and physical interventions – Cognitive psychology and cognitive therapies – Humanistic psychology and counselling – Psychodynamic psychology and psychotherapies – Social psychology, groups and social skills – Loss and grief therapy.

Index: All terms are also listed in the index. This may be a useful place to start when seeking information about a particular word or locating cross-references.

A guide to using a library has been included to indicate where psychology texts may be located (see Appendix).

Handy Headings

PURE PSYCHOLOGY IS DEFINED AS:

- *the scientific study of behaviour and experience*

APPLIED PSYCHOLOGY FOR HEALTH CARE IS:

- *a vast collection of individual studies*
- *a rich mixture of contrasting and contradictory approaches, often integrative, eclectic or multimodal*

Influenced by:

- arts • magic • superstition • myth • religion • science
- philosophy • healing • medicine

Following or integrating different schools, approaches or perspectives:

- Behaviourism and social learning theory
- Biopsychology and biopsychosocial approaches
- Cognitive psychology and cognitive-behavioural approaches
 - Humanistic (phenomenological) psychology
- Psychodynamic (including psychoanalytic) psychology
 - Social psychology

Using quantitative and qualitative research methods

- project justification • choice of paradigm
- general, pilot or preliminary work • detailing and categorising
- selection of variables • formation of hypotheses or research questions
 - project design • collection of data
- analysis of data • theories, laws and models
- publication and debate • application

Meeting the criteria of:

RELIABILITY AND VALIDITY

In order to:

DESCRIBE – EXPLAIN – PREDICT – CONTROL

Involving analysis and integration of the domains of the:

- AFFECTIVE – feelings and emotions
- COGNITIVE – beliefs and understanding
- CONATIVE – intentions, will

and concerned with issues such as:

- lifespan development • mind–body interaction, integration and reductionism
- free will and determinism • nature–nurture interaction and integration
 - the individual within society • language and communication
 - mental and physical health and illness • death and dying

HISTORICAL BACKGROUND

Early Philosophy, Mind and Reason

Modern psychology has many strands, all of which are influenced in one way or another by early ideas of magic, superstition, myth, religion, science, philosophy, healing and medicine.

In the Western world, the first written accounts of significant influence were those of Hippocrates, Plato, and Aristotle in the fifth and fourth centuries BC. These were in turn based on early Egyptian, other North African, Indian and other influences.

Hippocrates, remembered now in the Hippocratic oath of modern medicine, was a physician who described temperament in medical terms and was among the first to think of epilepsy as an illness resulting from natural causes rather than divine inspiration. This idea was later suppressed during the dark ages and was not fully appreciated until the twentieth century.

Plato (427–347 BC) was concerned with the teaching of philosophy in order to achieve the ideal state. He emphasised that the purpose of education was not to put knowledge or thoughts into the pupils' minds but to make them think for themselves. He demonstrated that conventional morality was often muddled and inadequate, and he attempted to analyse the elements of the human mind to show that its well-being, full development and happiness are to be secured by doing right and not doing wrong. He distinguished between doing right through deliberate choice, generous impulse and acting on animal appetite. He outlined the various arguments concerning whether we do something right because we know it is right or because there is some sort of reward. Plato followed Socrates' teaching that doubt was the most important feature of human thought and that knowledge of one's own doubts and limitations was the basis of real wisdom. These ideas are periodically lost and re-established throughout history.

Aristotle (c.384–322 BC) was interested in the relationship between mind and reason. He was concerned with the concept of the association of ideas in the mind, and notions of similarities and differences. He distinguished between our knowledge of the world derived from the senses and the power of rational thought, explaining desire in terms of the pleasure, or its reverse, gained from the senses. He defined five senses: sight, hearing, taste, smell and touch. Aristotle's ideas are derived from intuition and are often

unsupported by observation (what we call armchair philosophising). They have remained largely unchallenged for centuries and have profoundly influenced thinking. Much of what Aristotle described is similar to what people today tend intuitively to believe until introduced to more rigorous and scientific education.

The Stoic philosophers overrode Aristotle's neutral stance towards our biology by distinguishing between universal reason, which they considered to be pure and good, and man's often irrational nature, which by definition must be impure and bad. This led to passions and feelings being regarded as vile. Early Christian teachings, notably those of St Augustine (AD 354–430), took this further and thought of man as a pure rational soul temporarily using an impure, mortal, earthly body. They denounced the senses as evil sources of satisfaction and desire, while continuing to teach that all knowledge derives from them. Sexual feelings were particularly condemned and, more often than not, women were blamed for leading men astray, as is portrayed in the Biblical story contained in the Book of Genesis.

The Reformation, the Inquisition and Witchcraft; The Separation of Mind and Body, and the Suppression of Doubt

Confusion between mind and reason, and value judgements of mind versus body, coloured late Roman and medieval thought. For hundreds of years, theology was inextricably drawn into the psychological strands of philosophy, and new ideas were suppressed.

Not until the thirteenth century did new ideas begin to emerge. St Thomas Aquinas (1224–1274) revived Aristotelian philosophy. He regarded the soul as immortal but made respectable and non-heretical the revival of Aristotle's biological intellectualism, which did not condemn the senses and biological functions.

Over the next three centuries, the deadening influence of religious orthodoxy was beginning to be challenged in many spheres: political, economic, medical and philosophical. Important advances in medicine, notably Harvey's demonstration of the circulation of the blood, were made. The supreme authority of the Church to sway people's minds regarding all questions of moral conduct and personal responsibility was challenged.

In a desperate attempt by religious orthodoxy to hold onto its power, the Inquisition and its teachings about witchcraft and heresy led to extensive witch-hunts and purges. Until doubt and enquiry could be acknowledged as legitimate human responses to times of profound change, doubt was logically regarded as the ultimate of all heretical evils and must therefore be due to demonic possession. The body was seen as something gross that could be inhabited by any spirit craving a lodging. Witches, mostly women, were recognisable as those who expressed or led others to express excessive sexual appetite or who were hysterical or psychotic people. Burning and other inhuman treatment of the mere body was justified in terms of the purifying effect on the soul.

Johannis Weyer (1515–1588), city physician at Arnhem, deserves credit for insight and moral courage in asserting that the illnesses attributed to witchcraft came from natural causes. Weyer has been called the first clinical psychiatrist, both for his humanity and for his factual approach to psychological phenomena.

René Descartes (1596–1650) attempted to resolve the mind–body dilemma by postulating that the body worked on mechanical, physical lines but was controlled by the soul, which he thought had its seat in the pineal gland in the middle of the brain. The soul, operating via the pineal, regulated the flow of ‘animal spirits’ along the nerves and blood vessels like an elaborate plumbing system. Descartes’ (or Cartesian) theory is of mind–body interaction, with a firm distinction drawn between the two entities. Thenceforth, philosophers and theologians could mostly devote themselves to the problem of mind, leaving it to the physical scientists to puzzle out the relationship between the mind and the nervous system.

The empiricist philosophers of the late seventeenth and eighteenth centuries (Locke, Hume, Berkeley and others) again revived the Aristotelian concept of the association of ideas, which seemed to fit the increased knowledge of the nervous system and its connection with mental phenomena. Immanuel Kant (1724–1804) proposed the division of mental faculties into knowing, feeling and willing (cognition, affection and conation). Kant insisted on the unity of perception and on the experience of an active self that organises experience.

Positivism, the Brain, and the Beginnings of Scientific Psychology

Auguste Comte (1798–1857), who is also credited with the founding of sociology, introduced a style of philosophy known as positivism, which advocates the study of man by the methods of science, marking the beginning of the demise of armchair philosophising and the start of systematic observation.

Concurrently with all these advances, physiologists had been busy adding knowledge about the nervous system and the brain. Thomas Willis (1621–1675) studied brain structures and postulated that the nerves were not tubes through which animal spirits flowed but fibres by which some influence passed from brain to body. In the 1790s Galvani found that muscle contraction in frogs resulted from electrical discharge. In the early 1800s Bell and Magendie showed that the motor and sensory nerves were distinct and that each individual nerve fibre served only one function. Bell added a sixth sense – muscle or kinaesthetic sensation – to Aristotle’s original five. Pierre Flourens, c.1824, published evidence that there existed in pigeons a general correspondence between certain major divisions of the brain and various levels of bodily activity.

The stimulus given to experimental work on the animal brain, and its possible application to the human brain, was largely derived from Charles

Darwin's theory of evolution published in 1859. It was gradually becoming clear that man's pre-eminence was due to the greater growth and complexity of the cortex of the brain.

In 1861 Pierre Broca discovered the site of the centre for speech in the left hemisphere of the human brain. Hughlings Jackson in 1775 described the function of the nervous system as hierarchical, and the concept of levels of mental functioning was developed. Marshall Hall (1790–1857) described the difference between voluntary action and reflex action in the nervous system. Hermann Helmholtz (1821–1894) measured the speed of the nerve impulse and later developed his theories of vision and hearing. Gustav Fechner (1801–1887) can be considered to be the founder of experimental psychology through his attempts to apply the laws of mathematics to the physiology of sensation and develop psychology as a science with a mathematical base.

The appearance of psychology as a subject discipline in its own right is generally dated at 1879, when Wilhelm Wundt (1832–1920) founded the first laboratory for experimental psychology at Leipzig. Wundt's institute's researches added to knowledge about problems of sensation and reaction time. Wundt also attempted to develop a psychological theory that, while acknowledging the importance of introspection as a method of direct observation of oneself, laid stress upon the importance of experimentation and measurement in psychology.

Oswald Kulpe began work on imageless thought using introspection in a systematically controlled fashion. The technique of introspection in its purest form was carried over to America by E.B. Titchener (1867–1927), a student of Wundt and Kulpe. Experimental studies of behaviour then became popular. By 1882 Stanley Hall had founded America's first psychological laboratory at Johns Hopkins University, and 10 years later there were 15 such laboratories in the USA. In Britain, after some smaller beginnings, a psychological laboratory was founded at Cambridge in 1913 under the direction of C.S. Myers.

Psychoanalysis, Behaviourism and Humanistic Psychology

At the same time, new discoveries were being made in psychological medicine. Ancient ideas of divine and demoniacal possession had persisted despite attempts to contradict them, and it was still largely believed that the abnormal behaviour of the mentally ill was the product of some external influence or physical agent. Jean Charcot (1825–1893) was the first to demonstrate that hysterical phenomena could be induced and even relieved by suggestion. Further work by Pierre Janet, Bernheim and Liebeault began to uncover the mind's unconscious dynamics but these early discoveries were soon overshadowed by the work of Sigmund Freud (1856–1939).

Freud used the methods of hypnosis and free association and the study of his own dreams to evolve his theories about unconscious mental striving, largely based on sexual repression and defence mechanisms. Psychoanalysis became both a mode of treating patients and a system of psychology. Carl Gustav Jung (1875–1962) differed from Freud in rejecting the theory of

infantile sexuality, introducing the notion of collective unconscious and considering all people as a mixture of masculine and feminine characteristics. He considered the libido not as exclusively sexual but as a generalised life energy or will to live.

By the 1920s introspection as a method of enquiry was being seriously questioned. Observation and measurement of behaviour was considered more reliable, in particular by John B. Watson (1878–1958). A new brand of psychology – behaviourism – emerged. Watson believed that, to be a science, psychology must adopt only objective methods. The study of inaccessible, private, mental processes was to have no place in a truly scientific psychology. Behaviourism (in one form or another) was to remain the dominant force within psychology for the next 30 years or so, especially in the USA and to a lesser extent in Britain. The emphasis on learning, in the form of conditioning, was to make that topic one of the central areas of research in psychology as a whole. Behaviourist theories of learning are often referred to as stimulus–response or S–R theories because of their attempt to analyse all behaviour into stimulus–response units, no matter how complex the behaviour. In contrast to Freudian analysis, behaviourism gave rise to a form of therapy for neuroses based on a use of conditioning and deconditioning to the relevant stimuli.

Purposive or hormic psychology developed as a reaction to behaviourism. William McDougall (1871–1944) rejected the mechanistic views of behaviourism and held that the mind has an element of free will and that purposive striving played a decisive role in mental activity, behaviour being the resultant of mind–body interaction. Like Freud, however, McDougall believed that social organisation developed from inborn drives or instincts.

Carl Rogers (1902–1987) and Abraham Maslow (1908–1970) rejected both the psychoanalytic and the behaviourist approaches. They emphasised that the individual's uniqueness and freedom to choose a particular course of action and are the leading proponents of humanistic or phenomenological psychology. Central themes of the theory and psychotherapy are self-concept and self-actualisation. The psychodynamics of the individual are not considered to have fixed or generalised interpretations. Humanistic therapy is client centred or person centred (rather than analyst centred): the therapist does not offer any explanations or interpretations but instead assists clients in exploring and finding their own meanings.

Gestalt Psychology, Cognitive Development and Social Learning Theory

Another reaction against behaviourism came in the form of the Gestalt school of psychology, which emerged in the 1920s and 1930s in Austria and Germany. The Gestalt view is that 'the whole is more than the sum of its parts' and focuses attention on the organising functions of the nervous system. Gestalt principles can also be applied to learning, showing that insight is often more important than trial and error. After 1920 the Gestalt movement spread to America, where Kurt Lewin (1890–1947) developed his field theory, in which he viewed

the mind as a dynamic tension system and behaviour as the means of reducing or abolishing tension. The aim of the individual is to attain a tension-free state of equilibrium. This links with the homeostatic principles of the time, in which the ideal state is seen as quiescent and free from disturbance.

Freud's dynamic concept of the mind links up with educational theories from Plato to Rousseau (1712–1778) and Froebel (1782–1852) that the child is an individual in his or her own right and that education should develop innate qualities and not merely be an implanting of adult precepts.

The work of Freud and the evolutionary theories of Darwin combined to bring about the growth of interest in child development. Sir Francis Galton (1822–1911) is usually regarded as the father of the mental test, using statistical methods in correlating mental traits. His work was continued in Britain by Karl Pearson, Cyril Burt, Godfrey Thomson, William Brown and C.E. Spearman. In the USA, J.M. Cattell (1860–1944) carried out independent studies, while in Paris, Alfred Binet (1857–1911) studied the problem of backwardness in schoolchildren. Mental testing of all sorts became widespread in schools, in the armed forces and for job selection.

Jean Piaget (1896–1980), working on various tests, became concerned with underlying mental structures and outlined his theory of cognitive development. Piaget believed that children think in a way (concrete operations) that is fundamentally different from that of adults and that they have to develop through a series of stages before they can reach adult thinking (formal operations). This was later disputed by, for example, Peter Bryant and Margaret Donaldson, who believed that adults and children alike use a mixture of concrete and abstract thinking, according to context and individual interests, and that differences are due more to differing concepts, memory and concentration span.

A development of behaviourism arose in social learning theory, in the USA in the 1940s and 1950s, as an attempt to reinterpret certain aspects of Freud's psychoanalytic theory in terms of conditioning theory. This was carried on in the 1960s and 1970s, notably by Albert Bandura, who emphasised learning through watching and imitating others.

Jerome Bruner was greatly influenced both by Piaget and social learning theory; rather than describing stages of growth, he was concerned with ways of representing the world (enactive, iconic and symbolic), the need for language for the development of logical thought and the ways in which social interaction lead to the acquisition of language. These theories of cognitive development and social learning have led to significant changes in education and health-care practice, the emphasis now being on providing plenty of concrete examples and the opportunity to explore concepts through play and the age-appropriate use of language.

Brain Scans, Cybernetics and Modern Psychology

Fresh lines of investigation into the mode of brain functioning were opened up in the 1960s in the use of the electroencephalogram (EEG). Together with newer forms of brain imaging – computerised axial tomography (CAT),

positron-emission tomography (PET) and magnetic resonance imaging (MRI) – this allows study of the structure and activity of the brain without interference or damage. Another modern approach to investigating brain function is the science of cybernetics, which attempts to explain human thinking and behaviour using artificial intelligence, feedback and communication systems.

Although many definitions can be found, modern psychology is best defined as the scientific study of behaviour and experience. Psychology is not a single subject but a complex mosaic: a vast collection of individual studies with the common aim of using scientific methods to describe, understand, predict and (if appropriate) influence or control human behaviour and experience.

Underlying all modern psychology is the still unresolved relationship between mind (or consciousness) and neurological processes, in particular brain activity. Many psychologists recognise the importance of the brain and nervous system but are inclined to think of physiological activity as being separate from mental experience. Others regard psychology and physiology as fully integrated. Those who believe that all mental experience will eventually be explained in terms of the brain and nervous system are referred to as reductionists.

Health Psychology and Health Care

The emergence of health psychology as a rapidly growing discipline in its own right offers health-care professionals a vehicle with which to explore the concept of health and the many factors that influence health along the continuum from wellness to impaired health to dysfunctional health and ultimately to death.

There are various definitions of or approaches to health psychology. The following one by Matarazzo (1980), cited in Pitts and Phillips (1991: 3), is perhaps the most comprehensive:

Health psychology is the aggregate of the specific educational, scientific and professional contributions of the discipline of psychology to

- the promotion and maintenance of health
- the prevention and treatment of illness
- the identification of etiologic and diagnostic correlates of health, illness and related dysfunction
- and the analysis and improvement of the health care system and health policy formation.

Health psychology is a new section within the British Psychological Society and, at the time of writing, is asking to be formally recognised as a division.

By emphasising health promotion and illness prevention through the identification of health risk factors and the development of strategies to cope with life crises, health psychology provides health care professionals with a supplement to the traditional medical approach to health problems.