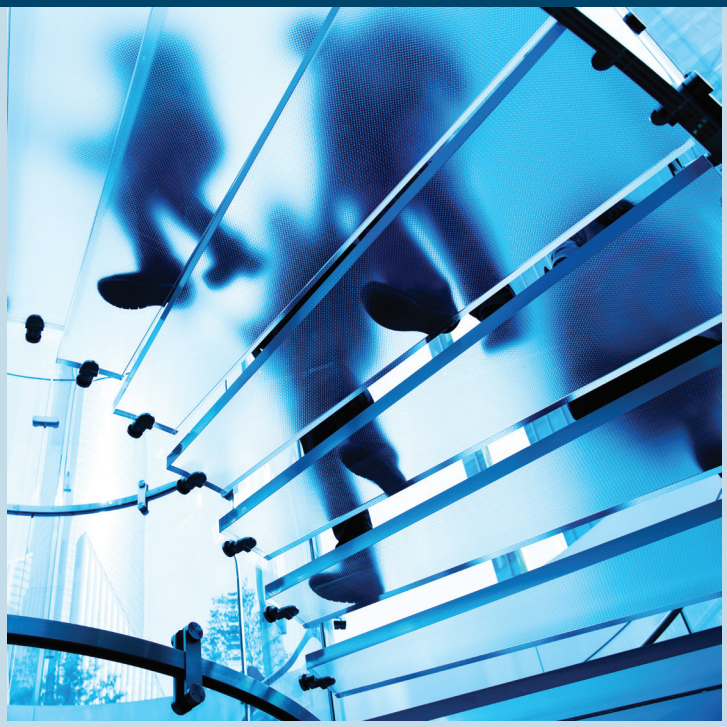
1 The Science of Psychology

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ROUTE MAP OF THE CHAPTER

This chapter provides an overview of the history of psychology from its philosophical roots to contemporary issues and future directions in the discipline. This chapter is structured to enable you to understand how psychology has developed as a discipline from its early philosophical roots to contemporary perspectives on the mind and behaviour; you will also explore key issues and debates in psychology and how the subject is relevant to you and your studies as a psychology student. However, remember that psychology is more than an academic discipline; it is also an area of professional practice. Training to be a psychologist is a popular career choice for many psychology graduates, but not all psychology students will become psychologists. This chapter also explores the main psychology professions and the variety of other careers in which you can apply your psychological knowledge. This chapter concludes by describing future directions in the discipline of psychology.

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WHAT IS PSYCHOLOGY?

LEARNING OBJECTIVE 1.1

Describe the evolution of psychology from early philosophy to contemporary sociocultural perspectives.

'Psychology – it's all obvious really. It's just common sense!' As a student of psychology, you will also be familiar with the quip, 'So, you're studying psychology – can you read my mind and tell me what I'm thinking?' Studying psychology will not enable you to become proficient in mind reading and it is important to remember that psychology *is* a scientific discipline. So, how do we define psychology? Psychology can be defined as the scientific study of the mind and behaviour. Some authors regard psychology as simply a science of behaviour; however, while this definition does have some merit (psychologists are, of course, interested in observing and measuring behaviour), psychologists also want to understand how and why people think, feel, act and interact with other people in the way that they do. For this reason, psychology is more than a science of behaviour; it is a science of the mind and the processes that shape our behaviour. Psychology is also more than common sense. In fact, there are many examples of psychological research in which the findings are very different from what most people expected. A classic example of counterintuitive findings can be seen in Milgram's (1974) study of obedience (see BBC, 2011). In this study, a teacher was instructed to administer an electric shock to a learner each time they made a mistake on a memory task, slowly increasing the intensity of the shock until it reached an agonizing 450 volts. How many people do you think progressed to administer the full 450-volt shock? If you are familiar with Milgram's study then you may already know the answer. Milgram canvassed the opinions of 40 psychiatrists from a medical school who predicted that approximately 4% of participants would administer the 450-volt shock, a similar figure to that predicted by non-experts. In fact, 65% of participants administered the full shock. People's everyday beliefs are therefore not a good foundation for psychological science, and many currently popular beliefs are false (Kohn, 1990).

To take another example, what makes ill-feeling between work colleagues shift faster? An instance of personal conflict with a colleague can create feelings of anger that are slow to fade. Paradoxically, when a stressful day in the office also involves a specific work-related dispute, bad feelings don't linger so long. According to Meier, Gross, Spector, and Semmer (2013), this counterintuitive finding may reflect our willingness to seek a non-harmful explanation for unpleasant situations, blaming the context rather than the person.

Is it really the case that movie goers enjoy and are emotionally engaged in films shown in 3D compared with 2D (Rooney, Benson, & Hennessy, 2012)? See the discussion point below for more on this topic.

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One reason why people may view psychological findings as 'obvious' and 'common-sensical' can be explained by **hindsight bias**, the tendency to view an event as predictable after it becomes known. We will explore hindsight bias in more depth later in this chapter. As you read through this book, you will become familiar with research methodology and the types of evidence used to validate claims about human behaviour. It is important that you adopt a critical and evaluative stance, and not take the evidence at face value. This will help you to develop your critical-thinking skills, important skills for any student of psychology.

DISCUSSION POINT

Read **this article**[1] on the British Psychological Society's website and discuss whether 3D films are more psychologically powerful than 2D.

Basic and applied research

Psychological research can be thought of as either basic or applied in nature. **Basic research** aims to seek knowledge for its own sake. Basic research examines how and why people think and behave in the way they do and may be conducted in a laboratory or real-world setting, with human participants or animals. In contrast, **applied research** is designed to solve practical, real-world problems. As you explore this book, you will find many examples of both basic and applied research that have addressed the complexities of human behaviour. Many psychologists hold the view that all research should have an applied focus, not only making a contribution to scientific knowledge but also having an impact on people, policy, and practice. However, basic and applied research should not be thought of as separate entities; psychologists use basic scientific knowledge to solve real-world, practical problems. Consider the example in Focus Point 1.1, which describes how behaviourist principles of rewards and incentives can be used to motivate students in the classroom. We will explore the behaviourist approach later on in this chapter.

FOCUS POINT 1.1

VIVO MILES: AN ONLINE SCHOOL REWARD SYSTEM

Motivating students to learn is an important goal of education. In order for students to learn effectively, they must be engaged with their learning on a cognitive, emotional, and behavioural level. Vivo is an online school reward system, based upon behaviourist principles designed to improve student engagement, raise attendance, improve grades, and help achieve school values. The programme provides a framework that actively supports a positive behaviour policy and all aspects of 'every child matters', including economic well-being.

Vivos are electronic points, similar to those found in the credit or merit systems that are commonplace in schools, and can be redeemed for a variety of rewards from a customizable catalogue. Students are awarded Vivos for achievements (e.g. excellent classwork or homework) and/or behaviour (e.g. 100% attendance, healthy lunch choices), and they are credited to each pupil's Vivo card. Students can log in online or

via their smartphone to check their Vivo Miles balance and exchange their points for items such as cinema tickets, high-street gift vouchers, charity donations, sports equipment, and mobile phone top-ups.

The programme has received praise from students, teachers and parents:

> It immediately sold itself as a system that would appeal to students motivated by both immediate and deferred gratification. It was win–win from day one.
>
> *(Deputy Head Teacher)*

> I love using the reward system. In classes it's had a massive effect on the learning, it's increased interest and it certainly motivates children to perform to their very best.
>
> *(Teacher)*

Feedback from one secondary school implementing the programme found that 95% of students were happier with Vivo Miles than the 'credits and merits' scheme previously in place and 60% of students quickly learned about real-world finances by saving their Vivo currency. A version of the programme for primary schools, Vivo Stars, was launched in 2011 to recognize and celebrate pupils' achievements. The programme enables teachers to award students Vivo points and stickers, which they can use to unlock items for their personal Avatar character.

Find out more about Vivo: https://www.vivomiles.com/index.php.

TEST YOURSELF

1. How can we define psychology?
2. How does psychology differ from common sense?
3. What is the difference between basic research and applied research?

SECTION SUMMARY

- Psychology can be defined as the scientific study of the mind and behaviour.
- Psychology is more than a science of behaviour; it is a science of the mind and the processes that shape our behaviour.
- It is important that you adopt a critical and evaluative stance, and do not take the evidence at face value.
- Basic research examines how and why people think and behave in the way they do. It may be conducted in a laboratory or real-world setting, with human participants or animals.
- Applied research is designed to solve practical, real-world problems.
- Psychologists use basic scientific knowledge to solve practical problems.

PSYCHOLOGY'S ROOTS: THE PATH TO A SCIENCE OF MIND AND BEHAVIOUR

LEARNING OBJECTIVE 1.2

Discuss the main issues and debates that have dominated the history of psychology.

Why do I have to take the Conceptual and Historical Issues in Psychology module? What can I learn from things that happened a long time ago? These are questions that many a psychology student may ask! While the thought of studying the history of psychology may fill you with dread, causing you to fall asleep in the lecture theatre or imagine musty-smelling books in the university library, understanding psychology's roots and its path to a science of mind and behaviour is essential in understanding psychology today and the psychology of tomorrow. The scientific developments in psychology have shaped our understanding of our world, from what we know about philosophical ideas such as the nature of consciousness to our understanding of 'shell-shock' (as it was known in World War I) to the development of treatments for those suffering with post-traumatic stress disorder the design of the 20 pence and £1 coins, and much more. As a student of psychology, you need to be able to reflect not only on how psychology has contributed to philosophical, social and technological change but also on how psychology has been constructed as part of this change (see Focus Point 1.2).

FOCUS POINT 1.2

WHY THE HISTORY OF PSYCHOLOGY IS GOING GLOBAL

In 2008, *The Psychologist* (the official monthly publication of the British Psychological Society) began a feature entitled 'Looking Back', a space for stories and lessons from the history of psychology. In 2011, Dr Adrian Brock discussed why studying psychology's past is actually becoming a global phenomenon:

> Recently I was moaning to a colleague about the fact that a new edition of the textbook that I use in my history of psychology course had appeared and that the university library had ordered only one copy of it for the entire class. When the previous edition appeared in 2002, it had ordered 10. My colleague looked at me with surprise and said: 'Surely the history of psychology hasn't changed all that much since 2002!'
>
> *(Brock, 2011, p. 150, reproduced with permission)*

As Brock argues, the history of psychology is, to some extent, a story, an unfolding narrative aiding our understanding of the human mind and behaviour. It is a well-known story and one that has been recounted in many textbooks (like this one!) for decades. However, the history of psychology is not static; it continues to change and evolve as new cutting-edge research is published that changes what we know about the human mind and behaviour. If what we know about human behaviour is already known then why do researchers continue to seek to understand the human mind and behaviour?

Brock suggests that, in order to answer this question, we first need to understand the difference between psychology's history and its past. The content of many textbooks is a fraction of psychology's past; it serves as what some sociologists and psychologists have termed 'collective memory' (Danziger, 2008). It consists of the things that a particular community at a particular point in history considers worth remembering. In this way, the history of psychology can be rewritten from generation to generation. Indeed, some of the more interesting changes in the history of our discipline have occurred in recent years – for example, an increased emphasis on sociocultural perspectives in psychology.

Most importantly, any advance in our understanding of the history of psychology is also an advance in psychology's object of study itself – ourselves.

Read more in ***The Psychologist's* archives**[2].

Earlier in the chapter, we learned that psychology is the science of the mind and behaviour. In studying human behaviour, psychologists are interested in exploring the biological, psychological, and environmental factors that influence how and why we behave in the way that we do. This is not new; in fact, it has been an integral part of psychology's history. How did the scope of psychology become so broad? Psychology has roots in philosophy and medicine, in addition to the biological and physical sciences; as a result, there are a number of different perspectives on psychology – that is, different ways in which we can view people's behaviour. The major perspectives in psychology discussed in the following sections of this chapter all help us to understand human nature and have important theoretical and practical applications.

Early philosophy

One of the longest-running debates in psychology is the mind–body problem, as we will explore later in this chapter. Is the mind part of the body or is it a separate spiritual entity? Early philosophers held diverse opinions on the relationship between the mind and the body, and the notion of science itself. Plato (427–347 BCE) was not convinced by the value of science and believed that knowledge is attained by thought. On the other hand, Aristotle (384–322 BCE) argued that there is an intimate relationship between the soul and the body. Aristotle made many contributions to psychology, including the idea that mental health is dependent on both the body and the mind. Despite the excitement created by the ancient Greeks, philosophy and psychology went into a period of decline until the French philosopher, mathematician, and scientist René Descartes (1596–1650) reinstated the mind–body debate. However, Descartes' contributions to psychology were not so positive and were described by Hearnshaw (1987) as leading psychology down a metaphorical cul-de-sac. Descartes claimed that the soul or the mind is the key part of being human, and that to understand human behaviour we first need to understand the workings of the human mind. However, since the mind is not a biological entity, it cannot be studied using objective, scientific methods. As a result, psychology cannot be viewed as a science.

The emergence of psychology as a science

In the mid-1800s, German scientists Ernst Weber (1795–1878) and Gustav Fechner (1801–1887) began to explore the relationship between the mental and physical realms and established a new field called **psychophysics**: the study of

how psychologically experienced sensations are dependent on characteristics of physical stimuli.

The beginnings of psychology as a science can be attributed to Wilhelm Wundt (1832–1920), who founded the first experimental psychology laboratory at the University of Leipzig in 1879. Wundt believed that the human mind could be studied by viewing it as separate components, in the same way that a chemist would study a chemical compound. Wundt's approach to the study of the mind is known as **structuralism**: the analysis of the mind in terms of its basic elements. Structuralists used **introspection** to study sensations by exposing participants to various sensory stimuli (e.g. lights, sounds, and tastes) and asking them to report their experiences. Despite the criticisms levelled at this approach, structuralism had an important impact on the development of the scientific study of cognitive processes. In the United States, an alternative perspective on the human mind emerged, known as **functionalism**. In contrast to structuralism, functionalism aimed to study the functions of consciousness rather than its structure and was greatly influence by Charles Darwin's evolutionary theory. William James (1842–1910) was a major proponent of functionalism and his book *Principles of Psychology* greatly enhanced psychology's scope, emphasizing biological and mental processes.

Although, like structuralism, functionalism is not part of modern-day psychology, its legacy is evident in both cognitive psychology, which studies mental processes, and evolutionary psychology, which explores how psychological traits have evolved and adapted over time.

The psychodynamic perspective

The **psychodynamic perspective** seeks to understand the causes of behaviour by examining the internal, inner workings of the human mind, emphasizing the role of unconscious processes. Sigmund Freud (1856–1939) is perhaps the most well-known psychodynamic theorist and developed influential theories of personality and psychosexual development. In the late 19th century, Freud, a young physician in Vienna, began treating patients who exhibited a range of physical symptoms but with no apparent medical cause. Freud also treated patients who had phobias and other conditions. In the absence of a medical explanation, Freud believed that the cause must be psychological, more specifically that the causes were unconscious, hidden from awareness. Freud used free association, a technique that required his patients to verbalize any thoughts that came to mind. Freud developed a form of therapy called **psychoanalysis**, which concerned the examination of unconscious psychological forces. He also proposed that we have innate sexual and aggressive drives that are punished in childhood, resulting in fear and anxiety when we become aware of their presence. This causes us to develop **defence mechanisms**, which are psychological techniques to help us cope with anxiety regarding traumatic experiences.

Freud proposed grand and far-reaching theories of human psychology, and his thinking was developed by a number of individuals, including Melanie Klein (1882–1960), whose contribution to developmental psychology is still evident today in the form of play therapy. Freud's ideas also perpetuated interest in the study of dreams, memory, and mental disorders. While Freud's theories are mostly rejected by contemporary psychological science, his views on the unconscious still support the idea that behaviour can be determined by non-conscious thoughts.

The behaviourist perspective

The **behaviourist perspective** emphasizes the role of the environment in our behaviour. A primary concern of the behaviourists was that psychology was becoming too subjective, using unscientific methods. In 1913, John B. Watson (1878–1958) led a new movement that directly opposed the structuralist, functionalist, and psychodynamic approaches. In Watson's mind, the focus of psychology should be on directly observable behaviour, not unconscious processes. Watson famously commented:

> Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might select – doctor, lawyer, artist, merchant-chief, and, yes, even beggar-man and thief – regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors. I am going beyond my facts and I admit it, but so have the advocates of the contrary and they have been doing it for many thousands of years. (Watson, 1930, p. 82)

Was Watson correct? Or was he indeed 'going beyond his facts'? While behaviour can be shaped by our environment, proponents of the humanistic and cognitive perspectives would challenge this view, as you will see later in this chapter.

B. F. Skinner (1904–1990) also made a significant contribution to modern-day behaviourism. Skinner's research largely involved experimentation on rats to determine how behaviour can be shaped through the processes of reinforcement and punishment. Skinner's approach is known as **radical behaviourism**, which emphasizes that society can utilize the environment to modify behaviour in beneficial ways; the main challenge to this is the concept that human beings are 'free agents'. Behaviourism inspired a collection of techniques known as 'behaviour modification', which manipulate environmental factors to increase positive behaviours and decrease problem behaviours. In the 1950s, Skinner developed 'programmed learning', a concept which suggests that learning is achieved through small, incremental steps, with immediate reinforcement for the student. Behaviourism dominated research on learning in the 1960s, challenging the psychodynamic perspective. However, the rise of the cognitive approach and the study of mental processes caused the interest in behaviourism to wane. Despite this, behaviourism had a significant impact on our understanding of human learning and its principles are clearly evident in many of the behaviour policies in the Western education system today. For example, see Focus Point 1.1, which describes how behaviourist principles of rewards and incentives can be used to motivate students in the classroom. According to the behavioural approach, student motivation is influenced by the use of rewards and incentives by teachers (Pintrich & Schunk, 2002). A reward is defined as an appealing object or event given to a student as a consequence of behaviour – for example, a student is rewarded with a trip to a theme park for 100% attendance over the past term. An incentive is an object or event that can be used to either encourage or discourage behaviour. For example, the promise of the visit to the theme park for 100% attendance is an incentive; actually going on the trip is the reward. Incentives may also be used to discourage negative behaviours – the threat of red marks in the student's planner or detention for not completing homework, for example. Rewards and incentives are useful for short-term involvement in tasks but may not be effective in the long term.

THE EVOLUTION AND IMPACT OF PSYCHOLOGICAL SCIENCE

Origins is a web-based, multimedia timeline developed by the British Psychological Society showcasing the history of psychological science and its contributions to society today. Visit **BPS Origins**[3] and explore the major milestones and discoveries; see how research in psychology has shaped the present and find out how cutting-edge discoveries may influence the future of our discipline.

The humanistic perspective

By the mid-19th century, a new perspective began to emerge to challenge the dominant approaches of psychoanalysis and behaviourism. Humanists disagreed with the focus of the psychodynamic approach that behaviour is guided by unconscious forces. They also rejected the behaviourist view, which proposed that behaviour is determined in response to environmental stimuli. In contrast, the humanistic perspective, or **humanism**, emphasized free will, personal growth, and finding meaning and value in life. Abraham Maslow (1908–1970) was a key figure in the development of humanism and created the **hierarchy of needs**, one of the most influential humanistic explanations of motivation. Maslow proposed a five-tier model of human needs, from basic physiological and safety needs to **self-actualization**. According to Maslow, self-actualization is reached through realization and fulfilment of an individual's potential. Humanists also emphasize the importance of free choice, responsibility, personal growth, and self-worth. From a humanistic perspective, the meaning of our existence rests in our hands. While humanism had a relatively limited impact on psychological science, it still had important applications. For example, Carl Rogers (1902–1987) applied humanist principles to psychotherapy. Maslow's theory also has important implications for education, highlighting the importance of the whole child, including their physical, social, and emotional well-being.

The humanistic emphasis on self-actualization has also emerged in the growing **positive psychology** movement. In contrast to many approaches in psychology that emphasize what is wrong in the world, positive psychology emphasizes how life can be made more fulfilling and how we can nurture the best in ourselves. Positive psychology is primarily concerned with using psychological theory, research, and intervention techniques to understand the positive, adaptive, creative, and emotionally fulfilling aspects of human behaviour (Seligman, 1998).

The cognitive perspective

The **cognitive perspective** seeks to explain human behaviour by examining mental processes. According to cognitivists, humans are essentially information processors whose actions are determined by thought. In the 1950s, psychologists showed a renewed enthusiasm for the study of consciousness and mental processes – a marked shift away from the dominant behaviourist perspective. This is sometimes

referred to as the **cognitive revolution** and marked a series of exciting developments in the history of psychology. The rise of computer technology contributed to a new interest in how we understood mental processes, which was influential in the study of memory and attention (Broadbent, 1958). The human mind was now viewed as a system that processes, restores, and retrieves information, which had important implications for how psychologists viewed the structure of memory. The 1950s also witnessed fierce debate between the behaviourists and linguists about how children acquire language. The behaviourists, led by B. F. Skinner, argued that language is acquired through learning. However, the linguist camp, led by Noam Chomsky (b. 1928), claimed that this was far too simplistic. In fact, human beings are preprogrammed to acquire language. In this way, language is innate and cannot necessarily be learned.

The modern-day cognitive perspective encompasses **cognitive psychology**, **cognitive neuroscience**, and **social constructivism**. Cognitive psychologists study the processes that explain how people reason, make decisions, problem solve, remember, form perceptions, and use language. Cognitive psychologists are also interested in the nature of consciousness and how non-conscious processes affect behaviour. Cognitive neuroscience uses brain-imaging techniques to examine brain activity when a person is engaged in a cognitive task. Cognitive neuroscientists are interested in (for example) how the brain acquires knowledge, forms memories, and learns language. In contrast to these very structural approaches to psychology, social constructivism emphasizes that our sense of reality is socially constructed – that is, it is the product of our own way of thinking as members of social groups rather than directly observable. It is evident that the cognitive perspective has developed and diverged over the years but still has a fundamental part to play in psychological approaches to the person.

The biological perspective

The **biological perspective** examines how the processes of the brain influence behaviour. It encompasses the physiological basis of behaviour, behavioural genetics, hormones and behaviour, neuroimaging, neuropsychology, and evolutionary psychology. Recent discoveries in biology have contributed to the dramatic growth in this field in recent years, enabling fascinating insight into the links between the structures of the brain, the human mind, and behaviour. What enables us to feel hungry, sad, happy, or afraid? These are all questions that behavioural neuroscientists seek to understand. **Behavioural neuroscience** examines the brain processes and other physiological functions that influence our behaviour, emotions, and thoughts (Robinson, Rennie, Rowe, O'Connor, & Gordon, 2005). Karl Lashley (1890–1958) and Donald O. Hebb (1904–1985) were two pioneers of the behavioural neuroscience approach. Lashley measured how damage to various parts of the brain affected rats' learning and memory, while Hebb (1949) suggested that connections between nerve cells in the brain are the basis for learning, memory, and perception. Behavioural neuroscientists use brain-imaging techniques, including positron emission tomography and magnetic resonance imaging, to measure brain activity (see Figure 1.1).

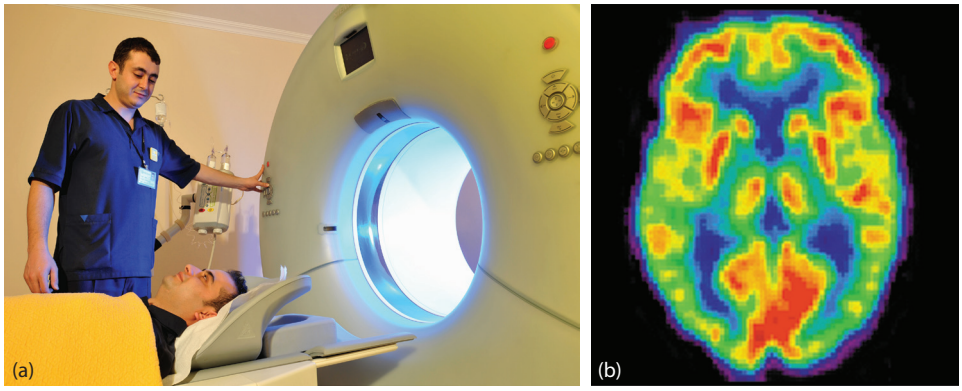


FIGURE 1.1 *Positron emission tomography (PET). (a) PET scanners have a flat bed with a large, circular scanner at one end. (b) Each image of the PET scan shows a horizontal slice of the brain. The parts of the brain illuminated in yellow and red (in this image, around the edges and towards the bottom) indicate those areas of the brain of greatest activity.*

Source: (a) Image copyright Levent Konuk, used under licence from Shutterstock.com; (b) National Institute on Aging / Science Photo Library.

Evolutionary psychology is a recent movement that seeks to explain how evolution has shaped human behaviour. Evolutionary psychologists argue that our mental abilities and behaviour have evolved through the process of natural selection. In 1859, Charles Darwin published the influential yet controversial title *On the Origin of Species*. Undoubtedly, Darwin has shaped the development of modern science, including its attitudes and values, and he is heralded by many as the creator and father of evolutionary theory and the principles of natural selection. Although principally a biologist, Darwin arguably had an overwhelming and lasting impact upon the development of psychology (Sahaklan, 1975).

The sociocultural perspective

The **sociocultural perspective** emphasizes the role of our social environment and culture in how we think, feel, and behave. As humans, we are embedded within a **culture** that shapes our values, beliefs, and our identity. Culture refers to the knowledge, values, customs, and attitudes that guide our behaviour. It is in essence the way of life of a particular group of people. These groups can be defined in many ways – culture may be based on religion, spirituality, ethnicity, occupation, geographic location, educational background, or a combination of these or other factors. All cultural groups possess their own set of **norms**, which are unwritten rules that state what behaviour is accepted and expected (e.g. how to dress and how to introduce yourself to a person in authority). Norms are transmitted to new members of the group through the process of **socialization**.

Psychologists have begun to explore diverse ethnic and cultural groups, leading to the development of **cultural psychology** and **cross-cultural psychology**, explored in more depth later in this chapter. These approaches explore how culture is passed down to its members and examine the commonalities and differences between people from diverse cultures.

DISCUSSION POINTS

1. Why is studying the history of psychology important?
2. How does the humanistic view of behaviour differ from a behaviourist perspective?
3. Describe the origins of the cognitive perspective on behaviour.

SECTION SUMMARY

- Understanding psychology's roots and its path to becoming a science of mind and behaviour is essential in understanding psychology today and the psychology of tomorrow.
- In studying human behaviour, psychologists are interested in exploring the biological, psychological, and environmental factors that influence how and why we behave in the way that we do.
- One of the longest-running debates in psychology is the mind–body problem. Early philosophers, including Plato and Aristotle, contributed to this debate, as did the French philosopher René Descartes.
- In the mid-1800s, German scientists Ernst Weber and Gustav Fechner established a new field called psychophysics, the study of how psychologically experienced sensations are dependent on characteristics of physical stimuli.
- The beginnings of psychology as a science can be attributed to Wilhelm Wundt, who founded the first experimental psychology laboratory at the University of Leipzig in 1879. Wundt's approach is known as structuralism. Structuralists used introspection to study sensations.
- The psychodynamic perspective seeks to understand the causes of behaviour by examining the inner working of the human mind. Sigmund Freud is perhaps the most well-known psychodynamic theorist and developed a form of therapy called psychoanalysis.
- The behaviourist perspective emphasizes the role of the environment in our behaviour. John B. Watson and B. F. Skinner led a new movement that directly opposed the structuralism, functionalism, and psychodynamic approaches.
- Humanism emphasized free will, personal growth, and finding meaning and value in life. Abraham Maslow was a key figure in the development of humanism and developed the five-tier hierarchy of needs.
- The cognitive perspective seeks to explain human behaviour by examining mental processes. The modern-day cognitive perspective encompasses cognitive psychology, cognitive neuroscience, and social constructivism.
- The biological perspective examines how the processes of the brain influence behaviour. It encompasses the physiological basis of behaviour, behavioural genetics, hormones and behaviour, neuroimaging, neuropsychology, and evolutionary psychology. Karl Lashley and Donald O. Hebb were two pioneers of the behavioural neuroscience approach.
- Evolutionary psychology is a recent movement that seeks to explain how evolution has shaped human behaviour.
- The sociocultural perspective emphasizes the role of our social environment and culture in how we think, feel, and behave.

LEVELS OF ANALYSIS: TYPES OF PSYCHOLOGY AND THEIR CONTRIBUTION TO UNDERSTANDING

LEARNING OBJECTIVE 1.3

Describe how psychology can be applied: to you personally, to your studies, and to societal problems.

Human behaviour, and its causes, can be understood at a biological level (e.g. genetic factors and brain processes), a psychological level (e.g. thoughts, feelings, and attitudes), and an environmental level (e.g. our physical and social environments). This is known as **levels of analysis**, a conceptual framework that can be used to help us understand human behaviour. Each of the perspectives discussed earlier in this chapter provide us with different conceptions of human behaviour (see Table 1.1). However, a full understanding of human nature requires us to move between these three levels of analysis. For example, the stress that you feel as you are about to sit an exam or test may be triggered by environmental cues, such as seeing tables arranged in rows, the presence of the invigilators, and so on; however, your feelings of stress and anxiety can also be triggered by chemical changes in the brain, representing a move to psychological and biological explanations of behaviour. To help understand how the levels of analysis framework can help us understand behaviour, let us look at social anxiety disorder (SAD), an excessive emotional discomfort, fear, or worry about social situations and in situations that involve being judged or evaluated by others.

Understanding social anxiety using the levels of analysis framework

Social anxiety can be triggered by public performance situations (e.g. giving a presentation, reading aloud in class) or social situations (e.g. meeting new people starting a new school) (Morris, 2004) and can be explained by biological and biochemical, psychological (e.g. personality), and environmental (e.g. negative life events) factors.

Biological and biochemical factors

Rapee and Spence (2004) suggested that 'genetic factors play a modest but significant role in the development of social anxiety, in both children and adults' (p. 744). Twin studies have found that the heritability estimates for SAD can range from 30% to 50% (Hirshfeld-Becker 2010). However, one recent twin study found only non-shared environment (influences that happen within and outside the family that make siblings from one family different from each other) had a significant influence on SAD in early childhood, whereas genes and shared environment were non-significant influences (Eley, Rijsdijk, Perrin, O'Connor, & Bolton, 2008); this is in contrast to some other studies suggesting the importance of non-shared environmental influences on SAD. More recently, in a longitudinal study of 3,500 twin pairs, Trzaskowski, Zavos,

TABLE 1.1 *Types of psychology and their contribution to understanding.*

	How is human behaviour understood?	What are the causes of human behaviour?	What is the main focus? What methods are used?
Psychodynamic	Controlled by inner forces and conflicts	• Unconscious motives, conflicts, and defences • Early childhood experiences • Unresolved conflicts	• Observations of personality processes in clinical settings • Laboratory research
Behavioural	Responds to the environment	• Past learning experiences • Stimuli and behavioural consequences that exist in the current environment	• Study of learning processes in the laboratory and real-world settings with an emphasis on the measurement of the stimuli–response relationship
Humanistic	Free agent, seeking self-actualization	• Free will, choice, and innate drive towards self-actualization • Search for personal meaning	• Study of meaning, values, and purpose in life • Study of the self-concept
Cognitive	Thinker	• Thoughts, planning, perceptions, attention, and memory processes	• Study of cognitive processes, usually in a laboratory setting
Sociocultural	Social being, embedded in culture	• Norms, social interactions, and group processes in one's culture and social environment	• Study of behavioural and mental processes of people in different cultures • Experiments examining responses to social stimuli
Biological	The human animal	• Genetic and evolutionary factors • Brain and biochemical factors	• Study of the relationship between the brain and behaviour • Role of hormones and biochemical factors in behaviour • Behaviour genetics research

Haworth, Plomin, and Eley (2012) found that genetic factors explained 68% of the continuation of one specific type of anxiety over time.

Psychological factors

Children who are withdrawn, shy, or timid when confronted with a new situation are thought to be more prone to developing SAD. Behavioural inhibition in the second year of life is a hypothesized predictor for social anxiety in later childhood,

adolescence, and even adulthood (Moehler et al., 2008). Behaviour inhibition refers to a pattern of behaviour involving withdrawal, avoidance, fear of the unfamiliar, and overarousal of the sympathetic nervous system. Children with behaviour inhibition are cautious, quiet, introverted, and shy in unfamiliar situations (Rosenbaum et al., 2000). In adolescence, inhibition (in addition to social comparison and peer attachment quality) can also predict social anxiety (Cunha, Soares, & Pinto-Gouveia, 2008).

Environmental factors

Parental psychopathology may increase the risk of an individual developing SAD; however, it is the interaction with other factors (e.g. family environment) that appears to be pivotal in the development of SAD. Affected parents may have difficulties modelling appropriate coping strategies and may instead react to their child's fears negatively or become extremely concerned about the level of their child's anxiety, which may result in overprotective behaviours (Ollendick & Hirshfeld-Becker, 2002). Parental rearing styles of overprotection, rejection, and lack of emotional warmth have also been associated with offspring SAD (Knappe et al., 2009).

There is also substantial evidence that negative life events during childhood increase the risk for SAD later in life. Family violence in early childhood has been identified as a risk factor for social anxiety (Binelli et al., 2012) and there may be gender-specific differences in how the disorder affects adult life situations (e.g. men with social anxiety reported greater problems at work and in close personal relationships than controls; Marteinsdottir, Svensson, Svedberg, Anderberg, & von Knorring, 2007). Therefore, while genetic factors have a role to play in the development of social anxiety, psychological and environmental factors are also important influences. In this way, human development can be described as multidimensional – an intricate blend of biological, psychological, and social forces. This forms part of the lifespan view of development.

ACTIVITY 1.1

COMPLETE YOUR OWN LEVELS OF ANALYSIS FRAMEWORK

How could you apply the levels of analysis framework to another developmental or psychological disorder?

1. Create a table with three headings: 'Biological', 'Psychological', and 'Environmental'.
2. Choose one of the terms below and then complete your own levels of analysis framework using each heading as a guide:
   - personality disorders
   - eating disorders (e.g. anorexia nervosa, bulimia nervosa, binge-eating disorder)
   - depression and mood disorders
   - psychosis
   - substance abuse
   - neurological disorders
   - specific learning disabilities (e.g. dyslexia, dyscalculia, dyspraxia
   - childhood anxiety and depression

You may wish to conduct a literature search using electronic databases such as Academic Search Complete, PsycARTICLES or PsychSource to find evidence to support your answers.

TEST YOURSELF

1. What is meant by the term 'levels of analysis'?
2. How can the levels of analysis framework be used to help understand human behaviour?

SECTION SUMMARY

- Human behaviour, and its causes, can be understood at biological, psychological, and environmental levels.
- This conceptual framework is known as levels of analysis.
- A full understanding of human nature requires us to move between these three levels of analysis.

ISSUES AND DEBATES IN PSYCHOLOGY

LEARNING OBJECTIVE 1.4

Demonstrate knowledge of the recent and possible future developments in the discipline of psychology.

Is psychology a science? What predicts our behaviour: our genes or how we were brought up? These are two classic debates in psychology, and they will be explored in this section, though they are but two of many issues and debates in psychology. Indeed, psychology, being a young science, is resplendent with such debates – this is what makes it such an exciting area of study.

Psychology as a science

A long-running debate within psychology concerns the extent to which it can be called a science. As we outlined at the outset of this chapter (and hopefully refuted!), a common claim from those not studying it is that psychology is just 'common sense' and not a science. In this section we will explore whether psychology can be described as a science. For instance, features of a scientific approach are that there is a definable subject matter, that it involves theory construction, that it involves hypothesis testing, and that it uses empirical methods for data collection. However, what these points fail to tell us is how the scientific process takes place, the sequence of

events involved, and the relationship between theory construction, hypothesis testing, and data collection.

If science is concerned with aspects of the real world, then biology is the science of the living world, physics is the science of the physical world, and chemistry is the science of the chemical world. Similarly, psychology would be the science of mind and behaviour (Gross, 2001).

Traditional views of science are concerned with **falsifiability**, which was proposed by Karl Popper (1902–1994) (1957), where a **hypothesis** needs to be fully tested to be a science. Science also needs to be **objective**, where we can see things for what they really are, and not subjective. Science additionally requires understanding, prediction, and control.

Contemporary views of science account for the fact that objectivity may not be achievable and that true objectivity may actually be impossible. Furthermore, contemporary views propose that a single explanation may not fully account for a phenomenon; that is, a number of theories (i.e. psychodynamic, behavioural, humanistic, biological, and cultural) can contribute to the explanation of one behaviour (see the section 'Levels of Analysis' earlier in this chapter).

Nature–nurture debate (heredity versus environment)

Another debate within psychology is the nature–nurture debate. This debate (sometimes referred to as heredity versus environment) is concerned with the extent to which we are determined by our genes (nature) or are the products of our environment (nurture).

There are two extreme views: those of **nativists** and **empiricists**. Nativists adopt an extreme heredity position and the assumption that humans as a whole are a product of evolution. For example, Plato believed that children are born with some innate knowledge and, rather than learning anything new, recollect knowledge that lies dormant in their minds. Empiricists, however, believe that, at birth, the human mind is a **tabula rasa** (a blank slate) and that knowledge comes from experiences and perception. For example, John Locke (1632–1704) believed that all behaviour is learned and that the environment makes people behave in certain ways. However, in practice neither of these two extreme positions is usually adopted, as there are too many facets to the argument to support an all-or-nothing view. So, the question is, how do nature and nurture interact?

This question was first proposed by Francis Galton (1822–1911) in the 19th century, and contemporary beliefs argue that it is in fact an interaction of both nature and nurture that determines behaviour (e.g. Handel, Handunnetthi, Giovannoni, Ebers, & Ramagopalan, 2010). This is known as an **interactionist** view. In Freud's and Jean Piaget's (1896–1980) theories, experience is just as important as underlying mechanisms – therefore, both are interactionists. This is the view that is now generally accepted: genes do not act alone; they always act with experience and this experience determines how genetic material is expressed.

Scientists now recognize that both genetics and the environment work together to enhance an organism's ability to adapt successfully to its environment (Gottesman & Hanson, 2005). In recent years, the interactionist view has been given increasing attention in explaining a range of complex human disorders, such as autism (Meek, Lemery-Chalfant, Jahromi, & Valien, 2013), asthma (Rava et al., 2013), and heart disease (Mi, Eskridge, George, & Wang, 2011). However, not all accept this view, and some argue

that genetics can in fact outweigh environmental influences in areas such as school achievement (see Focus Point 1.3). One way the nature–nurture debate is usually studied is by looking at **concordance** rates in identical twins who share exactly the same genetic make-up but have been reared apart and thus have different environmental inputs.

FOCUS POINT 1.3

THE NATURE–NURTURE DEBATE: SHOULD GENETICS HAVE A PLACE IN SCHOOLS?

Can all children achieve academically irrespective of their background? Not so, according to Professor Robert Plomin, a behavioural geneticist. In the summer of 2013, Professor Plomin gave a series of talks at the Department of Education that led to a public outcry when Education Secretary Michael Gove later revealed that he believed genetics outweighs teaching when it comes to how well children perform at school.

In a groundbreaking book, *G Is for Genes*, co-written with Dr Kathryn Asbury, Professor Plomin argues that the idea that children are 'blank slates' is, essentially, wrong. In contrast, children's ability to learn is influenced far more by genetics than by experience. What we should be aiming for, suggests Plomin, is 'a genetically sensitive school'. Asbury and Plomin further stress that genetics is important for policy decision making. Cognitive skills such as learning to read, doing maths, and understanding science are 'some of the most heritable, the most genetically influenced traits that we have, far more than personality or mental illness, and yet not a word is said about genetics in education. For a while, people were quite hostile to it' (Asbury & Plomin, 2013, p. 8).

The authors continue:

> If we really do equalize educational opportunity for all children, we get rid of a lot of the environmental variability, so what's left is the genetic variability. You don't get rid of the genetic differences between the children, so, proportionally, more of the individual differences in school achievement will be due to genetic differences. It may be that's why a national curriculum, to the extent that it's successful, actually does increase heritability. (Asbury & Plomin, 2013, p. 10)

DISCUSSION POINT

In **this episode**[4] of *BBC Inside Science*, Dr Adam Rutherford talks to Professor Robert Plomin, King's College London, and Professor Steve Jones, University College London, about the controversies around education and genetics.

Listen to the episode (the discussion starts at 2:18) and discuss some of the issues raised.

Mind–body relationship

Another key debate in psychology is the mind–body relationship. Is the mind part of the body or is the body part of the mind? How do they interact with each other, or are they distinct?

As mentioned earlier in this chapter, René Descartes argued that the mind and body are separate and only interact via the pineal gland in the brain. Although Descartes placed the mind in the brain, he stated that it is a spiritual entity and that the mind and body can in fact exist without each other. This proposal proved to be incorrect, as we now know that the pineal gland is not only used for muscle movement but also plays

an important part in the production of hormones. Descartes did, however, introduce the concept of reflexes – the automatic, involuntary actions of the body to environmental events – which are an important feature of survival.

Theories of the mind–body relationship are either **monistic** or **dualistic**:

- Monistic theories suggest that the mind and body are one, and that the mind is not a spiritual entity.
- Dualistic theories suggest that the mind and body are separate (e.g. as Descartes proposed).

Descartes' dualistic theory was challenged by Thomas Hobbes (1588–1674) and by Locke, who had monistic views, and these views are much more in tune with contemporary thinking. For example, Spiegel (2013) identified that stress and social support can affect the course of cancer progression. This shows that the mind and body are not separate, and that one affects the other.

Free will versus determinism

Free will versus determinism is another classic debate within psychology. The debate questions the extent to which our behaviour is under our own control. Free will relates to the notions that people have the ability to choose their own course of action, that they have the freedom to choose their behaviour, and that they have responsibility for their actions. On the other hand, determinism relates to behaviour that we cannot control – that is being influenced by internal or external forces – and argues that free will is just an illusion. Between these two extremes is 'soft determinism', an idea formed by William James, who believed that we do have some choice in our behaviours but that we also have brain mechanisms that control or determine this choice. This suggests that we are free to choose our behaviour but that our choices are drawn from a limited repertoire of predetermined responses. For example, we may have chosen to apply to X University but there are factors that may have determined this, such as our previous experience or our academic ability, which has to some extent been inherited.

The free will versus determinism debate can be applied to almost all human behaviour, including aggression, addiction, eating, psychopathology, and atypical behaviour. Your belief in free will can even influence your behaviour in a predictable way! For example, Baumeister, Masicampo, and DeWall (2009) found that a disbelief in free will reduces helping and increases aggression. Similarly, Vohs and Baumeister (2009) identified that experimentally weakening free-will beliefs led to cheating, stealing, aggression, and reducing helping.

DISCUSSION POINT

How can the free will and determinism debate be applied to explanations of depression, aggression, and relationships?

It is not surprising that many of us believe that we have free will as it matches our subjective experiences. However, despite our desire to assume that we have free will, we must accept some form of determinism.

Psychology and ethics

Ethics are an essential element of all research practice (and, of course, professional practice as well). When carrying out any type of research, it is important to adhere to an ethical code of practice, especially when our research is using people or animals. As researchers we have a moral responsibility to protect our participants from harm.

However, before formal ethical processes were introduced, a number of unethical studies were conducted on both animals and humans (for instance, consider the ethical issues in the Milgram studies described earlier). Animals have been used for a number of different experiments, some of which included maternal deprivation (Harlow, 1958) and drug addiction (Johanson & Balster, 1978). These experiments were carried out with animals because it was felt that it was important to study these topics but that doing so would cause too much harm if the studies were carried out with humans. However, some people believe that it is also unethical to carry out experiments with nonhuman animals, given they cannot consent, cannot be debriefed, and may experience physical or psychological harm. However, others believe that animal experiments are justifiable when the animal has minimal levels of distress and when the experiment will benefit the animal involved or benefit their species (see Festing & Wilkinson, 2007).

In the past, some less-than-ethical studies have also been carried out with humans, for example Watson and Rayner's (1920) study of 'Little Albert', a child of unknown age but probably under 1 year. In this experiment, 'Little Albert' was shown a white rat of which he had no fear, but, when the rat was then shown again, Watson made a loud noise. After the rat was repeatedly presented with the noise, 'Little Albert' developed an emotional response every time he saw an object with a similar property to that of the rat (something white). This experiment would not be approved by today's ethics committees because of a number of ethical problems. There are many other studies that you can probably think of that, again, would also not conform to our ethical standards today, such as Milgram's (1963) obedience study and Zimbardo's Stanford prison study (Haney, Banks, & Zimbardo, 1973). This does not mean that these studies cannot be replicated. Indeed, it is important that these results are replicated so that they can be verified and reinterpreted. Instead these studies can be partially replicated, where a study is replicated as far as possible and specific elements that are unethical today are either removed or modified. Following are some ethical issues arising in early studies:

- Watson and Rayner's 'Little Albert' study (Watson & Rayner, 1920)
  - *Psychological harm*, as the study was designed to produce fear.
  - *No informed consent* – there was no permission from Little Albert's parents.
  - Little Albert was taken from the hospital before the last tests were completed; therefore, it was not possible to remove the conditional emotional response, and therefore there was *no debriefing*.
- Milgram's obedience study (Milgram, 1963)
  - *Deception* – participants actually believed they were shocking real people.
  - *Protection of participants* – participants were exposed to extremely stressful situations, which may have caused psychological harm.
- Zimbardo's Stanford prison study (Haney, Banks, & Zimbardo, 1973)
  - Lack of fully *informed consent*.
  - *Humiliation and distress* were experienced by those acting as prisoners.
  - Participants were not protected from *psychological or physical harm*.

The British Psychological Society (BPS)'s *Code of Ethics and Conduct* (2009) in psychology provides guidelines that discuss several issues relating to research with human participants. These include informed consent, debriefing, deception, confidentiality, and withdrawal. There are a number of other ethical guidelines that may differ in some way; however, the fundamental ethical standards they follow will be very similar. Furthermore, it is now common for research institutions to have their own ethics committee, which will review research proposals and consider the ethical issues raised by them. These committees follow strict ethical guidelines and scrutinize research proposals for ethical issues, making suggestions for areas that may need to be altered. An ethics committee can delay a research project until any ethical issues have been resolved.

TEST YOURSELF

1. What is the difference between the nativist and empiricist perspectives on human development?
2. Why is it important to have ethics in psychology?

SECTION SUMMARY

- Psychology is a young discipline and works hard to engage with key debates, such as answering the question of whether or not psychology is a science.
- Karl Popper proposed that science is founded on the principle of falsifiability, where a hypothesis can and must be fully tested. Science also needs to be objective, to see things for what they really are.
- Psychology can be considered to be the science of mind and behaviour.
- A classic debate in psychology is that of whether our genes or our environment predict our behaviour. Within this nature–nurture debate, nativists adopt an extreme heredity position and the assumption that humans as a whole are a product of evolution. Empiricists believe that the human mind is a blank slate and that knowledge comes from experiences and perception.
- One way the nature–nurture debate is usually studied is by looking at concordance rates in identical twins who share exactly same genetic make-up but have been reared apart and thus have different environmental inputs.
- Another key debate in psychology is the mind–body relationship. Theories of the mind–body relationship are either monistic (mind and body are one) or dualistic (mind and body are separate).
- The free will versus determinism debate is another classic debate within psychology. The debate questions the extent to which our behaviour is under our own control or dictated by external factors.
- Ethics are an essential element of all research practice and professional practice. Studies such as Milgram's obedience study can be partially replicated, with specific elements that are unethical today either removed or modified.
- The BPS's (2009) *Code of Ethics and Conduct* in psychology provides guidelines on issues relating to research with human participants.

BIAS IN PSYCHOLOGICAL RESEARCH

LEARNING OBJECTIVE 1.5

Discuss the main potential biases that can influence the ways that psychological research is conducted and the results interpreted, and examine the potential methods of tackling bias in psychological research.

When studying human behaviour in particular, it is important to be aware of a number of potential biases that might influence the way we conduct our research or the way we interpret our research. You may want to consider some of these when conducting your own research. Research biases include experimenter bias and sampling bias. There are many other types of research bias, some of which will be discussed briefly in this section.

Research bias

Research bias may occur by selecting or encouraging one outcome or answer rather than another. This can happen at any time during the research process, including how the study design or method of data collection are selected, and even affecting data analysis, drawing conclusions, and publication (Pannucci & Wilkins, 2011).

One type of research bias is **experimenter bias** (sometimes called experimenter expectancy effects or observer expectancy effects), which refers to the way in which the results of a study are affected by the experimenter. The experimenter may unintentionally influence the participants in the experiment in order to get the desired results.

Sampling bias exists when a sample is not representative of the population from which it was drawn. Historically, psychologists have under-represented women, ethnic minorities, and non-Westernized cultures and a lot of research is based upon white middle- and upper-class students (Arnett, 2008), typically undergraduate psychology students.

Gender bias refers to the way in which research might be influenced by the gender of the participants, and can be defined as a preference, or prejudice, towards one gender over the other (e.g. one gender is either exaggerated or downplayed). In research, this type of prejudice is known as **androcentrism** – taking male thinking as 'normal' and female thinking as 'abnormal or inferior' (Ritchie, 2009). For example, Bowlby (1944) studied 44 child thieves focusing only on the mother's relationship with the child because the father was considered to be merely the economic and emotional support for the child's mother. Bowlby concluded that maternal deprivation can severely affect a child's mental health, ignoring the potential impact of the father's relationship with the child on the child's well-being. Hare-Mustin and Marecek (1988) proposed two types of gender bias:

- **Alpha bias** – a tendency to exaggerate differences between men and women. An example of an alpha-biased theory is Freud's theory of

personality. Freud assumed that a child's superego develops when they identify with their parent of the same sex, with boys developing the stronger superego.

- **Beta bias** – a tendency to exaggerate the similarity between men and women. Kohlberg's (1976) theory of moral development exhibits beta bias as his stages of moral development were based on male moral reasoning, making an inappropriate generalization to women.

Research can often contain a number of gender biases, which include:

- not recording or reporting the sex of the participants involved
- studying more men than women
- studying one pattern of behaviour more so in one sex (e.g. aggression in men)
- researching only one sex.

In psychological history, it comes as no surprise that females have been seen as less important, although this is also true of many other academic disciplines. When psychological research was first conducted, it was difficult for women to become involved, and, when they were, it was assumed that their work was somewhat less important than that of their male counterparts. However, in recent years this has slowly changed as more women take up the discipline (Cynkar, 2007). Other, more contemporary gender biases that may affect research include gay, lesbian, and bisexual biases. This may be by the researcher's selection of research questions and the language used in them, as well as in aspects such as sampling, research design and procedures, protection of participants, and the dissemination of results (Garnets & Kimmel, 2003; Herek, Kimmel, Amaro, & Melton, 1991).

Cultural bias refers to the tendency to ignore differences between different cultures and impose a view taken from one culture on other cultures. There are two types of cultural bias: **ethnocentrism**, the belief that your own culture is superior to another, and **Eurocentrism**, which places an emphasis on Western ideas and then applies these to other cultures to create a universal view of human behaviour.

Cultural bias is evident across many psychological studies (see Activity 1.2) and can also particularly be found in many standardized tests. For example, a number of researchers have unsuccessfully tried to construct culture-free intelligence tests, including Cattell's Culture-Fair Intelligence Test, Goodenough's Draw-a-Person Test, and Williams' Black Intelligence Test of Cultural Homogeneity. Each of these tests has been shown to lack validity across cultures. For instance, Cattell's and Goodenough's tests required participants to draw using pencils and blocks. However, this task would be difficult for children from cultures that are not familiar with such materials. Consequently, these children may score lower than those from cultures to which these materials are familiar. This could lead to children being incorrectly classified in schools (e.g. very bright children placed in a lower set/group).

There are also a number of issues with conducting research with different cultures; these issues are discussed in more detail later on in the chapter.

ACTIVITY 1.2

PERSPECTIVES IN MODERN PSYCHOLOGY

Conduct some research on each of the following classic studies in psychology:

- Bartlett's memory study
- Asch's conformity study
- Milgram's obedience study
- Loftus and Palmer's eyewitness testimony study
- Zimbardo's prison study
- Piaget's three mountains test

For each study:

1. Identify what cultures the participants came from.
2. Identify any methodological issues relating to cultural bias.
3. Suggest some changes that could have been made to the methodology to make it more culturally relevant, looking at it from an objective stance.
4. Finally, ask yourself: How difficult was it to think of changes to make the study more culturally relevant? How might the changes have affected the results?

Tackling bias in psychology

From what has been discussed so far, it is easy to see how biases can be introduced into psychology and psychological research. Although bias is almost always present in every published piece of research, it is mainly up to the reader to consider how bias might influence a study (Gerhard, 2008). However, some biases can be eliminated through careful study design, such as ensuring samples are representative, using objective measures, and employing standardized procedures. Researchers also help to tackle bias by being critical about their results, looking for similarities and differences, and considering effect sizes so that others can see how meaningful the results are.

TEST YOURSELF

1. What are the two types of cultural bias?
2. Historically, why has psychology been gender biased?

SECTION SUMMARY

- When studying human behaviour, it is important to be aware of a number of potential biases that might influence the way we conduct our research or the way we interpret our research.

- There are many types of research bias, including experimenter bias and sampling bias.
- Research bias may occur by selecting or encouraging one outcome or answer rather than another. An example of this is where the experimenter may unintentionally influence the participants in the experiment in order to get the desired results.
- Other biases include sampling bias, gender bias, and gay, lesbian, and bisexual biases.
- Cultural bias refers to the tendency to ignore differences between different cultures and impose a view taken from one culture on other cultures. There are two types of cultural bias: ethnocentrism and Eurocentrism.
- Cultural bias is evident across many psychological studies and can also particularly be found in many standardized tests.
- Although bias is almost always present in every published piece of research, it is mainly up to the reader to consider how bias might influence a study. Researchers also help to tackle bias by evaluating their results critically and objectively.

PSYCHOLOGY AT THE CULTURAL LEVEL

LEARNING OBJECTIVE 1.6

Understand and describe the distinction between cultural psychology and cross-cultural psychology and the research into and implications of these two areas of psychology.

Although an understanding of cultural psychology is essential to be able to study cross-cultural psychology, it is important to make a distinction between the two (Ratner, 2006).

Cultural psychology

Culture refers to the values, traditions, and beliefs that are shared by a particular group of people. Although culture is often associated with nationality and ethnicity, culture can also be defined by age group, sexual orientation, religion, and occupation. Cultural psychologists seek to understand the links underlying cultural influences and behaviour. They focus not only on the interaction of behaviour with the environment but also on the relationship between behaviour and the sociocultural context in which the behaviour occurs.

Culture remains an important factor that shapes individual behaviour through sets of attitudes, beliefs, and values shared by a large population or region (Shiraev & Levy, 2010). For example, in Western culture, handshakes should be firm as weak handshakes are considered limp and cold, but in some Muslim countries (such as Turkey and the Arabic-speaking Middle East) a grip that is too firm is considered to be rude.

Cross-cultural psychology

In contrast to cultural psychology, cross-cultural psychology seeks to understand universality rather than focusing on how local cultural practices influence psychological phenomena. According to Shiraev and Levy (2010), cross-cultural psychology is defined as the 'critical and comparative study of cultural effects on human psychology' (p. 2). Cross-cultural psychology places an emphasis on the critical-thinking and comparative aspects of study, demonstrating the ways in which human activity is influenced by cultural forces (Shiraev & Levy, 2010). Research around cross-cultural psychology requires data from two or more cultures in order to draw comparisons between their data. Thus, cross-cultural psychologists try to explain the vast psychological diversity between differing cultures.

Cross-cultural psychology is an important feature of psychological enquiry because it helps to reduce ethnocentrism. Ethnocentrism is the tendency to see the world from our own point of view; to be judgemental, suspicious, or misunderstand other groups; and to believe in the intrinsic superiority of our own group. For example, in an interesting research study, Whittaker and Whittaker (1972) gave students 10 minutes to draw a map of the world, adding as much detail as possible. The researchers found that, in almost all cases, the students' own country was disproportionately larger (geocentrism), potentially indicating thoughts of grandeur or superiority for their own country.

Approaches: Etic–emic distinction

Research has to begin somewhere, and this usually involves techniques rooted in the researcher's own culture (Berry, 1989). In this instance, cross-cultural psychologists may pick one of two approaches: **etic** or **emic**. The etic approach refers to examining how cultures are similar – that is, examining only one culture using criteria relevant to the internal characteristics of that culture. The emic approach refers to the differences between cultures, revealed by examining many cultures and making comparisons using criteria that are considered to be absolute or universal.

Many attempts have been made to replicate studies originally conducted in the United States in other parts of the world, with researchers assuming that the situation being studied had the same meaning in other cultures as it did in the original culture (Smith & Bond, 1998). For instance, Arnett (2008) found that many prestigious journals of the American Psychological Association were 'based not on a broad cross cultural section of humanity but on a small corner of the population with mainly those living in the United States' (p. 602). Similarly, Webster, Nichols, and Schember (2009) pointed out that a large percentage of psychological research has been conducted predominantly in Western and English-speaking universities and as a result has focused on a relatively small selection of the world's population. Although this research cannot be generalized to the whole population, it is assumed that all populations are similar and is therefore said to be 'imposed etics'.

Individualism versus collectivism

Individualism and **collectivism** are two ways in which we can understand the relationships between individuals in a group. Individualism refers to individuals making their own choices and the extent to which they interact as individuals with the rest of a group. The people in individualistic societies typically view themselves as independent and are usually considered to be represented by Western cultures, such as

Australia, France, the United Kingdom, and the United States. On the other hand, collectivism relates to the views of the group as an entity, a social pattern consisting of closely linked individuals who view themselves as part of one or more collectives and where individuals are mostly concerned with pleasing the social group in which they live (e.g. an individual's family or their group of friends). Collectivistic societies are usually considered to include countries such as China, India, and Japan.

It is important to distinguish between individualistic and collectivistic cultures in psychological study because the ways in which people behave in these two types of culture are likely to differ – especially when it comes to social group behaviour and the psychological beliefs that drive individual behaviour.

Difficulties researching within cross-cultural psychology

There are a number of issues that may arise when conducting cross-cultural research in psychology. A few of these research considerations are listed below:

- Research materials (e.g. apparatus, tests, stimuli) need to be familiar to the participants and valid within each culture.
- There is a need to have high levels of internal consistency as well as external validity (Chen, 2008).
- The participants need to be clearly representative of the culture being studied.
- Will all the participants understand the concept of 'consent' in the same way? In some cultures women are not allowed to give consent; in other cultures consent is frowned upon; and in others the term 'consent' has a completely different meaning.
- The influence of a 'researcher' in different cultures may differ, with participants in some cultures feeling compelled to participate because of the researcher's perceived status.
- Discussing sensitive topics – such as sexuality and human rights, which may not be talked about openly and freely in certain cultures – needs to be considered carefully.
- Conclusions should be drawn from data with a full understanding of what they might mean within a particular cultural context.

Examples of cross-cultural differences in psychological research

Below are a few examples from important areas of psychology of the ways in which culture influences emotion, personality, and health and well-being.

Emotion

There are many examples of cross-cultural differences in the recognition of emotional facial expressions. For instance, Izard (1971) found that North American and European groups correctly identified 75–83% of facial expressions, whereas a Japanese group scored 65% and an African group 50%. Similarly, Jack, Garrod, Yu, Caldara, and Schyns (2012) identified that facial expressions of emotion are not culturally universal. Through the use of a computer graphics system, 30 individuals from Western and Eastern cultures were asked to identify six different basic emotions. The authors found that

Westerners identified each of the six basic emotions with a distinct set of facial movements common to their group. However, those from Eastern cultures did not, their representations showing considerable overlap between emotion categories, particularly for surprise, fear, disgust, and anger.

One way that this can be explained is the fact that emotions are social constructs as a function of the cultural system in which we grow up. For example, the similarities across cultures in emotional expression may be universal across all cultures, while there may be some cultural variation among others.

Personality

Can personality traits be generalized across people from different cultures? Can traits developed by a US psychologist be generalized to people from different countries? For example, Costa and McCrae (1992) developed the Big Five personality traits – a theory which assumes that personality can be described based on just five major important dimensions. However, of these five traits, it has been identified since that *extraversion*, *agreeableness*, and *conscientiousness* are consistently found whereas *openness* and *neuroticism* do not seem to be important within certain cultures. It is therefore difficult to determine whether these latter traits do appear or indeed exist within certain cultures. This is a contemporary issue of debate within psychology.

Health and well-being

People from different cultural backgrounds will have differing opinions on ideal levels of subjective health and well-being. For example, there are a variety of factors that differ across cultures that may influence when and how people present with mental health problems and what type of treatment they seek (Eshun & Gurung, 2009).

Health and well-being can be understood either from a Western evidence-based medical approach or from within traditional indigenous approaches (Prasadarao, 2009). For example, in traditional Chinese medicine, health is regarded as the balance of yin and yang, the two complementary forces in the universe. The balances of yin and yang (hot and cold) are a critical element of many different cultures (e.g. Chinese, Indian, and Mexican) and even affect food choices. In addition, mental health problems are conceived of very differently across different cultures. For example, in Indian Hindu populations, many believe that mental illness is caused by possession by the 'evil eye' (Periyakoil & Dara, 2010); in Japan, mental illness is seen as a weakness in character rather than a treatable illness (Nakane et al., 2005); and in Vietnam, mental illness is considered shameful and often associated with wrongdoing in a previous life (Allotey, Manderson, Nikles, Reidpath, & Sauvarin, 1998). There are many other examples of cultural differences in health beliefs, such as decision making around surgical procedures and treatment (Yosef, 2008), the gender of the health professional a person may see (Periyakoil & Dara, 2010), and the use of a spiritual healer or sorcerer (Allotey et al., 1998; Macfarlane, 2005).

TEST YOURSELF

1. What are the differences between cultural psychology and cross-cultural psychology?
2. How does cross-cultural psychology address bias?
3. What is meant by individualism and collectivism? How do they interact with each other?

SECTION SUMMARY

- Culture refers to the values, traditions, and beliefs that are shared by a particular group of people.
- In contrast to cultural psychology, cross-cultural psychology seeks to understand universality rather than focusing on how local cultural practices influence psychological phenomena.
- The etic approach refers to examining how cultures are similar. The emic approach refers to the differences between cultures.
- A large percentage of psychological research has been conducted predominantly in Western and English-speaking universities and as a result has focused on a relatively small selection of the world's population.
- Individualism and collectivism are two ways in which we can understand the relationship between individuals in a group. It is important to distinguish between individual and collectivist cultures in psychological study because the way in which people behave in these two different types of culture is likely to differ.
- There are a number of issues that may arise when conducting cross-cultural research in psychology. Research considerations include appropriateness of research materials, representativeness of participants, experimenter influence, and topic sensitivity.
- There are many examples of cross-cultural differences in emotion, personality, and health and well-being.

PSYCHOLOGY TODAY

LEARNING OBJECTIVE 1.7

Demonstrate understanding of the applications of psychology as an academic subject and some of the governing and professional bodies in psychology as a career and subject area.

As we have seen earlier in this chapter, the discipline of psychology has grown enormously since the laboratory experiments of William Wundt in 1879, and psychology has emerged from the scientific lab to have a genuine real-world influence. Over the years since the founding of the British Psychological Society in 1901, the expertise of psychologists has begun to have an influence across many areas of society. As we will see later when we explore the psychological professions, psychologists today can be found almost anywhere – even in areas such as traffic management and aviation safety. However, let us first look at psychology as an academic discipline.

Psychology as an academic subject

Psychology is one of the most popular degree subjects, with 66,120 full-time and 28,090 part-time students enrolled on psychology courses across the UK in 2014–2015 (Higher Education Statistics Agency, 2015; most recent national statistics available);

TABLE 1.2 *Areas of academic psychology.*

Area	Description
Biological psychology	The physiological basis of behaviour, behavioural genetics, hormones and behaviour, neuroimaging, neuropsychology, and evolutionary psychology.
Cognitive psychology	Cognitive processes, including memory, learning, thinking, reasoning, perception, language, attention, and consciousness.
Developmental psychology	Physical, cognitive, social, and emotional human development across the lifespan, from the prenatal period through to late adulthood.
Social psychology	Social cognition, attribution, group behaviour and intergroup processes, relationships, prejudice and discrimination, attraction, prosocial behaviour, and aggression.
Individual differences	Personality, intelligence, motivation, emotional intelligence, psychological testing, and cognitive style.
Research methods	Quantitative and qualitative methods, research design, data collection, analysis, and interpretation.
Conceptual and historical issues	Examines the 'big picture' of psychology through key issues and debates that have informed its development, from the origins of the discipline to the present day.

More careers information is available from the British Psychological Society (www.bps.org.uk/careers).

overall, the number of students has grown by some 40% since 2010. People have many different ideas about psychology. One of the main things that surprises people about psychology is the breadth of the topics that are covered during an undergraduate degree. But what does the subject actually involve? The areas in Table 1.2 are strands underpinning the academic subject of psychology that you will study throughout your undergraduate degree.

Since psychology as a discipline is extensive, it is impossible to cover everything during the three (or sometimes four) years of a psychology undergraduate degree. However, students usually get the opportunity to study modules in areas that they find particularly interesting, especially in the final year of study. For example, you might choose to study a forensic psychology module, exploring the psychology of criminal behaviour and offenders.

The skills that are developed while studying psychology are broad and wide ranging. As you can see from the various areas of psychology in Table 1.2, a psychology student will have the opportunity to develop skills in many areas. However, it is important to recognize that psychology at an undergraduate level is just the starting point. In order to become a psychologist or to become professionally skilled in a certain area, you will need to carry out further study and engage in relevant work experience. We will look at the professions and how you can work towards these careers a little later on.

Governing and professional bodies in psychology

The discipline of psychology in the UK is represented by the British Psychological Society (BPS). This is a professional body that aims to promote excellence in the field of psychology through the sharing of scientific knowledge, research, and guidelines

for good practice. The BPS also monitors the standard of university courses and training programmes in psychology, including undergraduate and postgraduate degrees and specific training courses. Those courses that meet certain criteria then achieve BPS-accredited status.

Students who successfully complete a BPS-accredited undergraduate degree are eligible for Graduate Basis for Chartered Membership (GBC), which is a requirement for most psychology positions and for a career as a chartered psychologist. The BPS also accredits postgraduate courses that lead to **chartered** status. If you are applying to take an undergraduate psychology degree in the UK, you might like to consider whether or not the course is accredited by the BPS and whether this is important to you or your career. However, it is possible to undertake conversion courses at a later date if you require GBC.

Depending on the area that you specialize in, and your personal interests, you might also be a member of another professional body, such as the UK Council for Psychotherapy, the British Association for Counselling & Psychotherapy, or the Experimental Psychology Society. Other bodies include the Psychological Society of Ireland, the Association of German Professional Psychologists, and the European Health Psychology Society.

Another organization relevant to psychology is the **Health and Care Professions Council (HCPC),** which will be of significance if you plan to have a career in an area of professional psychology. Unlike the BPS, the HCPC is a regulatory or governing body, which means that this organization monitors professional practice and has the power to prevent people from practising. Once you are qualified and practising as a psychologist, you are required to keep a record of your professional activity and development. Professionals are randomly selected for audits and also have to renew their membership every 2 years.

DISCUSSION POINTS

1. What areas of psychology might you expect to study during an undergraduate psychology degree?
2. Which body sets the standards for entry onto the professional register of all practitioner psychologists?

SECTION SUMMARY

- Psychology is one of the most popular degree subjects. In 2014–2015, there were 66,120 full-time and 28,090 part-time students enrolled on psychology courses across the UK.
- The breadth of the topics that are covered during an undergraduate degree surprises most people and the skills that are developed while studying psychology are wide ranging.
- In order to become a psychologist or to become professionally skilled in a certain area, you will need to carry out further study and engage in relevant work experience.
- The discipline of psychology is represented in the UK by the BPS.

- Students who successfully complete a BPS-accredited undergraduate degree are eligible for Graduate Basis for Chartered Membership, which is a requirement for most psychology positions and for a career as a chartered psychologist.
- Depending on the area in which you specialize, and your personal interests, you might also be a member of another professional body.
- An organization relevant to psychology is the Health and Care Professions Council, which will be of significance if you plan to have a career in any area of professional psychology.

PSYCHOLOGY IN ACTION: APPLYING PSYCHOLOGICAL SCIENCE

LEARNING OBJECTIVE 1.8

Demonstrate knowledge of the wide variety of professional careers in psychology and other occupations where a psychological science background is advantageous.

Psychology is a very diverse subject and we have briefly touched upon the key strands underpinning the academic discipline. But how does this translate into the real world? What does psychology have to offer on everyday issues? Understanding psychological theory and research can also have an impact on our own lives and how we act or respond in certain situations (see Research Methods 1.1).

RESEARCH METHODS 1.1

THE SMOKE-FILLED ROOM AND 'THE BYSTANDER EFFECT'

A study in the 1960s revealed an interesting finding about how we act differently when we are in the presence of others compared with when we are alone (Latane & Darley, 1968). Participants were asked to sit in a waiting room, either by themselves or in the presence of two other people. The two others were either real participants or confederates who were aware of the aims of the study.

When the room began to fill with smoke, the researchers measured how long it took each participant to report the smoke. Interestingly, although participants reported the smoke very quickly when they were alone (75% reported it), only 10% of participants reported it at all when they were sat with two confederates who did not respond to the smoke. In fact, even in the presence of two real participants, still only 38% reported the smoke!

This study was part of a series of studies that led to the coining of the term 'the bystander effect'. According to Latane and Darley (1968), people are less likely to react or offer help in an emergency if there are other people around. This appears to be due

to a number of factors, including 'pluralistic ignorance', which is the idea that people look at how others react to help them to know what to do, and 'the audience inhibition effect', which is the idea that people don't respond in case they look stupid or appear to be overreacting.

Latane and Darley also referred to 'diffusion of responsibility'. This is the idea that, when others are around, we believe we are less responsible. Additionally, if others are nearby but not visible, we tend to assume that another person will be responding and that our help is not needed. More recent research has shown that this may extend to everyday non-emergency situations as well. For example, people may be more likely to respond to an email requesting help with something when the email is addressed solely to them and not to a number of recipients. One study found that these responses also tended to be lengthier and more helpful (Barron & Yechiam, 2002).

DISCUSSION POINT

Experiments such as Latane and Darley's (1968) with the smoke-filled room provide insight into social behaviour and force us to take some responsibility.

What would you do if you were driving home and saw a large fire in a field as you passed by? Would you think that it must be being dealt with – after all, someone else must have seen it? And would your reaction be affected by the number of people passing by without stopping? Or, knowing what you now know about social behaviour, would you report it, just in case nobody else has?

Similar issues were explored in the 2013 UK Channel 4 TV series *Eye Spy*, narrated by Stephen Fry. This series involved a number of hidden-camera experiments to see how the public would react in certain situations. For example, would anyone speak up when a waiter repeatedly expressed comments of a racist or homosexual nature to a couple in a restaurant? Surprisingly, it seemed that a lot of people did not speak up in these situations.

Although the programme may not have undertaken these experiments in a scientifically rigorous way, it did highlight the social and psychological processes and pressures that people face. *Eye Spy* was presented as a light-hearted look at the morals of people in Britain, with the underlying message that most people are essentially good ('heroes') – but was it really *morals* that were being tested? Was it poor morals that stopped people speaking up when a couple received racist abuse in a restaurant? Or was it in fact psychosocial processes at work, such as the bystander effect (i.e. 'If no one else is saying anything, it must not be necessary for me to speak up')?

A meta-analysis of the research into the bystander effect suggested that this non-intervention is greatest when situations are perceived as dangerous, when perpetrators are present, and when the costs of intervening are potentially physical (Fischer et al., 2011). Although it is unlikely that the people in the *Eye Spy* series felt physically threatened by the person dishing out verbal abuse, it is possible that their behaviour was affected by what other people were doing (or, rather, not doing) as well as concerns about personal repercussions due to the presence of the 'perpetrator'.

The psychological professions

What do psychologists do?

Careers in psychology are just as broad ranging as the subject itself. Psychologists work in many different areas and their roles involve completing a variety of duties on a daily basis. Psychologists apply evidence and theory to human problems; this may be through direct work with individuals or through research and sharing information.

While psychologists cannot 'solve' human problems, they work in collaboration with people to help them develop and utilize coping strategies for the future and to help them change the way they think or behave when their current strategies are not working for them. They use observations, assessments, and scientific research to inform how they work with people and which 'interventions' may be useful. There are a number of types of psychologist; however, it is important to remember that, despite the different titles, the roles of psychologists often overlap due to the core skills that all psychologists develop during their education and training. Also, remember that there are a wide range of careers that psychology graduates might go into, as we will explore later in this chapter. A fuller description of applied and professional psychology can be found in Davey (2011).

Counselling psychologists

Counselling psychologists meet with individuals, couples, or groups who have mental health problems, such as depression or anxiety, or other issues that they are struggling with, such as bereavement, domestic violence, or relationship problems. They may also work with people to promote personal growth. Counselling psychologists work together with individuals to help reduce distress. This usually involves talking therapies, although counselling psychologists might also draw upon other methods of engagement, such as art, music, or play therapy. Counselling psychologists work in a variety of places; these include hospitals, GP surgeries and other healthcare establishments, mental health teams, educational settings, the workplace, and private practice. More information about counselling psychology can be found in the *Handbook of Counselling Psychology* (Woolfe, Strawbridge, Douglas, & Dryden, 2010).

Clinical psychologists

Like counselling psychologists, clinical psychologists work with individuals, couples, and groups with mental health problems. They might also work with people with learning disabilities, brain injury, or physical health problems, and they work across the age span, with children, adults, and older adults. Clinical psychologists carry out assessments to better understand individuals. This might be through observations or the use of questionnaires and **psychometric tests**. Clinical psychologists then use this information to think about how a problem has developed and how it might be managed so as to reduce distress and improve well-being. Clinical psychologists often work in teams and their roles can be very broad. They might work indirectly to support individuals, through working closely with carers and giving advice, or through delivering training to staff teams, for example. They might also provide one-to-one therapy with individuals. Clinical psychologists usually work in healthcare settings such as mental health teams and hospitals, often in the NHS but sometimes for private companies. They might also work

independently in private practice. The 'Short Introductions to the Therapy Professions' series provides a useful introduction to this profession (Cheshire & Pilgrim, 2004; Davey, 2011; Davey, Lake, & Whittington, 2014).

Educational psychologists

Educational psychologists work with children and adolescents in schools and other educational settings. They aim to support the development of each young person towards their potential by working with parents, families, and teachers, as well as the child, to find ways of supporting the individual's learning and participation in education. Educational psychologists support young people with a variety of issues, including learning difficulties and behavioural, emotional, and social difficulties. Like clinical psychologists, educational psychologists use various forms of assessment to inform their work with young people. For example, these assessments may be measures of cognitive functioning, which indicate the person's strengths and areas of need. Educational psychologists tend to work in schools, nurseries, and other facilities for young people. Some work privately, providing consultation to people who seek professional support. See Alexander and Winne (2006) and Davey (2011) for introductions to this field.

Health psychologists

Health psychologists are concerned with the psychology of health and well-being. They use their knowledge of behaviour change to advise others (e.g. the media or government) on the best ways to get messages across about health and lifestyle behaviours, such as alcohol use, fruit and vegetable consumption, and use of contraception. Health psychologists also apply their knowledge to physical illness and support people with the psychological impact of illness. They may work in healthcare settings, academic institutions, or private practice. See Davey (2011) and Ogden (2012) for more detailed introductions to health psychology.

Occupational psychologists

Occupational psychologists support people in the workplace by working with employers. They are able to draw on their knowledge of psychology to advise organizations on things like how to keep staff motivated and how to prevent and manage stress in their employees. Occupational psychologists use a range of assessment tools to inform their work, including psychometric tests. Their knowledge and skills are useful for promoting the effectiveness of companies and their workforces. Occupational psychologists work in organizations such as the civil service, the prison service, and government departments, as well as universities.

Forensic psychologists

Forensic psychologists assess people who have committed criminal offences, provide intervention programmes, and give their expert opinions in court. They apply psychological theory, research, and formulation to understand the behaviour of these individuals. Forensic psychologists might also develop interventions for supporting prison staff and promoting well-being and rehabilitation in people who are in prison. They usually work in the prison service, secure hospitals for people with mental health problems, social services, universities, or private practice. See Canter (2010) and Davey (2011) for introductions to the field.

Clinical neuropsychologists

Neuropsychology is an expert field involving the science of the brain and neuropsychological function. Once qualified as a clinical or educational psychologist, you can undertake further study to specialize in neuropsychology. Neuropsychologists work with people who have experienced brain injury, tumours, strokes, and neurodegenerative disorders, providing assessment and support. They tend to work in healthcare settings and rehabilitation centres, as well as academic institutions. Ogden (2005) presents an introductory text with case studies to illustrate the work of a clinical neuropsychologist.

Sport and exercise psychologists

Sports and exercise psychologists provide advice to athletes, coaches, and the general public on all psychological aspects of performance. For example, they might support others to promote team spirit, motivation, and goal setting, or they may help athletes to manage stress. These psychologists work in any settings where people are involved in sports and exercise. See Davey (2011) and Weinberg and Gould (2011) for introductions to this field.

Academic, research, and teaching psychologists

Psychologists also work in research and teaching, usually in educational facilities such as universities (see earlier in this chapter for information about psychological research). Researchers communicate this information to others through presentations at conferences, through teaching, and by publishing their work as journal articles and books. Academics work in teaching or lecturing and usually engage in research activities as well. Read more about teaching in psychology in Upton and Trapp (2010).



Look through the BPS Media Centre **playlist**[5] from the British Psychological Society for more insights into careers in psychology.

How do I become a professional psychologist?

Every area of professional psychology has a different route. Table 1.3 gives an indication of the qualifications and work experience needed in order to become a chartered psychologist in the UK in any of the areas outlined above. For most of these routes, you will need to have obtained an upper second (2:1) or a first-class degree in addition to voluntary or paid work experience. If you obtain a 2:2 degree, you may need to study for a postgraduate qualification (e.g. an MSc) in addition to voluntary or paid work experience.

All psychologists have a responsibility to work ethically and to ensure their work is centred on promoting well-being and preventing harm. For example, they must always consider whether or not their intervention is wanted or needed and whether or not it would be useful. The HCPC monitors the practice of chartered psychologists throughout their career to ensure they are adhering to the HCPC's standards. Psychologists should also take note of the BPS's Code of Conduct and guidelines for ethical practice, and they must use government legislation and guidance to inform their practice.

TABLE 1.3 *Pathways to becoming a chartered psychologist in the UK.*

Specialism	Postgraduate qualifications and work experience
Counselling psychologist	• Relevant paid or voluntary work experience in mental health • Basic qualifications/training in counselling skills are preferred • Doctorate in counselling psychology, accredited by the BPS and approved by the HCPC or the BPS's Qualification in Counselling Psychology
Clinical psychologist	• Doctoral training in clinical psychology, accredited by the BPS and approved by the HCPC – a 3-year course involving study and work placements • Competition for places on the doctorate course is very high so most candidates will have completed a number of years of work experience before being accepted onto the course (a minimum of 1 year); this might be anything involving working with people, such as the roles of assistant psychologist, research assistant, or support worker
Educational psychologist	• Relevant work experience with children (1 to 2 years minimum) • A doctorate in educational psychology, accredited by the BPS and approved by the HCPC, or, if in Scotland, an accredited master's in educational psychology followed by the BPS's Award in Educational Psychology
Health psychologist	• Voluntary or paid work experience in healthcare settings • A master's in health psychology accredited by the BPS • Stage 2 of the BPS Qualification in Health Psychology, approved by the HCPC (which involves 2 years of supervised practice) or a doctorate programme in health psychology
Occupational psychologist	• A master's in occupational psychology accredited by the BPS • Stage 2 of the BPS's Qualification in Occupational Psychology (which is approved by the HCPC); this involves 2 years of supervised practice
Forensic psychologist	• A master's in forensic psychology accredited by the BPS • Stage 2 of the BPS's Qualification in Forensic Psychology (which is approved by the HCPC and involves 2 years of supervised practice) or a doctorate programme in forensic psychology approved by the HCPC (instead of the master's stage 2 qualification)
Clinical neuropsychologist	• Postgraduate training in clinical or educational psychology accredited by the BPS (see above for clinical and educational routes) • The BPS's Qualification in Clinical Neuropsychology (QiCN)
Sport and exercise psychologist	• A master's in sport and exercise psychology accredited by the BPS • Stage 2 of the BPS's Qualification in Sport and Exercise Psychology (which is approved by the HCPC and involves 2 years of supervised practice)
Academic, research, and teaching psychologist	• To be a chartered psychologist in teaching or research, you will need to complete 5 or more years of professional work experience that is supervised and assessed • To work in research, you will need to complete a doctorate and/or carry out relevant work experience

Note: BPS: British Psychological Society; HCPC: Health and Care Professions Council.

What if these careers don't appeal? What else can I do with a psychology degree?

It is estimated that between 15% and 20% of psychology graduates go on to become professional psychologists (Quality Assurance Agency for Higher Education, 2007). However, this does not mean that the other 80–85% of psychology graduates do not use their knowledge and skills in this area. A background in psychology is not only useful for the above professions; knowledge and skills in this area are invaluable to a wide range of employers. Indeed, the Higher Education Careers Service Unit (2013) has found that graduates with a degree in psychology are highly likely to find employment after graduation, and this appears to be due to the transferrable skills they have gained from their degree. Psychological knowledge is useful for any job or company that involves people (and that is pretty much everywhere!).

However, it is not just this emphasis on people that makes psychologists great employees; they also have a number of skills in research, scientific and critical thinking, statistics, and areas such as biology. Human resources, media, teaching, police, and public services are all examples of areas that might benefit from a background in psychology.

Earlier we touched upon the fact that psychologists might also work in other unusual and diverse areas, such as traffic, aviation, and design. If we take traffic, for example, psychologists have explored concepts such as pedestrian road-crossing behaviour (Harrell, 1991; Rosenbloom, 2009) and indeed psychologists have a lot more to offer on similar issues. One example is ongoing research into the effects of mobile phone use for drivers (e.g. Collet, Guillot, & Petit, 2010) and pedestrians (Schwebel et al., 2012) and the impact that this can have on concentration levels and safety.

Go to the **BPS Careers website**[6] for an interactive look at your journey into psychology.

TEST YOURSELF

1. What are the nine main psychology professions? See whether you can briefly describe the type of work that each psychologist carries out.
2. Why do you need to study for an accredited undergraduate degree programme to progress on to professional training in psychology?

WHO DOES WHAT IN PSYCHOLOGY?

COUNSELLING PSYCHOLOGISTS

- Work with individuals, couples, or groups who have mental health problems, such as depression or anxiety.
- Methods usually involve talking therapies as well as art, music, or play therapy.
- Relevant paid or voluntary work experience in mental health is required.

CLINICAL PSYCHOLOGISTS

- Work with individuals, couples, or groups who have mental health problems, such as depression or anxiety.
- Usually work in healthcare settings such as mental health teams and hospitals.
- A number of years of work experience is usually required before being accepted onto a highly competitive training course.

EDUCATIONAL PSYCHOLOGISTS

- Work with children and adolescents in schools and other educational settings.
- Support young people with a variety of issues, including learning difficulties and behavioural, emotional, and social difficulties.
- Relevant work experience with children is required.

HEALTH PSYCHOLOGISTS

- Use their knowledge of behaviour change to advise others.
- May apply their knowledge to physical illness and support people with the psychological impact of illness.
- An accredited master's degree in health psychology is required.

OCCUPATIONAL PSYCHOLOGISTS

- Support people in the workplace by working with employers.
- May work in organizations such as the civil service, the prison service, or government departments, as well as universities.
- An accredited master's degree in occupational psychology is required.

FORENSIC PSYCHOLOGISTS

- Assess people who have committed criminal offences, provide intervention programmes, and give their expert opinions in court.
- A doctoral programme in forensic psychology is required.

CLINICAL NEUROPSYCHOLOGISTS

- Work with people who have experienced brain injury, tumours, or strokes.
- Postgraduate training in clinical or educational psychology is required.

SPORT AND EXERCISE PSYCHOLOGISTS

- Provide advice to athletes, coaches, and the general public on all psychological aspects of performance.
- An accredited master's in sport and exercise psychology is required.

ACADEMIC, RESEARCH, AND TEACHING PSYCHOLOGISTS

- Communicate research to others through presentations at conferences, through teaching, and by publishing work as journal articles and books.
- Completion of 5 or more years of supervised and assessed professional work experience is required.

SECTION SUMMARY

- Psychologists work in many different areas and their roles involve completing a variety of duties on a daily basis. Psychologists apply evidence and theory to human problems through working directly with individuals or through research and sharing information.
- There are many types of psychologist. However, it is important to remember that, despite the different titles, the roles of psychologists often overlap because of the broad range of core skills that all psychologists develop during their education and training.
- There is a wide variety of careers into which psychology graduates might go, including counselling psychology, clinical psychology, educational psychology, health psychology, occupational psychology, forensic psychology, clinical neuropsychology, sport and exercise psychology, and academic, research, and teaching psychology.
- Every area of professional psychology has a different career path.
- A psychology degree offers a range of transferable skills, meaning that psychology graduates are highly likely to find employment after graduation.

FUTURE DEVELOPMENTS

LEARNING OBJECTIVE 1.9

Discuss possible future developments in psychological research and practice and the implications of these developments for the profession and society at large.

We have seen throughout this chapter how psychology has evolved enormously since Wundt's experiments in 1879. As psychology is a science, it is essential that it continues to develop and that it never remains static. So, what might the future look like for psychology? And in which areas might we see the key changes?

Future developments in academic psychology and research

Future research in psychology will need to be clearer about its potential impact on society. Under the new UK national Research Excellence Framework (REF) (which involves the assessment of a university's research outputs over the previous 6 years), researchers will have to demonstrate that their research has an impact on society. The most recent outcomes were presented in 2014 and a new exercise is planned for 2019–2020. For more information on the REF **visit its website**[7].

Future developments in the psychology professions and the impact on society

In line with the applied emphasis in research, there is also increasing focus on evidence-based practice for professional psychologists. In other words, psychologists in the future will need to ensure that their interventions are supported with

research findings. This relates to the growing focus on providing value for money; psychologists can be expensive professionals to employ, and there are now a higher number of professionals who offer similar services for lower salaries. One example is the 'psychological well-being practitioner', who may be able to deliver psychological therapies to individuals with common mental health problems at a lower cost than a clinical psychologist. Psychologists therefore need to ensure they are providing a high-quality service and they need to sell themselves more so that it is clear what they have to offer and why they are worth the extra cost.

In recent times, there has also been more emphasis on service-user involvement or participation, both in research and in the development of services. People who use psychology services have a lot to offer to service development since they are the people who use the services and have the 'lived experience' of dealing with particular issues. When working in collaboration with professionals, service users can create a fuller picture and provide insight into what is needed from services. In the past, the idea that people with mental health problems or other difficulties could actually have an input into what services they received might have been scoffed at; after all, if they're not coping and need the help of a psychologist, how can they tell you what they need? Recently, however, it has become clear that service users *do* have a lot to offer, and who better to ask about a condition or service than a person who has actually experienced it? For example, **INVOLVE**[8], the national advisory body funded by the Department of Health, aims to actively involve members of the public, patients, and users in NHS research, service evaluation, and clinical audit.

There is an increasing role for psychologists in society, along with an increasing recognition of psychology's value. This increase can be seen within the 'traditional' areas of psychology, such as health, clinical, educational, and occupational psychology, but psychologists will also become more apparent in other areas. These may include responding to mass disasters (such as Typhoon Haiyan in the Philippines), traffic, economics, and sports, to name a few. Additionally, psychologists in the future are likely to have greater involvement in informing policies and working with the government. The BPS works with the UK parliaments and assemblies, non-governmental organizations, and international bodies to ensure it has an effective voice. One example is the involvement of the BPS in the consultation process leading to the publication of new regulations for child performers by the Department for Education (2014).

As well as having government involvement, psychologists will need to have more of a role in society in general. As stated by Davey (2007), psychologists surely have more to offer in terms of real-world issues for the public, and there are many social issues that may require psychological knowledge. One example where psychological knowledge is vital is within dementia care. This is an important issue and will become even more so as life expectancy increases. Psychologists may help to provide early diagnoses and assessment, and improve current psychological interventions. Furthermore, an increase in life expectancy may also mean there may be many more individuals who will be left caring for those with dementia or an elderly relative. This can have a considerable impact on a carer's health and well-being, including increased levels of depression, exhaustion, stress, and social isolation (Princess Royal Trust for Carers, 2011). Psychologists will be needed to give support, provide information, and research novel interventions to help improve these issues for carers. Psychologists may also provide carers with access to a range of psychological therapies, such as cognitive behavioural therapy, which are accessible and convenient for carers.

DISCUSSION POINT

How might the future of psychology be different? Name three areas that have been mentioned and then see whether you can think of another area that hasn't been discussed in this chapter.

SECTION SUMMARY

- Future research in psychology will need to be clearer about its potential impact on society.
- In line with the emphasis on applied research, there is also increasing focus on evidence-based practice for professional psychologists and a growing requirement to provide value for money.
- There has also been greater involvement and participation of service users, both in research and in the development of services.
- There is an increasing role for psychologists in society, along with an increasing recognition of the value of psychology as a discipline. Psychologists have more to offer in terms of real-world issues for the public, and there are many social issues that may require psychological knowledge.

CHAPTER SUMMARY

This chapter has considered the ways in which psychology has developed as a discipline from its early philosophical roots to contemporary perspectives on the mind and behaviour. We did this by first exploring the fundamental question of what exactly psychology 'is' and moved on to outline the roots of the discipline by examining the path that the subject has taken through early philosophy to contemporary sociocultural perspectives. We then looked at the discipline through a level of analysis framework and moved on to an evaluation of key issues and debates in psychology as well as an exploration of bias and cross-cultural approaches. The chapter concluded with some thoughts on how the science of psychology is applied at a practical level, with particular emphasis on service-user involvement and participation in the co-design and co-development of services and real-world solutions to social issues.

ESSAY QUESTIONS

1. To what extent did functionalism serve to widen the focus of psychology beyond that of the individual?
2. Discuss some of the key challenges involved in research in cross-cultural psychology.
3. How might public interest in psychology affect the development of our discipline?

KEY TERMS

- **alpha bias:** A tendency to exaggerate differences between men and women.
- **androcentrism:** A type of prejudice that takes male thinking as normal and female thinking as abnormal or inferior.
- **applied research:** Research designed to solve practical, real-world problems.
- **basic research:** Research that aims to seek knowledge for its own sake. Basic research examines how and why people think and behave in the way they do and may be conducted in a laboratory or real-world setting, with human participants or animals.
- **behavioural neuroscience:** Examines the brain processes and other physiological functions that influence our behaviour, emotions, and thoughts.
- **behaviourist perspective:** Emphasizes the role of the environment in our behaviour.
- **beta bias:** The tendency to minimize the differences between men and women.
- **biological perspective:** Examines how the processes of the brain influence behaviour.
- **chartered:** A chartered psychologist is someone who is considered competent (and therefore qualified to practice) in their area of psychology due to having completed the necessary training, study, and work experience.
- **cognitive neuroscience:** Uses brain-imaging techniques to examine brain activity when a person is engaged in a cognitive task.
- **cognitive perspective:** Seeks to explain human behaviour by examining mental processes.
- **cognitive psychology:** The study of the processes that explain how people reason, make decisions, problem solve, remember, form perceptions, and use language.
- **cognitive revolution:** An intellectual movement in the 1950s that marked a shift in emphasis from the behaviourist perspective to the cognitive perspective.
- **collectivism:** A culture that focuses more on the needs of the group and less on individual desire.
- **concordance:** the presence of the same trait in both members of a pair of twins.
- **cross-cultural psychology:** Possible universal behaviours and mental processes. Cross-cultural psychology places an emphasis on the critical-thinking and comparative aspects of study, demonstrating the ways human activity is impacted by cultural forces.
- **cultural bias:** The tendency to ignore differences between cultures and impose an understanding of one culture on other cultures.
- **cultural psychology:** A branch of psychology which identifies that human behaviour is influenced by cultural differences, meaning that psychological phenomena can only be compared in individuals across cultures to a limited extent.
- **culture:** The knowledge, values, customs, and attitudes that guide our behaviour.
- **defence mechanisms:** Psychological techniques to help us cope with anxiety regarding traumatic experiences.
- **dualistic:** A theory which suggests that the mind and body are one and that the mind is not a spiritual entity.
- **emic:** Refers to the differences between cultures and to examinations of multiple cultures using criteria that are considered to be absolute or universal.
- **empiricists:** People who hold to a theory which states that knowledge comes from sensory experience.
- **ethnocentrism:** The use of your own cultural group to make judgements about other groups.
- **etic:** Refers to examining how cultures are similar and to examinations of one culture using criteria relevant to its internal characteristics.
- **Eurocentrism:** An emphasis on Western ideas and the application of those ideas to other cultures in a way that may not be true of the other cultures.
- **evolutionary psychology:** A recent movement that seeks to explain how evolution has shaped human behaviour. Evolutionary psychologists argue that our mental abilities and behaviour have evolved through the process of natural selection.

- **experimenter bias:** The way the results of an experiment are affected by the experimenter.
- **falsifiability:** The notion that a hypothesis can be tested and proved wrong.
- **functionalism:** The study of the functions of consciousness rather than its structure.
- **gender bias:** A preference or prejudice towards one gender over another.
- **Health and Care Professions Council (HCPC):** A body that sets the standards for entry onto the professional register of all practitioner psychologists in the UK and determines an individual's fitness to practice. This includes training, professional skills, behaviour, and health. Anyone who wishes to use the title 'educational psychologist' must be registered with the HCPC.
- **hierarchy of needs:** An approach to motivation proposed by Abraham Maslow. A five-tier model of human needs, from basic physiological and safety needs to self-actualization.
- **hindsight bias:** The tendency for individuals to view events as more predictable than they actually are.
- **humanism (humanistic perspective):** Emphasizes free will, personal growth, and finding meaning and value in life.
- **hypothesis:** A proposed explanation for a phenomenon.
- **individualism:** A culture in which individuals tend to make their own choices and interact less with the rest of the group.
- **interactionist:** A person who believes that both nature and nurture determine a person's behaviour.
- **introspection:** Looking within.
- **levels of analysis:** A conceptual framework that can be used to help us understand human behaviour.
- **monistic:** A theory which suggests that the mind and body are separate.
- **nativists:** People who hold an extreme heredity position, which is the assumption that humans as a whole are a product of evolution.
- **norms:** Unwritten rules that state what behaviour is accepted and expected, (e.g. how to dress and how to introduce yourself to a person in authority).
- **objective:** Refers to seeing things for what they really are and not subjectively.
- **positive psychology:** Emphasizes how life can be made more fulfilling and how we can nurture the best in ourselves. Positive psychology is primarily concerned with using psychological theory, research, and intervention techniques to understand the positive, adaptive, creative, and emotionally fulfilling aspects of human behaviour.
- **psychoanalysis:** A form of therapy that involves the examination of unconscious psychological forces.
- **psychodynamic perspective:** Seeks to understand the causes of behaviour by examining the internal, inner workings of the human mind, emphasizing the role of unconscious processes.
- **psychometric test:** A test used by psychologists (and other professionals) to measure particular things about people, such as personality traits, intelligence, and attitudes. A psychometric test is usually in the form of a questionnaire or a similar paper-based or electronic test.
- **psychophysics:** The study of how psychologically experienced sensations are dependent on characteristics of physical stimuli.
- **radical behaviourism:** Emphasizes that society can utilize the environment to modify behaviour in beneficial ways.
- **research bias:** Occurs by selecting or encouraging one outcome or answer rather than another. This can happen at any time in the research process, including when choosing the study design or method of data collection, and even during data analysis, drawing conclusions, and publication.
- **sampling bias:** Exists when a sample is not representative of the population from which it is drawn.
- **self-actualization:** The top-most level of Maslow's hierarchy of needs, which is reached through fulfilling one's potential.

- **social constructivism:** Emphasizes that our sense of reality is socially constructed – that is, it is the product of our own way of thinking as members of social groups rather than directly observable.
- **socialization:** The process in which norms are transmitted to new members of a group.
- **sociocultural perspective:** Emphasizes the role of our social environment and culture in how we think, feel, and behave.
- **structuralism:** The analysis of the mind in terms of its basic elements.
- **tabula rasa:** The idea that the mind at birth is a blank slate.

NOTES

1. https://digest.bps.org.uk/2012/11/06/are-3d-films-more-psychologically-powerful-than-2d/
2. http://www.thepsychologist.org.uk/archive/archive_home.cfm
3. http://origins.bps.org.uk/
4. http://www.bbc.co.uk/programmes/b03ctc1r
5. https://www.youtube.com/playlist?list=PLCkLQOAPOtT2ATuX2Kz0tApFp-UUFwlIZ
6. http://careers.bps.org.uk/
7. http://www.ref.ac.uk
8. http://www.invo.org.uk/

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