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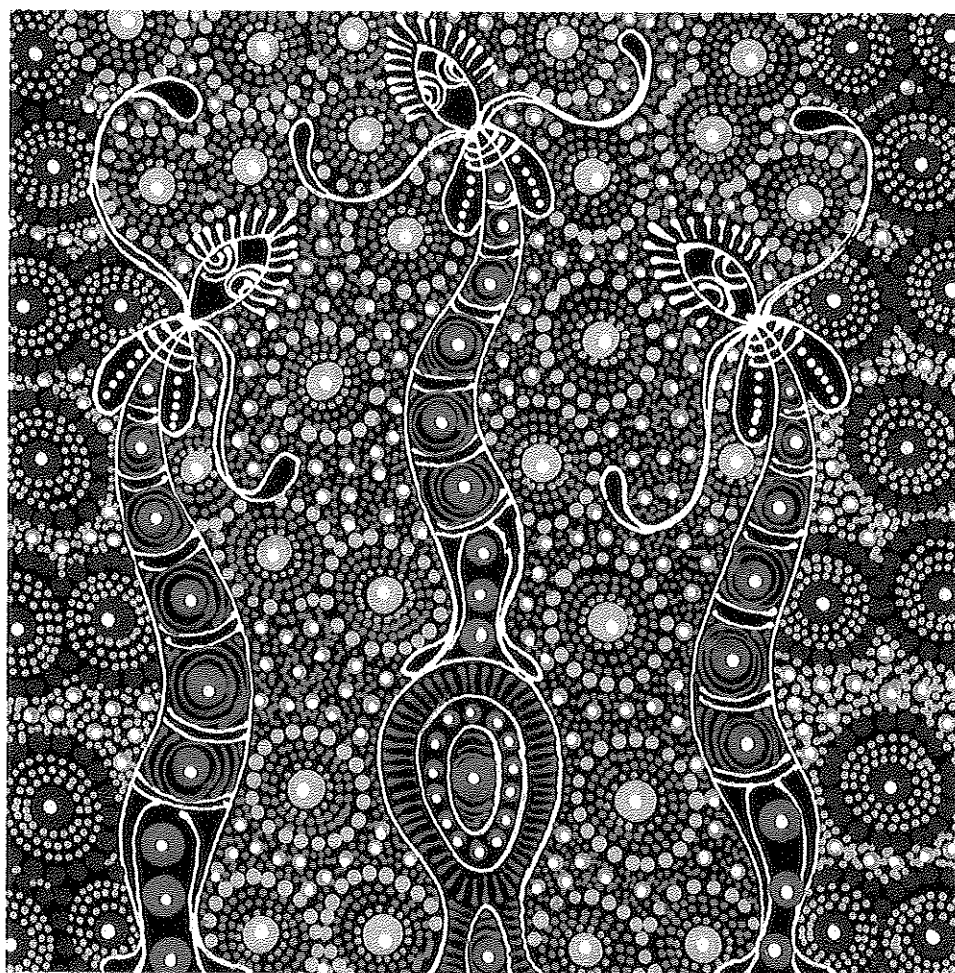
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Looking forward through the lifespan

DEVELOPMENTAL PSYCHOLOGY

6TH EDITION



Candida C Peterson

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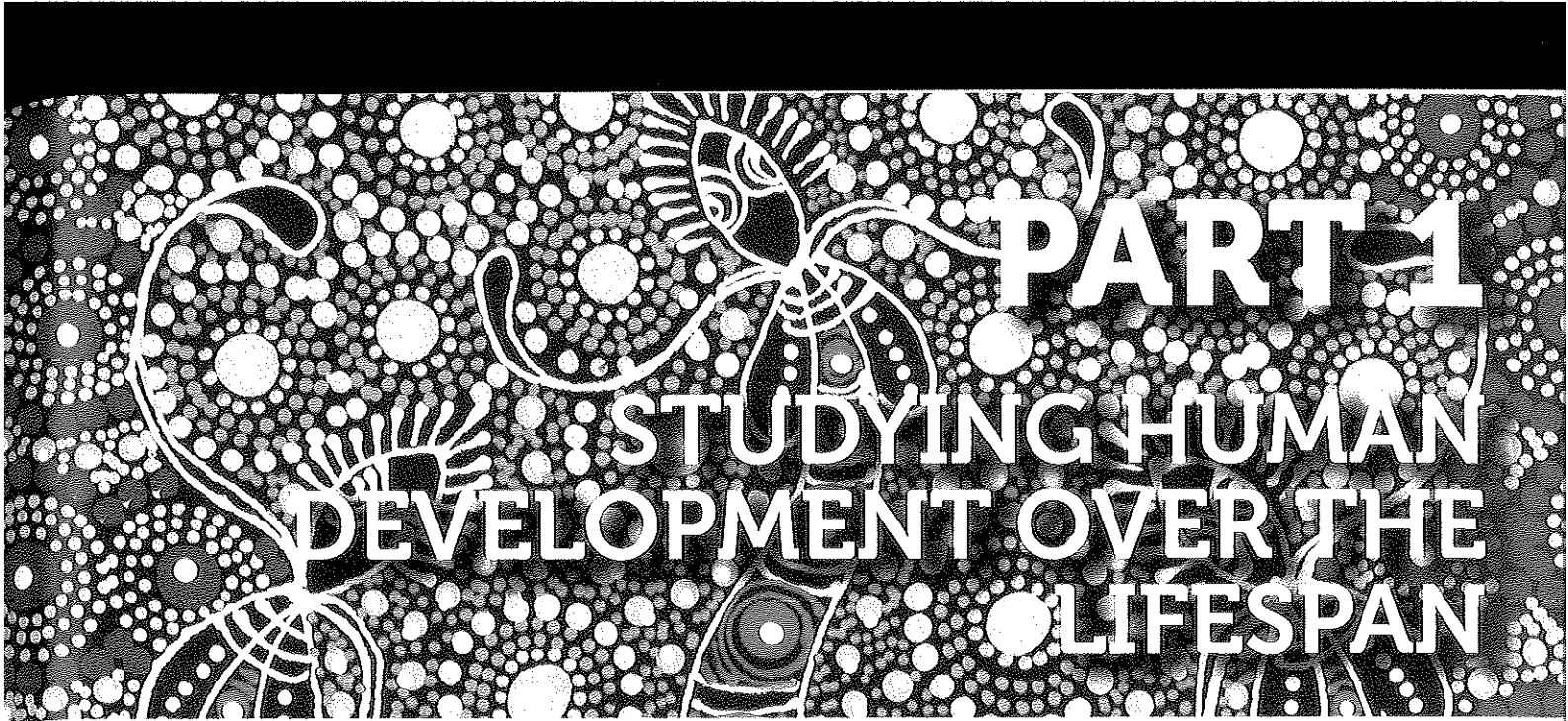
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PART 1

STUDYING HUMAN DEVELOPMENT OVER THE LIFESPAN

CONTENTS

OVERVIEW

CHAPTER 1 Lifespan developmental psychology	2
CHAPTER 2 The science of lifespan development: Goals, theories and methodology	30
CHAPTER 3 In the beginning: Heredity, prenatal development and birth	64

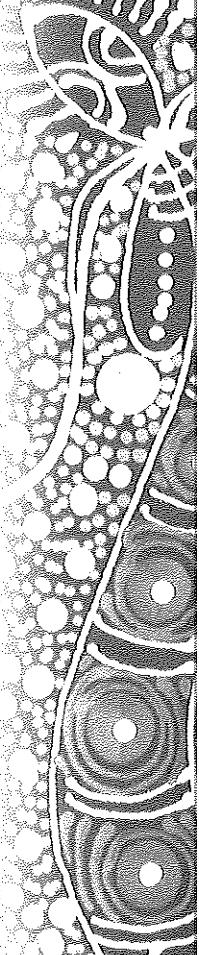
OVERVIEW

The study of how people grow and change psychologically over the complete span of human life from conception to death in old age is an ambitious, multifaceted undertaking. This is *lifespan developmental psychology*.

From a personal perspective, it can be exciting but also a little daunting to think about what the long future holds in store for us and our loved ones as we move through the 21st century. Think of all the important social and technological changes that have happened during your own and your parents' lifetimes—perhaps spanning the advent of television through to the internet and the latest mobile phone technologies. It is important to understand how people cope with change, as we are likely to have a lot more of it to look forward to in our own future lives.

The scientific study of lifespan development is central to the broader field of human psychology. Studying the processes of change that hold a person's life together from its beginning moment at conception right to its end in extreme old age reveals the coherence of human psychology amid all its complexity. By examining continuities and changes in people's psychological functioning as they pass through all life's exciting milestones, pitfalls and opportunities, we come to understand human behaviour as an integrated story with a clear pattern and consistent plot amid all the intriguing suspense and individual variation. This is the story we follow chronologically and topically through this book.

The first three chapters trace the broad outlines of this overall pattern. Chapter 1 overviews the discipline, and introduces and explains core concepts that are central throughout the remainder of the book. We examine the kinds of insights about human nature that we gain through knowing a person's chronological age, and the benefits of studying these age-related regularities in behaviour objectively, through the lenses of science. Chapter 2 introduces the building blocks of lifespan psychology. We learn about the basic research techniques that enable us to study changes in psychological functioning over the years and decades of a person's life, together with the seminal theories that inform our journey through the life course in the rest of this book. Chapter 3 concludes Part 1 with an exploration of the genetic and environmental underpinnings of lifespan development and the new baby's fascinating, though largely invisible, developmental journey from conception through the first nine months of life inside the womb.



CHAPTER 1

Nothing is permanent except change.

HERACLITUS (513 BC)

LIFESPAN DEVELOPMENTAL PSYCHOLOGY

CONTENTS

Chapter overview	3	BOX 1.5 A pause for thought: Is it wrong to laugh?	18
Adults can grow psychologically through the whole of life	3	BOX 1.6 How can you explain it? Ageism is a health hazard	19
Hallmarks of the lifespan approach to psychological understanding	3	The science of lifespan human development	20
Lifelong development	3	Studying change	20
Continuity and change	3	The field of lifespan developmental psychology	20
BOX 1.1 Four luminary lifespans	4	Core assumptions of the lifespan approach	21
Culture and the lifespan	5	The concept of development	21
Normative lifespan transitions	6	Permanent change	22
Why is age so important to psychologists?	6	Qualitative and quantitative change	22
The personal meaning of age	7	Normative, generalisable change	22
BOX 1.2 A case in point: What it means to be 50	8	BOX 1.7 Activity suggestion: Development through art	23
Personal plans for lifespan development	9	Progressive change: The actualising of hidden potential	23
The human lifespan today	9	Life-cycle surprises	23
Social and historical changes in personal age consciousness	10	Longitudinal studies with unexpected twists	24
BOX 1.3 Activity suggestion: Lifeline drawing	10	BOX 1.8 How can you explain it? Cheerfulness, conscientiousness and longevity	24
Will you live to be 100?	10	The adult development of 'late bloomers'	25
Culture, age and lifespan development	11	Nurturing development through the lifespan	25
Filial piety and attitudes to age	11	Developmental optimisation	26
Indigenous ageing: Becoming an elder	12	BOX 1.9 A case in point: Optimising health education with traditional Indigenous art	27
Development in historical perspective	14	Parents and developmental optimisation	27
The history of childhood	14	Optimisation through education	27
The history of adolescence	15	The optimising roles of health and helping professionals	28
The history of adulthood, old age and the lifespan	15	Looking forward	28
Age and society	17	Chapter summary	28
The normative social clock	17	For further interest	29
BOX 1.4 Activity suggestion: Age makes the news	17		
The problem of ageism	18		

CHAPTER OVERVIEW

This chapter begins by examining the lifespan developmental researcher's most important, yet most enigmatic, clue to human psychology: chronological age. We know that human behaviour changes in predictable ways as a person gets older. Thus age is important as a predictor of psychological functioning. But we also know that age alone does not *cause* developmental change. Think about people who spend years in a coma. Even though they get older, they do not pass through normal developmental milestones during this time. This absence of a straightforward causal link is what makes the age clue so enigmatic.

In this chapter we analyse what age means to each of us, now and as we reflect on our past and future lives. We also explore some of the varied ways in which chronological age has shaped the fabric of human life in general—across cultures, through history and in our contemporary technological society. Then we return to the lifespan researcher's quest for a scientifically responsible account of human psychology, overviewing what researchers and theorists have discovered about age as a signpost to change over the whole of life, and noting some caveats of using age on its own as a scientific clue.

A contemporary model of how human psychological functioning develops over the whole of life is presented. We will glimpse a few of the fresh insights and 'life-cycle surprises' that arise out of this lifespan model of development as a continuing process. The chapter concludes with a foretaste of some of the practical applications of developmental science that emerge in the rest of this book. Throughout the chapter, as well as in a special focus at the end, we glimpse psychology in action. Professionals from varied disciplines and walks of life can use lifespan psychology to optimise their own developmental journeys, as well as those of the Australians and New Zealanders of all ages with whom their lives are entwined.

Adults can grow psychologically through the whole of life

People stop growing taller at the end of adolescence. Some decades ago it was thought that the same might be true of psychological growth. For example, the pioneering experimental psychologist, William James, proposed in 1890 that: 'In most of us, by the age of 30, the character has set like plaster and will never soften again' (Rubin, 1981, p. 18). But, owing to recent lifespan developmental research, we now know that this view is wrong. Unlike physical growth, psychological development can continue in a genuinely progressive sense throughout the whole lifespan. Some examples of adults becoming more complex, flexible, creative, effective and far-sighted throughout old age are included in Box 1.1 on next page.

Hallmarks of the lifespan approach to psychological understanding

The four lifespan vignettes in Box 1.1 are illustrative of psychological development. They recount the life stories of adults whose political, literary and creative achievements were undeniably of higher quality, broader scope and greater impact on society than most of us are ever likely to achieve. Nevertheless, they also serve to illustrate the typical patterns of ordinary men's and women's lives in most other ways. When we begin to chart development chronologically in later chapters of this book, we shall

see that formative childhood experiences, such as Shaw's difficulties at school or Kngwarreye's first glimpse of a white policeman, can continue to shape adults' thoughts, reminiscences and life plans many decades later. Similarly, core elements of a person's early identity, such as Zhou's passion for social justice or Walker's love of poetry, can lie dormant for many years and then surface in undertakings for the first time during mature adulthood or old age.

Lifelong development

The perspective that guides this book—lifespan developmental psychology—brings core elements like these, which all human lives share, into sharp relief. Guided by the scientific research evidence that we examine as we follow chronological psychological development through this book, we shall see that there is no stage in life when a person has become 'too old' to develop new plans and ideas, cultivate and express longstanding talents or contribute productively to the welfare of younger friends, family and future generations. Each of the four life stories in Box 1.1 gained productive new dimensions in maturity and old age.

Continuity and change

Another core theme of lifespan development is the balance between stability and change. Indeed, throughout life there is a delicate interplay between the constancy of the core properties defining each person as a unique human being and the unstoppable progression of change. This was first articulated by the Greek philosopher Heraclitus during the 6th century BC, who wrote 'Nothing is permanent except change' (van Doren, 1941, p. 559). The life stories in Box 1.1 reveal many instances of both continuity and change.

BOX 1.1**Four luminary lifespans**

George Bernard Shaw, born in 1856, dropped out of high school prematurely at age 15 after very mediocre academic careers in four different schools where he continually failed many subjects. He spent his pocket money on books and theatre tickets and, to earn more, briefly took up a clerical job in real estate. Bored with this, he elected to become unemployed and to depend financially on his mother in order to teach himself creative writing, in line with his early passion for plays and literature. He first tried novels but had trouble getting them published, and so became a drama critic. Then, contrary to his own oft-quoted line, 'Every man over 40 is a scoundrel', Shaw finally discovered his true calling at the age of 36 with the completion of his first play. He continued as a prolific and accomplished playwright throughout the remainder of his long life, rapidly achieving international acclaim. Shaw was honoured with the Nobel Prize for Literature at the age of 68, wrote his last play during his late 80s and died at the age of 94.

Zhou Enlai was born in 1898 in Jiangsu, China, the eldest son of a privileged middle-class family. After finishing school, he enrolled in an Arts degree at Nankai University, studying literature and editing the student newspaper. From an early age, he was distressed by the poverty and oppression he saw all around him and aimed to devote his life to serving the cause of social justice. At university in 1919 he joined a progressive student movement, and was arrested during a student demonstration and briefly jailed. Upon his release from prison, he went to France on a work-study scheme sponsored by the Chinese and French governments. He soon discovered corruption in the scheme. Corrupt bureaucrats in concert with French factory owners were forcing the Chinese students to work in factories for long hours for no pay in exchange for their study permits. Zhou wrote home to a Chinese newspaper to expose the corruption of the scheme and, perhaps motivated by a desire for more effective collective action, joined the French Communist Party in 1922.

He soon returned to China to work as a political organiser in the alliance between the Communist Party and the right-wing Kuomintang (KMT). Forsaking the KMT after surviving Chiang Kai Shek's bloody anti-Communist purge, Zhou joined Mao Tse-tung and became a revolutionary leader during 1934 and 1935, helping to guide the 'Long March' towards the liberation of the oppressed poor. Ever the consummately skilled negotiator, he eventually managed to convince Chiang Kai Shek and the KMT to join forces in battling the invading Japanese army during World War II.

After the revolution in 1949, Zhou became Premier of the People's Republic of China, a post he held until his death in 1976. As Chairman Mao Tse-tung's health began to fail in 1972, Zhou took on increasing duties in international and domestic leadership, including his major role in the rapprochement of the United States and China that culminated with Richard Nixon's visit in 1972. Zhou's diplomacy and negotiating skills were strenuously tested during the Gang of Four rise to power. Even through his terminal illness, he continued from his hospital bed to fight selflessly on behalf of the Chinese people, and to pursue his lifelong goals for social justice and international

harmony. His wife and fellow Long March revolutionary, Deng Yingchao, remained with him to the end, supporting and assisting in these efforts. (They had married in 1925 after a five-year long-distance courtship and worked together, sharing mutual inspiration and sympathetic criticism from then on.)

Zhou's biographer and self-avowed admirer, Han Suyin (1994), once visited the elderly couple in their small apartment in Beijing, where she was struck by the modest and cramped conditions in which they lived. She was particularly moved to see that this senior world diplomat and national leader had only one pair of very tattered bedroom slippers. Ever a man of the people, Zhou saw no need for shoes or quarters more expensive or luxurious than those of the ordinary workers he had devoted his life to serving.

Oodgeroo Noonuccal (Kath Walker) was born in Queensland in 1920 and is jointly recognised as Australia's foremost Indigenous poet and a leading civil rights campaigner. She left school at age 13 to enter domestic service, then volunteered for the Army in 1939. She married during World War II and had two sons. Awakened from her conventional life as a 1950s housewife by an article in a Communist newspaper, Walker gradually became politically active. Her leadership of the campaign for Aboriginal civil liberties grew over the decade and she achieved national prominence in 1961 at the age of 41 through her election as Queensland State Secretary of the Council for the Advancement of Aborigines and Torres Strait Islanders. For the next seven years, Walker travelled throughout Australia, often giving as many as 10 speeches per day advocating Aboriginal equality, citizenship and the right to vote. As the major force behind the national referendum of 1967 she was eventually successful, and Indigenous Australians were at last allowed to cast their vote and were counted in the Census for the very first time.

Throughout this time Walker was also writing poetry. Her first book, *We Are Going*, published in 1964 when she was 44, was a signpost for Aboriginal rights that swiftly won national and international acclaim. The first print run sold out in just three days, breaking the Australian record for poetry sales previously set by C.J. Dennis in 1916. She was awarded the MBE (Member of the Order of the British Empire) by the Queen in recognition of her outstanding literary achievements. However, in 1988 at the age of 68, Walker sent this award back as a gesture of protest against the injustices Aboriginal people still continued to suffer two decades after winning their right to vote.

At this point, she entered a new phase in her life. A return to her ancestral land on North Stradbroke Island near Brisbane enabled her to forge a new identity (see Chapter 11) that melded together her triad of lifelong interests in children, Aboriginal culture and race relations. She invited children, both black and white, to share her life in her educational camp on the island. There, she taught them to appreciate nature, conservation of the land and Aboriginal culture. More than 30 000 children had visited Moongalba (this poetic name, translated, is 'resting place') by the time Walker died there peacefully in 1993.

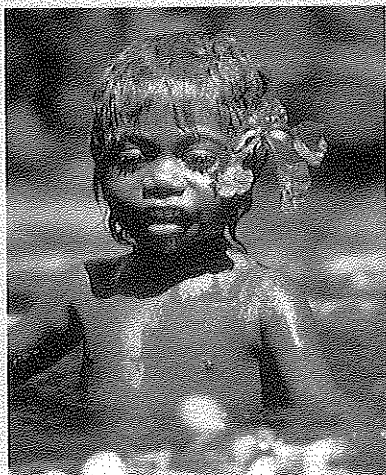
Emily Kame Kngwarreye was born 1910 at the Alkahere Soakage on the edge of the Utopia cattle station in Central Australia, some 250 kilometres northeast of Alice Springs (Neale, 2008). She received a strictly traditional Aboriginal

upbringing as a member of the Anmatyerre language group, and was well into adolescence before she saw a white person for the first time. This initial glimpse was disturbing: she was gathering wild yams in a thicket with a friend when, on the horizon, a pair of Anglo-Australian policemen appeared on horseback with an Aboriginal prisoner in chains.

Before taking up a paintbrush for the first time in 1988, when in her mid-70s, Kngwarreye had risen to the rank of tribal elder, a respected leader of her people who held important responsibilities for her land and her kin, and as a keeper and teacher of sacred culture and religious knowledge.

In the eight short years from the time of her introduction to oil painting until her death on 2 September 1996, Kngwarreye created a legacy of remarkable paintings that established her position as foremost among Australia's contemporary artists. Her abstract depictions of desert landscapes, harvest scenes, and the roots, vines, fruits and flowers of the yam plants for which she bore ceremonial responsibility, play on light and colour in a manner reminiscent of Monet's impressionism. Many of these large canvasses now grace the permanent collections of leading public and private art galleries throughout the world. Their size alone bears amazing tribute to the tireless dedication of the elderly artist who created them, in the open air, often racked with arthritis. Kngwarreye was spurred on as she painted, not only by her artistic inspiration, but also by a strong sense of personal responsibility for her cultural heritage and for the many members of her extended family who depended on her art sales for their financial support.

Thus, until the moment of her death and afterwards, Kngwarreye continued to earn the respect of younger members of her community. She was a senior elder with vast traditional wisdom and experience of Aboriginal culture. She was a great artist, and she was a powerful community leader and economic provider. Her inner strength, coupled with faith in herself, in her people and in her position within the larger spiritual scheme, enabled her to paint with inspiration until the moment of her death, while also equipping her to negotiate, with enviable dexterity, humour and generosity, 'the pressures that worldly success brings to individuals living in communal bush societies' (A.M. Brody, 1998, p. 19).



Children learned to appreciate nature at Walker's camp at Moongalba.

Core elements of each personality remained essentially continuous, as did the life goals that guided these four remarkable adults' lifelong patterns of achievement. For example, the youthful idealism that led Walker to join the Army during World War II and Zhou to go to prison as a social activist at university took a more mature form in the political activism that both individuals engaged in after the age of 40.

Similarly, there was continuity over many decades of changing life circumstances in the personal strength of character and the creative inspiration that fuelled the artistic genius of both Shaw and Kngwarreye. These creative individuals continued to produce great works to the end of their lives, in spite of physical frailty and social opposition. Later in this chapter we will return to this core theme of how developing individuals may rise above obstacles such as the health adversities brought about by physical ageing. First, we explore some of the other essential features that enrich the lifespan perspective on the scientific study of human psychological development from conception through to old age.

Culture and the lifespan

Another key feature of the lifespan approach to human psychological development is the recognition of how each person's lifelong pattern of psychological growth is shaped in predictable and idiosyncratic ways by an interplay between biobehavioural and sociocultural forces. For example, consider the life stories in Box 1.1. In her later years Kngwarreye suffered from the normal, age-related decreases in visual acuity (see Chapter 16) that made large canvases and wide brushstrokes a more effective painting style for her than finely detailed miniatures or delicate line drawing. Her Aboriginal cultural heritage similarly influenced her painting. The themes she chose to depict were bound up with her ceremonial responsibilities as an Indigenous elder. She preferred to paint in the open air, surrounded by friends and kin, rather than isolated in an indoor studio where protection from the physical forces of wind, dust, rain and searing summer temperatures might have made the task of mixing and applying paint to canvas much easier. She used her knowledge of cultural traditions as themes for her paintings (for example, her first work on canvas, *Emu Woman*, was based on body markings used during women's ceremonial rites of passage). For Kngwarreye, painting was less an exercise in aesthetics than a spiritual expression of her role as a community elder.

In every human lifespan, from conception to old age, the complete pattern of developing psychological functioning, across the domains of cognition, emotion, personality and social relationships, is continually subject to changes that have biological underpinnings and take place in a sociocultural context. In other words, human psychological development occurs in a physical body that is situated socially within a cultural context. Lifelong growth is nurtured by others in changing ways over time, and historical and cultural forces also regulate development.

Cultural diversity adds new elements to the plot of our developmental story and, in periods of rapid social change such as the present, the contrasting experiences of each new generation also contribute to the development of diversity among members of different age groups.

We look more closely in Chapter 2 at how the science of lifespan psychology accommodates these complexities, and keep an eye on the joint influences of biology and culture on psychological growth throughout the remainder of this book.

Normative lifespan transitions

Some of the developmental changes that punctuate any person's life story are idiosyncratic and unpredictable; many others are as regular as the hourly chiming of a town hall clock and can be forecast with reasonable certainty long before they occur, simply because they happen to almost everyone who reaches a particular age. These predictable developments, often known as 'milestone events' or 'turning points', occur throughout the lifespan. Some, such as an infant's first social smile, a toddler's first meaningful word, a child's first friendship, an adolescent's departure from the parental home and an adult's transitions to work, marriage, parenthood, grandparenthood and widowhood, are universal across most cultures and most eras of human history. Others, such as learning to read, attending school or university, conscription into military service, running for political office, pursuit of a demanding career or retirement from employment into a leisured way of life, are of a more restricted scope across the human population and yet are predictable in particular cultures at particular historical times.

Lifespan developmental psychology makes use of the inherent predictability conferred by the normative nature of many of the most important transitions and challenges that shape our lives to assist in the task of scientifically understanding how people change as they grow up and grow older. Development carries the individual forward through each milestone transition and, at each of these important junctures from infancy through to adulthood, new opportunities for psychological growth present themselves. At the same time, the range of available life choices may narrow, the loss of developed capacities may arise, and problems and disappointments will almost certainly occur. In responding to these opportunities and adversities, the individual's life course takes shape from conception through to death. Many changes can be foretold with reasonable accuracy simply by knowing how old someone is, as we see in the next sections of this chapter.

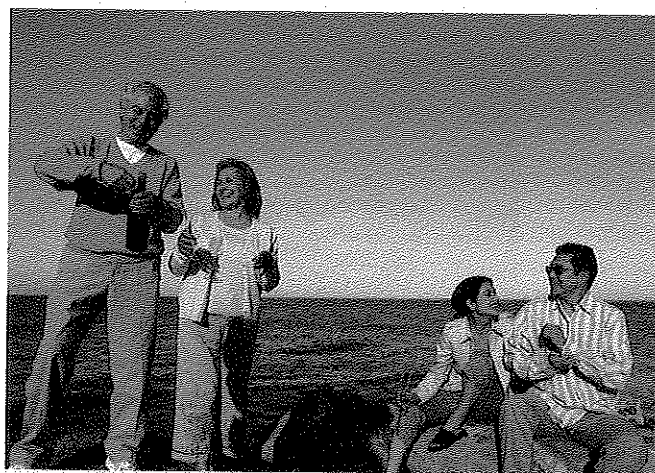
Why is age so important to psychologists?

Psychology distinguishes itself from other disciplines that focus on human lives (e.g. history or literary biography) with its concern for objectivity. Using objective scientific methodology, the general story that psychology tells is of

how development unfolds for most people. As a science, the study of human development is bound by long and secure methodological traditions (Bond & McConkey, 2001). Within this disciplinary framework, developmental psychology uses chronological age as an important guide to the science of development (Peterson, 2001). The period of time over which behaviour is followed also makes the developmental approach to human psychology quite unique. For example, a typical infant born in Australia or New Zealand today can count on living for more than three-quarters of a century, while 20-year-olds are apt to have good odds of living even longer, since surviving infant and child mortality is a predictor of an even longer life. However, it is not simply the breadth of the stretch of time encompassed that lends fascination to the lifespan approach.

Let us take a closer look at why age can provide useful insights to scientists and lay people alike. What can we learn about a person's overall patterns of psychological functioning simply from knowing how old they are? Why do we so often focus, when observing strangers, on clues such as skin texture, body shape, hair colour and hairline, which can suggest how old they are? What does it matter how old you and your closest friends are? Answers to these questions highlight how significant age can be. In fact, the overall influence of age on human psychological functioning is, as noted above, partly a biological matter of inhabiting a body that has been around in the world and actively used for a certain number of years. As we see in later chapters, many biobehavioural processes take time to mature, and wear-and-tear can eventually undermine bodily functioning in the same way that it may have affected your old car or vintage computer.

Age group membership also exerts important sociological and cultural influences on human psychological functioning. Although what it means specifically to be aged 15, 35 or 50 will vary considerably from culture to culture and, within a culture, across successive generations in that culture's history, the fact that age-group membership has a



Normative life events, such as retirement from work or a child or grandchild starting school, are markers that shape the life cycle for many adults in our culture.

meaning is constant through them all (Baltes & Staudinger, 2001). To gain a sense of how age as a psychological variable can assist in the explanation and prediction of human behaviour and its development through time, let us examine some of these personal, cultural and sociohistorical correlates of the chronological age construct.

The personal meaning of age

If someone asks you how old you will be at your next birthday, will you be eager to give a truthful answer? Are you impatient for that birthday, so that you can be one year older than you are at present? Do you feel flattered when someone thinks you are a bit older than you really are? Do you believe you feel, look and act exactly your age?

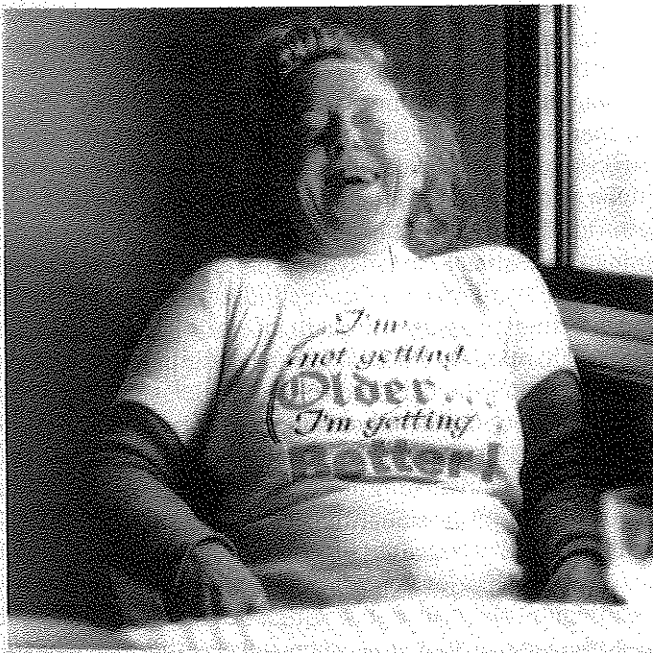
If you said 'yes' to most of these questions, there is a strong chance that you have not yet reached the age of 25 years (Barak, 2009; Peterson, 2003). If you hesitated or said 'no' to most or all of these questions, you could be any age from 30 to 90.

In fact, a wealth of research from many countries throughout the world shows that most men and women from their 30s into their 90s feel younger than their actual age in years (Barak, 2009; Montepare, 2009; Peterson, 2003; Uotinen, 1998). Furthermore, the older we get the wider the gap is between what the calendar tells us and our personal feelings of how old we are psychologically and subjectively. Figure 1.1 illustrates this. It summarises the results of several studies in which different age groups of healthy men and women were asked to estimate how old they felt themselves to be, irrespective of actual chronological age. As the figure shows, the average adult in Europe, Australia or the United States who is really aged 40 to 50 feels like someone five to eight years younger. By age 75, the gap has widened so much that people feel

subjectively like adults in their 60s or younger. Of course, this research was done with healthy volunteers who were pursuing active lives in the community. Elderly men and women who are in poor health often feel even older than they really are (Montepare, 2009). The same is true of psychological health. Adults who are bored or depressed feel old, even when they are chronologically only in their 20s and 30s, whereas being actively involved in a challenging life activity makes a person feel younger than their years (Infurna et al., 2010; Montepare, 2009; Uotinen, 1998).

Personal age consciousness is expressed in people's attitudes to the age they now are, remember being and wish to be. These feelings may shape plans and goals for the future along with sensitivity to age as a criterion for personal reflection and social categorisation. Yet a problem is that none of us can have direct personal experience of future age periods to go on. In contrast to concrete experiences of how age is influencing our lives now, and personal memories of ages in the past, future stages in our own lifespan represent an unknown frontier. Compounding the problem of lack of direct personal experience is the fact that the news and advertising media typically paint a rather bleak picture of ages over 20 or 25 (Kite et al., 2005). (To prove this to yourself, have a look at the insight exercises in Boxes 1.5 and 1.7 and on pages 18 and 23, respectively.) Are these adverse portrayals of maturity accurate? To know for sure, we need objective scientific investigation. Supplying this is one of the goals of lifespan developmental psychology, as we will see later in this chapter.

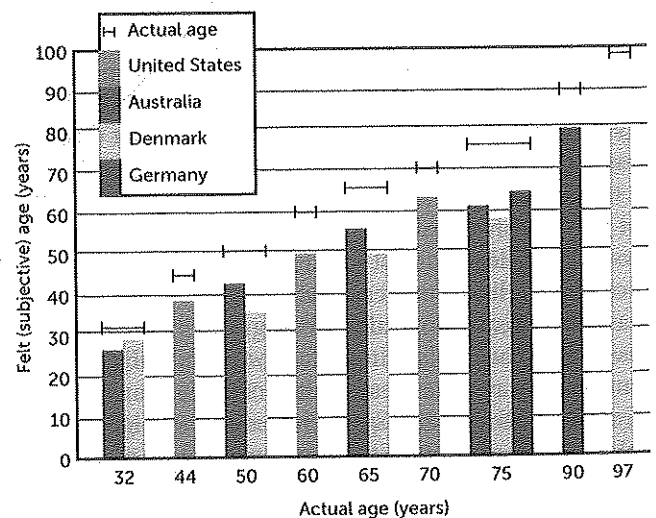
Nevertheless, no matter how optimistic or pessimistic our notions about future life stages may be, age is a fact of life for all of us. No matter how hard we try to disguise the symptoms of facelift with the aid of hair colouring, anti-wrinkle creams, wigs, facelifts or cosmetics, an



Reactions to growing older are shaped by personal experience.

FIGURE 1.1

After age 30, adults in many cultures feel younger than their years



Source: Based on data in Barak (2009); Peterson (2003); Rubin & Berntsen (2006); and Smith & Baltes (1999) and Ward (2012)

outside observer will see us as in terms of age from the moment of first meeting us. We can try to avoid celebrating birthdays, mentioning the past, or writing down our age on forms and documents, but age still remains a fact of life for everyone. Think about the last time you had to produce your birth certificate or give your birth date. Chances are, it was not that long ago. Age is relevant to applications for jobs, courses of study, foreign travel, medical treatment and borrowing money from the bank. Legal age limits govern our eligibility to leave school, drive a car, get a tattoo, get a prescription for contraceptives, buy cigarettes, vote or drink alcohol (Peterson & Siegal, 1998).

Informally, each age group in a society is segregated to some extent from its juniors and seniors, whether in schools or inner-city neighbourhoods, or through its various clubs and friendship networks. At each phase in life people are subjected to cultural attitudes that may range from adulation to bigotry. The sense of being a particular age also shapes our thoughts and feelings about ourselves, as well as many aspects of our outward behaviour. However, by no means are all these thoughts negative, whatever age you are. Group surveys suggest that most adults aged 30 to 60 years are reasonably content to be whatever age they currently are, and only a few would prefer to be in their 20s again. Culture is a major shaper of favourable versus antagonistic feelings towards old age, as can be seen by comparing the remarkable lifespans in Box 1.1. The traditional respect for older people's wisdom, for example, that imbued Zhou Enlai's upbringing in China and Emily Kngwarreye's coming of age in a traditional Aboriginal community conferred very different expectations about later stages of life from Shaw's in the United Kingdom.

Another study of very old men and women in Sweden (Infurna et al., 2010) revealed that a majority of those in the chronological age bracket from 84 to 90 years old (which seems like it should qualify as old age to most of us who are younger) had not yet traversed the dividing line between mature adulthood and old age in their own subjective opinion. These 80-year-olds were not subjectively or psychologically 'old' despite their lengthy store of years. As Figure 1.2 illustrates, when asked if they perceived themselves as 'old' or 'not yet old' (e.g. 'middle-aged'), only 16 percent of very elderly Swedes agreed that they had crossed the dividing line into old age (see Chapter 16). Most felt they were not yet 'old' in any way, while some perceived that they had reached old age in some ways (appearance, physical mobility) but not in others (e.g. outlook, competence, zest for life). Furthermore, objective ratings on other measures of psychological wellbeing were consistent with these elderly Swedes' optimistically youthful subjective age identities. On average these healthy octogenarians (chosen as representative of the Swedish Census population their age) were free of many of the problems that, in stereotype, inevitably accompany advancing years (see the section on 'The problem of ageism', concerning age stereotypes and myths, later in this chapter). Indeed, these elderly Swedes scored well above average in freedom from loneliness and depression, and did as well as or better than much young-

BOX 1.2

A case in point What it means to be 50

Despite the significance of normative trends, it is also important to be aware of the individual differences among the members of any age group. Personal experience can also supply useful insights to stimulate scientific investigation, as we will see in the 'Case in point' boxes throughout the remaining chapters of this book. To take one example, actress Simone Signoret described her personal experiences of her life after the age of 50:

It's miraculous when life brings you parts that seem to grow better each year; stronger, laden with the memories and personal experiences that have put those lines on your face. They are the scars of the laughter, the tears, the questions, the astonishments and the certainties that are also those of your contemporaries ... Does one act better after one has aged? Well, one doesn't act better, one doesn't act anymore. One is. The compliments you get [for] 'the courage to show oneself in an unflattering aspect' are just pious remarks. It isn't courage: it's a form of pride, possibly vanity, to show yourself as you really are in order to better serve the character that has been offered you as a gift. (1978, pp. 358–60)

In other words, this committed and mature actress found ageing to be an asset rather than a liability. To consider some of the reasons why this was so, later in this book (particularly Chapters 15 and 16) we explore how psychological changes in the adult years can bring genuine growth and new opportunities for the expression of creative potential.

er adults on a cognitive functioning test (see Chapter 16) requiring accurate recall of a 100-word prose passage.

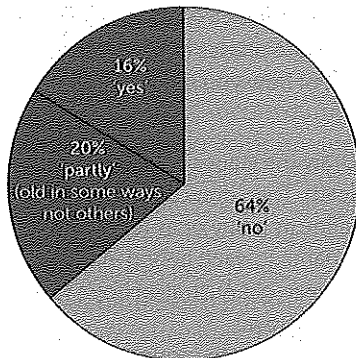
Are you surprised by these findings? Many of us are. Having no direct experience yet to go on, we may unconsciously be swayed by stereotypic portrayals of ages older than our current age, despite these being inaccurate in many cases. This is one reason why the scientific study of lifespan development can prove valuable not just for future careers but for personal wellbeing and life planning as well.

To a younger child, age may mean little more than the criterion for membership in a peer group or a source of smug pride after a birthday. But parents are likely to be even more keenly aware of their child's age than their own, for the child's passage through successive milestones on the road to maturity clocks the speed of the parents' ageing process (see Chapters 14 and 15).

At age 100, on the other hand, each day added to the lifespan can be a source of pride and personal pleasure. A case in point is that of centenarian Leonard 'Rosie' Ross of Arizona, a professional musician in the United States (Adler, 2008) who, after being chosen to represent his state at a celebration for 'Oldest Continuing Workers' in Washington, DC, told reporters that he enjoyed all his days over the age of 100 for the opportunities they brought to continue to share his love of playing the trumpet with an appreciative audience.

FIGURE 1.2

Proportion of Swedish adults over 80 who say 'yes', 'no' or 'partly' when asked, 'Do you feel old?'



Source: Copyright © 2010 by the American Psychological Association. Adapted with permission Infurna, F., Gerstorf, D., Berg, S., Robertson, S. and Zarit, B. The nature and cross-domain correlates of subjective age in the oldest old. *Psychology and Aging*, 25, 470–476.

Personal plans for lifespan development

Personal impressions like these about our present age and about future age periods can have important consequences for mental health, emotional wellbeing and psychological development, indicating that we need psychological research evidence in order to make sure that such personal beliefs about age are objectively accurate. Indeed, as adults engage in life planning (Lawrence & Valsiner, 1993), their implicit beliefs about future age periods, and their anticipations of the problems and possibilities of later stages in the lifespan, can prove crucial for enabling them to make realistic choices that will foster lifelong psychological growth.

Fortunately, even without the benefit of formal study in the discipline of lifespan psychology, many mature men and women hold positive and optimistic views about what later stages of the adult lifespan may have to offer. Carol Ryff (1991; Ryff & Singer, 2008) investigated psychological development and wellbeing over the adult lifespan. She found that adults in their 40s and early 50s, asked about how they expected to see themselves in the future, anticipated that they would have gained in at least some psychological strengths by the time they reached 60. Anticipations of gains in wisdom (see Chapter 16) and in effective management of the conflicts and complexities of their lives (see Chapter 15) were particularly prominent. For instance, 48 percent of one sample of ordinary women aged 40 to 50 anticipated significant personal growth over the next 10 to 15 years (Ryff & Heinicke, 1983). As they looked forward to how their personalities would change with the onset of old age, these middle-aged women believed that they would gain in knowledge of themselves, in their personal effectiveness and in their sense of purpose in their lives. In addition, 70 percent believed that they would become more self-reliant and self-accepting and

more invested in satisfying close relationships over the next 10 years.

While the absolute proportion of older women (mean age = 73) who anticipated personal growth of this kind was smaller (around 30%), it was nevertheless notable that approximately one in three women in their 70s believed that by the time they reached their mid-80s they would have gained further in personal growth, sense of purpose, and personal efficacy and control over their lives. Furthermore, more than 40 percent of 73-year-olds expected to have become more self-accepting and self-sufficient in advanced old age. Clearly, there is an expectation in popular consciousness of genuine psychological growth and development throughout the lifespan, even including advanced old age.

However, as noted earlier, our expectations of future psychological growth are based on indirect evidence and conjecture, in contrast to the firmer ground of our actual experiences in the present or in the past. In a further study, young adults (20 to 30 years old) were compared with the middle-aged (40 to 50 years old) on an inventory of self-descriptions (Karasawa et al., 2011; Ryff, 1991). Higher scores reflected agreement with items such as, 'I have a strong sense that I am realising my potential' and 'I have changed in ways that reflect greater self-knowledge', plus disagreement with items such as, 'I feel I am stagnating' and 'I am bored with life'. First, the adults rated themselves as they were at the time of the study, and then in terms of how they had been at their preceding life stage (adolescence or young adulthood). Results showed significant gains in psychological strengths for both age groups, in line with the anticipations described above. Surprisingly, however, the middle-aged women (mean age = 46 years) had gained significantly more in terms of personal development between age 25 and the present than the younger women had from their teens to age 25. Clearly, maturity has something to offer, confirming adults' developmental expectations.

Culture also influences opportunities for personal growth at different stages of the lifespan, as we will see in a later section of this chapter. In terms of overall satisfaction with life, a similarly positive objective picture contrasts with many younger men's and women's gloomy expectations. In the United Kingdom and the United States, several cross-sectional surveys of large samples of adults' happiness with life suggest an increase from youth through added gains in both middle age and early old age (Oswald, 2006; Yang, 2008). Furthermore, when Ravenna Helson and her colleagues (e.g. Helson & Soto, 2005) followed a group of female university graduates into mature adulthood, periodically addressing their emotional states and overall quality of life, they found that emotional wellbeing increased steadily, as shown in Figure 1.3 on next page (more details on this longitudinal study will be presented in Chapter 15).

The human lifespan today

Recent dramatic improvements in population health care and longevity (ABS, 2008d) have led demographers to suggest that most adults alive today can count on considerably more years of life than their parents or

FIGURE 1.3

Changes in women's levels of happiness (positive effect) and unhappiness (negative effect) from youth to old age



Source: Copyright © 2005 by the American Psychological Association. Up and Down in Middle Age: Monotonic and Nonmonotonic Changes in Roles, Status, and Personality. Helson, Ravenna; Soto, Christopher J. *Journal of Personality and Social Psychology*. Vol 89(2), Aug 2005, 194–204.

grandparents experienced or even imagined possible (see Chapter 18 for detailed longevity projections). Yet most of us have only a sketchy idea of what those extra years will bring us, and of what our lives will be like 10, 20 or 50 years from now. Take a moment to examine your own views. Do you look forward to middle or old age? Or does the thought of becoming a decade older, or even passing the threshold to your next birthday, inspire feelings of dread and denial? To help think about the lifespan as a conceptual entity, you may wish to complete the exercise in Box 1.3.

Social and historical changes in personal age consciousness

By the time most children enter primary school, they generally have some idea about growing up, as well as a set of impressions, however sketchily defined, about their own future life course. By early adolescence, a firm set of anticipations about the major turning points in life is likely to be in place, together with views about whether or not to marry, have children, take time out of a career for childrearing and so on (see the sections on adolescent identity development in Chapter 11).

Even so, in youth, as in maturity, there is plenty of room for individuality and surprise, and it is hard to get a firm fix on subjective beliefs about the lifespan, owing to the rapid pace of social change. As a result of contemporary changes in the average length of formal education and of the nature of career options and the labour market, adults' plans for the future now require more compromise and tolerance for change than was true in the past. The wider range of options available today for age at entering or leaving a career, university or marriage means that our implicit models of the life course need to remain more open and flexible.

BOX 1.3

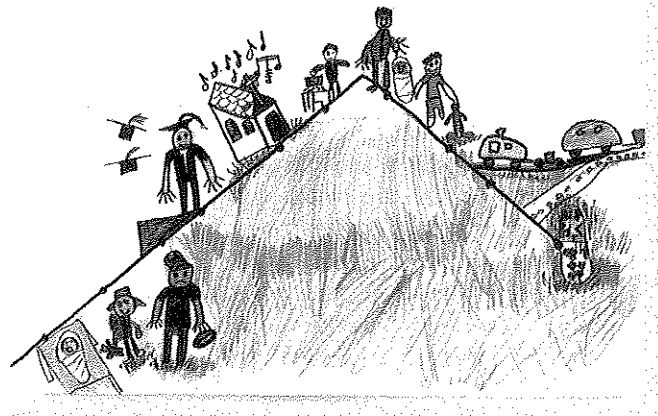
Activity suggestion Lifeline drawing

This lifeline drawing measure (Ruoppila & Takkinen, 2001) provides a window on your personal anticipations of future phases in the lifespan, as well as a graphic portrayal of how you now view your life as a complete whole.

Instructions: Draw the stages of your life as you imagine them from birth to death. Then draw lines to mark *periods* in your life. You may define as many or as few as you think appropriate. Finally, assign a name to each period in the drawing. (An example of a 10-year-old Australian boy's response to this question is shown below.)

Try giving this exercise to groups of people of mixed ages. Count the number of phases used by each person and graph this against their age in years. Are lifelines by different age groups upward-sloping, steadily downward or U-shaped? What could this mean?

Interpretation: Optimistic and pessimistic ideas about life-cycle stages pervade people's consciousness at all ages, as illustrated in this exercise (Kojima & Aoi, 1987). If your friends or classmates also completed this exercise, compare their pictures and yours with those of groups of different ages. According to Isto Ruoppila and Sanna Takkinen (2001), lifelines with a genuinely upward trend (after averaging out the dips and peaks over short spans within the overall picture) are associated with sense of purpose, life satisfaction and socioeconomic wellbeing in mature adults.



Will you live to be 100?

People live longer today than in the past, especially in affluent well-educated societies such as Australia and New Zealand. In Chapter 18 we will examine longevity trends and look at individual examples of people who have lived to be over 100 years old. The experiences of these pioneering centenarians may contain useful lessons for developmental psychological researchers and for ordinary men and women trying to imagine what their own lives may be like in the future. Have you ever met and spoken to a person who was over 100 years old? Most of us have not.

The experience could well bring pleasant surprises. When Daniela Jopp and Christoph Rott (2006) interviewed 56 centenarians (aged 100 to 101) in Heidelberg, Germany, about their current lives, they found a remarkably high level of enthusiasm for being very old. A majority (54%) claimed to be as happy now as at younger ages, the same proportion as among 40- and 60-year-olds. In view of the negative anticipations that most younger adults have about extreme old age, together with the inescapable (see Chapter 16) negative psychological effects of biological ageing (over half of this centenarian sample had health problems requiring nursing care), this very high level of happiness was doubly surprising. However, their high self-reported level of satisfaction with life was borne out in these centenarians' behaviour. They had frequent visitors, loved talking to people (scoring 9.5 on a 10-point scale), and had excellent cognitive and problem-solving resources, honed through a century of life experiences. More than 75 percent of them said they 'always' or 'almost always' knew 'ways out of difficult situations' (p. 272).

Most surprising of all was the high level of zest for living and love of life that emerged from interviews with these centenarians. The vast majority said that every day they had 'much to look forward to' and, even more surprising, the group as a whole scored significantly higher than a younger group (aged 60 to 65) from the same community on a question about how often they laughed and enjoyed the humorous pleasure of everyday life. Another recent study of elderly men and women probed the adaptive value of sharing a joke and enjoying laughter during very old age (Damianakis & Marsiali, 2011). Results showed that 'being able to laugh at oneself and life's uncontrollable circumstances appeared to support a positive sense of self [and] may play an important role in managing the ageing process' (p. 110).

In Sweden, one ambitious study tracked five separate groups of centenarians born in 1887 through to 1891. As in the US samples described above, life satisfaction remained unexpectedly high in the face of inevitable physical health declines (Samuelsson et al., 1997). Furthermore, 'personality profiles indicated that centenarians were more responsible, capable, easy going, and less prone to anxiety than the general population' (p. 223).

Are you surprised by these results? Perhaps living to a ripe old age is better than most people imagine. We need lifespan development psychology research to tell us why (see Chapters 2, 16 and 17 for some hints and clues).

Culture, age and lifespan development

Personal feelings about the pros and cons of being six, 16, 50 or 80 clearly vary among members of the same age group and culture, as illustrated in the preceding examples (see especially Box 1.2). However, age variations are much more pronounced when we compare age groups across cultures. This is not surprising, since the age-related practices and values of different cultures vary markedly from one

another, while also changing within each culture with the progression of historical time. Consequently, as Jacqueline Goodnow and W. Andrew Collins (1990) explained, it is impossible to understand fully the development of any individual in isolation from the cultural milieu. We must take account of a culture's shared beliefs about age-appropriate behaviour and development, together with the culturally significant network of social roles and relationships in which each individual lifespan is embedded.

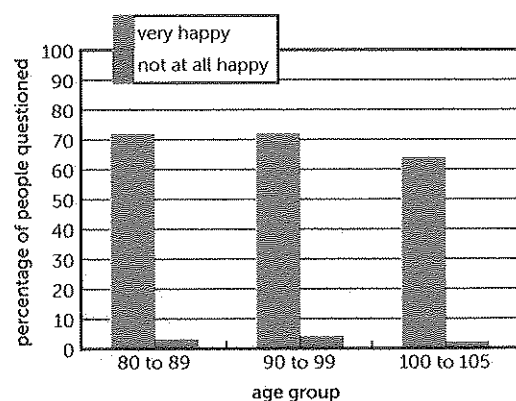
Developmental patterns and plans are shaped by attitudinal factors within the culture, and by cultural institutions such as schooling that may be restricted to specific age groups (e.g. primary school for children aged five to 13) or broadly accessible to many age groups. Cultures also embody ideas about how development ideally should happen. These beliefs actively guide progression through the life cycle in every culture, inspiring the decisions that people make as they lead their lives with offspring, parents, friends, romantic partners and work colleagues.

It is useful to examine implicit beliefs about the life course that different cultural groups adhere to in their everyday thinking about their own and others' lives, as outlined in the following sections of this chapter.

Filial piety and attitudes to age

Many cultures in Asia share norms of filial piety, collectivism and respect for Buddhist teachings and Confucian philosophy (Takahashi, 2000). Consequently, culturally shared attitudes and practices with regard to middle and old age are often highly positive in Asian cultures. This may result in high levels of happiness and satisfaction with living, even during very old age. Figure 1.4 shows the results of a survey of more than 8000 adults in contemporary China who were aged 80 to 105 years (Yi & Vaupel, 2002). When asked how happy and satisfied they felt with their lives at the present time, the vast majority were highly satisfied and only a tiny minority (less than 4%) felt generally bad. Furthermore this was true of rural

FIGURE 1.4 Elderly Chinese men's and women's happiness with their present lives



Source: Based on data in Zeng Yi and James W. Vaupel, 'Functional Capacity and Self-Evaluation of Health and Life of the Oldest Old in China' Winter 2002, *Journal of Social Issues*, Vol. 58, Issue 4, p. 742.

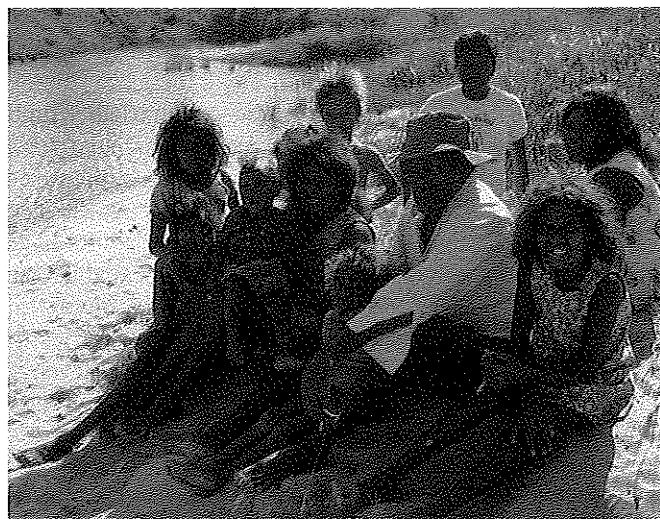
and urban men and women equally, and there was no significant decline in happiness from age 80 to age 105.

The explanation for why there are more positive experiences of extreme old age in Eastern cultures than in Western ones may trace back to culturally shared beliefs, values and philosophies of life. As we will see in Chapter 2, many contemporary Western adults place high importance upon material goals such as high income, financial security, luxurious living quarters, new cars or expensive holidays that may be harder to achieve in old age, after retiring on a fixed income, than earlier in life. In Eastern cultures, where the collective wellbeing of others as well as oneself weighs into the personal happiness equation, personal income is less important. Particularly in cultures that have collectivist values and Buddhist or Confucian traditions, less tangible outcomes than wealth can bring optimal happiness. This includes personal growth to higher levels of understanding, including the aim to continue to gain knowledge, compassion, character and wisdom throughout extreme old age (see Chapters 16 and 17). For example, Japan has a 'Revere the Elder' day which involves local and national celebration and honouring of elderly community members. Mayors give speeches and pay special recognition and tributes to local adults who are aged 80 and over (Karasawa et al., 2011). In this cultural milieu it is obviously much easier for an older adult to maintain self-esteem and to continue to cultivate personal strengths than in one where people over 65 are deemed obsolete, unemployable and a burden on younger community members. This may explain why there is scientific evidence of more frequent positive personal growth during advanced lifespan stages in cultures such as Japan and China, which have strong traditions of filial piety and respect, than in the West (Karasawa et al., 2011a).

Indigenous ageing: Becoming an elder

In non-Western cultures with longstanding oral traditions and time-honoured cultural practices that tend to be carried over with little change from one generation to the next, there is good reason to value the knowledge and skill of an older person who has had many more years than a young adult to acquire the culture's lore and wisdom. Thus the social position accorded to an elder may be superior in such a culture to that of the older adult in a modern industrialised society where urbanisation and the rapid pace of technological change have severed links with younger generations, while making the older person's skills and knowledge seem irrelevant and obsolete (Cowgill & Holmes, 1972; see Chapter 16).

Anthropological evidence provides some support for these suggestions. For example, the remote-dwelling Lepcha people of the upper Himalayas looked forward to old age so much that they would manipulate their clothing, hairstyle and appearance, not in order to seem young, as a Westerner might, but rather to fool people into believing them older than they really were. In Lepcha culture it is a special mark of respect when a younger sibling calls an older sister 'mother'. Fathers and fathers-in-law



In traditional Aboriginal culture, the older men and women occupy a special place in religious, political and educational life.

are equally flattered when their children are thoughtful enough to address them as 'grandfather' or to tell them that they are looking ancient (de Beauvoir, 1977, p. 83).

The traditional Maori people who lived in New Zealand before the arrival of the Pakeha (Anglo) settlers also had strong cultural norms of respect for age, along with a clear set of social mechanisms for recognising the gains in wisdom and social prestige that ageing could bring. Although social advancement was not an automatic consequence of growing older, positive achievements in adult roles led to personal pride and public tribute. One way in which traditional Maori culture accorded social recognition to adult achievers was the process of ceremonial tattooing, or *moko*. Reminiscent of contemporary Anzac Day parades where war veterans display their medals and ribbons, the traditional Maori warrior who achieved distinction on the battlefield aspired to the reward of a facial tattoo authorised by the King. The *moko* was tattooed on the face by a special artisan during a public ceremony. The tattooing process was painful, but the occasion was one of rejoicing for the warrior who would carry this public record of achievement on his face for all to see for the rest of his life. *Moko* decorations were also granted for adults' intellectual and creative achievements. For women, exceptional ability as a dancer or musician or in the domestic arts might earn the award of a facial tattoo, but a mature outlook on life and sense of social responsibility were additional implicit criteria. As Michael King (1972) explained, women's *moko* was 'the mark of adulthood and an indication that women were able to bear pain and ready to take on responsibilities, domestic and public' (p. 88).

The practice of formally according increasing social status to people as they grow older is called 'age-grading'. Among the tribal Masai of East Africa, another tradition-oriented culture, there are seven age grades for males: uninitiated youth, apprentice warrior, senior warrior, junior elder, senior elder, retired elder and ancient elder. Each grade has its own code of dress and diet and its own residen-

tial, social and occupational characteristics. For example, apprentice warriors run messages and build fences and are not allowed to marry or eat meat (Cain, 1964).

As seen by the example of Emily Kngwarreye's life in Box 1.1, old age in traditional Australian Aboriginal culture is potentially a time for reaching the pinnacle of culturally significant achievement and social respect. As a result of her lifelong learning and ceremonial induction into her culture's spiritual knowledge and traditions, Emily Kngwarreye held a position of high community influence and responsibility in her 80s. Not only was she an artist of international acclaim, but she was also an Indigenous elder with high economic, political and religious authority (Brody, 1998). In traditional Aboriginal culture today, as in the past, elders within the community are venerated as keepers of cultural tradition and spiritual knowledge. However, the status of elder is earned through merit and ceremonial law, rather than being an automatic right once a person reaches a particular age in years. According to anthropologists Ronald and Catherine Berndt (1964):

Wisdom is not assumed to come automatically with increasing age. Personal factors are involved, too. A man, or woman, who by middle life has achieved a reputation for incompetence or foolishness is not normally expected to improve as he grows older. On the whole, however, there is an emphasis on age, especially when it comes to providing a final decision on some debatable point—in much the same way that in our own society precedents are cited as a basis for legal judgments. Other adults do have an informal say, but they are considered to be less familiar with all the issues which may be involved. And because in the great religious sequences men take a more active role than women, some men come to have increased authority as ritual headmen. This lends weight to their opinions. Knowledge of sacred matters is a pre-eminent criterion, and people who qualify on this score are regarded as final authorities, or as human spokesmen for those authorities. (Reproduced courtesy of the Estate of R.M. & C.H. Berndt)

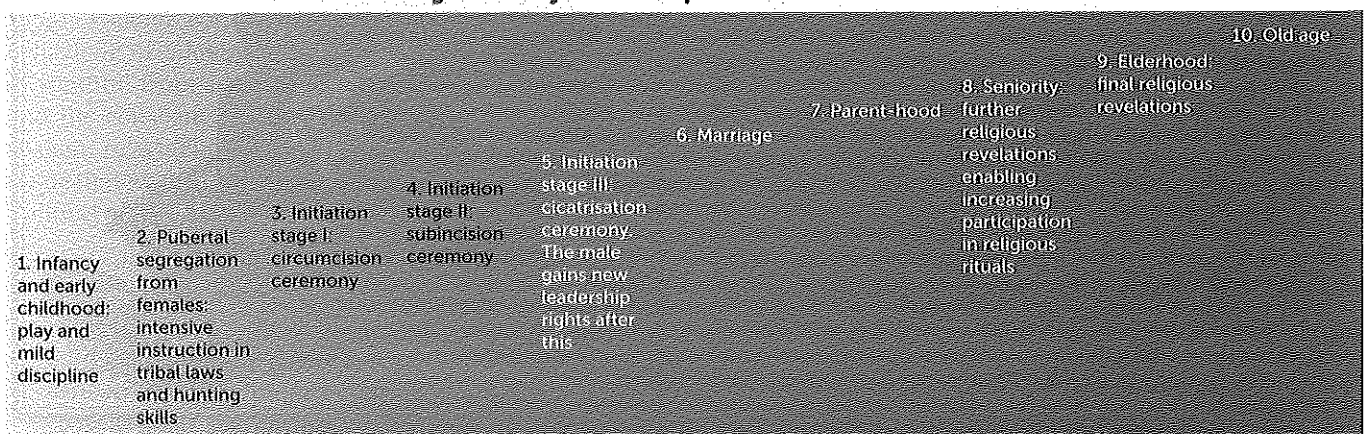
In Indigenous Australian culture, the lifespan was conceptualised as a series of developmental stages ascending towards ever higher levels of knowledge, spirituality and community influence from adolescence to old age. In some traditional communities today, age-linked ceremonial initiations, or 'rites of passage', continue to be practised. These rites serve important social and cultural purposes, as well as assisting individual psychological growth. Senior members of the community are involved in assessing whether a junior member is ready to ascend to the next level of seniority and elder status. Then the whole community becomes involved. Traditions surrounding judgements of maturity and the knowledge to be made available via the ceremony were based on the community's recognition that the junior member was worthy of such a promotion, based on past achievements and leadership potential. The Berndts (1964) described how these successive initiation ceremonies punctuated the life cycle for Indigenous Western Australian Aboriginal men, as illustrated in Figure 1.5.

This traditional Aboriginal conceptualisation of the life cycle implicitly depicts adulthood as a ladder or staircase ascending towards ever higher levels of power, social service and spiritual purity for adults of both sexes. For example, from the time of the first initiation at puberty through to the successive ceremonies that segmented the mature lifespan, a man was seen to gain wisdom and respect progressively with his years (Maddock, 1974). As he progressed through the initiation sequence, a man was also accorded increasing social responsibility for law-making, law enforcement and the transfer of knowledge and spiritual matters. New privileges accompanied these added responsibilities. Yet, at each step, the individual had to prove himself worthy in the eyes of others before this higher social recognition could be accorded.

Traditional Indigenous Australian women in many remote communities today, as in the past, practice ritual initiation. As adult women progress through the lifespan in wisdom, leadership and ceremonial knowledge, they cross a series of bridges into higher levels of elder status. Adult

FIGURE 1.5

The Australian Aboriginal life cycle as a sequence of initiations into elder status



Source: Reproduced courtesy of the Estate of R.M. & C.H. Berndt.

women's ceremonies are less fully documented than in the case of the male life cycle of ceremonial initiation (White, 1985). Thanks, however, to the painstaking record keeping of amateur anthropologist Daisy Bates, a teacher and journalist who migrated to Australia from Ireland in her late teens and spent the last half of her life, until her death at age 91, living in traditional Aboriginal communities in South and Western Australia, the following account has survived. It tells how the elder status of *yogga biderr* (meaning 'great, strong woman' or 'vein of strength') was accorded to an older woman who had borne many children, had gained and displayed specialised secular and traditional knowledge, and had become influential in her community:

The ceremony was usually at some big gathering ... The privileges conferred upon the woman were a continuous and plentiful supply of food, clothing, shelter and fire by the younger members amongst her relatives, and immunity from capture by raiders. She was also henceforth sacred from revenge in a tribal fight, but she was powerful in stirring her people up to fight against offending outside tribes and she was equally privileged to allay family feuds within the tribe, and other quarrels. If family feuds arose and a fight was anticipated, the yogga biderr could go into the midst of the combatants and disarm them of their spears and other fighting weapons, and her harangues, either directed towards war or peace, were always listened to with respect. As she was generally supposed to possess [wisdom] she was sometimes consulted as to the favourableness or otherwise of a hunting expedition and was also frequently requested to smoke the magic out of a dog or spear after an unsuccessful day's hunt. ('The Native Tribes of Western Australia' by Daisy Bates, edited by Isobel White. p. 145-146 (c) 1985 Canberra: National Library of Australia.)

Development in historical perspective

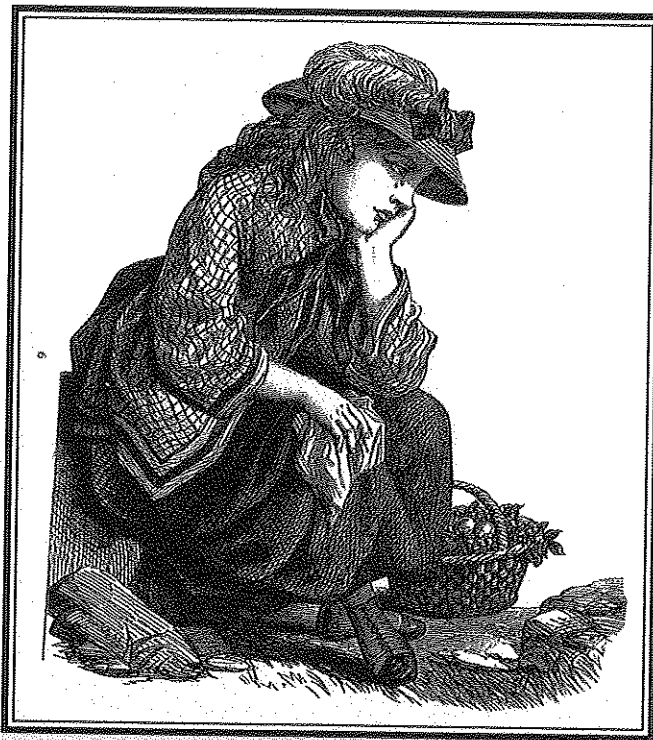
As illustrated in Box 1.3, it seems quite natural today to subdivide the lifespan into separate phases, and we tend to view each phase in life, from infancy through to old age, as unique in certain ways. Adolescents have fewer obligations and social privileges than middle-aged adults, for example, but more flexibility and tolerance for error. However, when we look back through history, we see that segmentation of the lifespan is a recent development for Western technological societies. In medieval Europe there were only three phases in life: infancy, maturity and (occasionally) senility (Aries, 1962). From the time that children could walk and speak, they were integrated into the mainstream of adult life. They were not excused from manual labour, and they worked alongside adults on the same jobs and for equally long hours (de Mause, 1976). On the other hand, neither were they denied access, as modern children are, to bawdy or boozy adult entertainment. Breughel's paintings provide a graphic record of the mixed-age drinking and

lewd amusements that occurred in Dutch villages during the early 16th century. All ages, similarly, mingled together to play games such as knucklebones or hide-and-seek and to listen to nursery rhymes—activities that we might now consider suitable only for preschoolers.

The history of childhood

The medieval psychology of childhood reflected society's refusal to attend to any differences other than size between the very young and their elders (Aries, 1962). Such a view of childhood is illustrated visually in the frescoes of pre-Renaissance artists such as Giotto and Fra Angelico. These painters depicted the infant Jesus as a tiny man with mature facial and bodily proportions. The dwarf-like statues of family members that decorated the tombs of Elizabethan England supply another permanent record of the use of miniature adults to represent infants and children (Plumb, 1971). The clothing styles of 13th-century Europe also reflected the belief that children were merely 'adults-in-miniature'—people of all ages dressed in identical long gowns (Aries, 1962). No words existed in medieval European languages to describe young people specifically. Terms such as 'boy' and 'girl' could refer to elderly peasants and servants as well as children, while the word 'child' described kinship without reference to age. The distinction of being physically small was not seen as important enough to warrant a separate word to describe it. The few attributes of children that were recognised, such as economic dependency and generational lineage, were in no way unique to childhood.

Court physician Jean Herouard, who kept a diary on Prince Louis of France from his birth in 1601 until



Children in past centuries were dressed, and treated, as little adults.

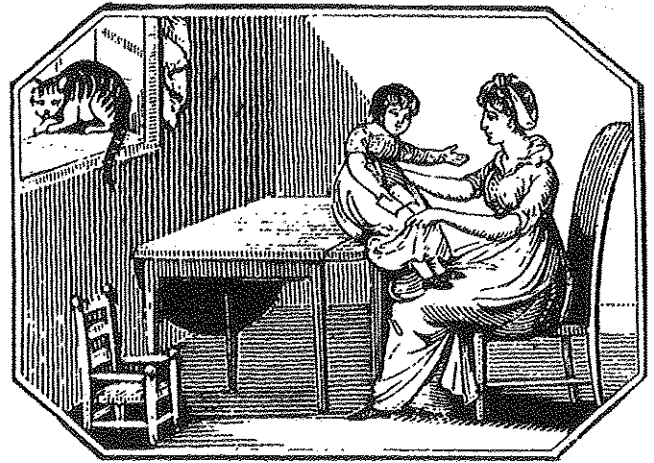
1628, gives detailed accounts of the young monarch's participation in mixed-age recreation, which included betting, gambling, listening to obscene jokes and attending plays where nudity and explicit sexuality were featured. One of the two 'toys' he owned was a small-scale sword with a real tip which frequently drew real blood from his playmates. No one seemed to believe that five-year-olds needed special protection, nor that their skills or wisdom differed markedly from those of a mature person.

According to Lloyd de Mause, who described the history of childhood as 'a nightmare from which we have only recently begun to awaken' (1976, p. 1), this ignorance of children's special disabilities and vulnerabilities led to harsh, inhumane forms of discipline. Children of the past were sent to the gallows for minor crimes, just like adults. Even in the home, punishments for behaviours that we now consider characteristic of children, such as showing fear, interrupting or failing to answer an adult's question, or wetting the bed, ranged from burnings and beatings to incisions with a knife, icy baths, sexual abuse and being forced to swallow their own urine. De Mause accounted for this callous treatment by citing an old proverb: 'A man should not trust on a broken sword, nor on a fool, nor on a child, nor on a wraith, nor on a drunkard' (p. 229). In other words, because there was no separate 'psychology' of childhood, children's behaviour was judged by adult standards and deviations were dealt with accordingly.

The history of adolescence

Adolescence, as a separate phase in life spanning the teens (see Chapter 10), has an even shorter history. Indeed, according to Gillis (2001), 'It was not until the twentieth century that everyone was seen as being entitled to both a childhood and an adolescence' (p. 8814). Before that, teenagers worked, married (witness Romeo and Juliet) and had children while mingling with older men and women on a largely equal footing. The historical shifts that contributed most to setting adolescents apart from other age groups were (1) compulsory schooling (Musgrove, 1964), (2) the delaying of young people's entry into fully-fledged adult occupations (Aries, 1962) and (3) advertisers' appeals to a separate 'youth market' (Demos & Demos, 1972). Popular consciousness of the unique needs and behaviour of adolescents also grew with the separation of youthful from adult offenders within the penal system and the consequent concept of the 'juvenile delinquent' (Bakan, 1974). This aspect of the invention of adolescence is one that Australia can claim credit for. According to John Collins (1975):

Australia has a special place in the history of the study of adolescent delinquency. In South Australia in 1889 the first ever special children's court was set up to deal with juvenile offenders. Its aim was to achieve a blend between legal and welfare considerations, to take into consideration the welfare of the child, his previous conduct and the nature and seriousness of the offence. (p. 150)



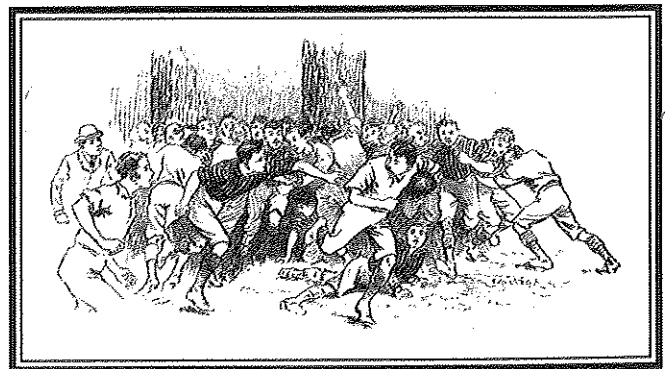
Until relatively recently, artists depicted children as miniature adults, as in this 18th-century spelling book. The head is too small and the trunk too long to look like a real toddler.

The history of adulthood, old age and the lifespan

The modern adult's preoccupation with chronological age (see Figure 1.1) had no equivalent in the past (Gillis, 2001). Indeed, in Europe three to five centuries ago, there were no birth registries or birth certificates and most adults lacked the necessary literacy and numeracy skills to calculate their own ages exactly. Even the word 'adulthood' was unknown in the English language until 1870 (Jordan, 1978). The only exception was 'old age', which has always held a special place in popular consciousness, perhaps because of its obvious signs of grey hair, wrinkles and muscular weakness.

One of the earliest surviving documents commenting on old age was composed by the Egyptian philosopher Ptah-hotep, in 2500 BC:

How hard and painful are the last days of an aged man! He grows weaker every day; his eyes become dim, his ears deaf; his strength fades; his heart knows peace no longer; his mouth falls silent and he speaks no word. The power of his mind lessens and today he cannot remember what yesterday was like. All his bones hurt. Those things which not long ago were done with pleasure are painful now; and taste vanishes. Old age



Historians link the emergence of adolescence with an increased emphasis on schooling in the 19th and 20th centuries.

is the worst of misfortunes that can afflict a man. His nose is blocked, and he can smell nothing any more.
(de Beauvoir, 1977, p. 104)

In ancient Greek and Roman times, old age had an earlier onset than today. Cicero claimed that old age began at the age of 46, while in the fourth century BC the Greek philosopher Hippocrates saw old age as beginning at 55 years for men and 50 for women (Covey, 1992), although declines associated with ageing did not set in until much later. According to Hippocrates, old age had five substages:

1. *Age 50 to 65.* The 'springtime' of old age: a person is gaining wisdom and maturity, yet also has reasonably good health and physical power.
2. *Age 65 to 75.* The phase of 'green' old age: a person is beginning to show signs of physical decline but, ideally, can maintain activity while enjoying a certain social respect accorded to venerability.
3. *Age 75 to 80.* 'Real' old age: a person is definitely becoming physically frail and should begin to withdraw gracefully from social life.
4. *Age 80 to 90.* The 'ultimate' stage of old age: although physically frail, the old person is capable of reaching a peak of wisdom and spiritual insight through solitary contemplation.
5. *Age 90 onwards.* The stage of 'caducity': this is inevitably a period of senility and painful infirmity from which death provides a welcome relief.

This mixed model of old age was carried forward with slight modification into ancient Roman custom. The social position of the elderly family patriarch was enviable. He (patriarchs were always male) had the power of life and death over his children and his slaves. Politically, the votes of elderly men counted for more than those of young adults, so that an affluent man might look forward to growing old despite physical aches and pains or disabilities. According to Plato: 'As age blunts one's enjoyment of physical pleasures, one's desire for the things of the intelligence and one's delight in them increase accordingly' (de Beauvoir, 1977, p. 123).

However, the notion of ageing as the 'worst of misfortunes' was prevalent during eras in European history when the physical attributes of beauty, strength and endurance were highly prized. In medieval Europe, for example, where military and courtly exploits served to brighten an otherwise harsh and physically stressful style of existence, old age was scorned. On the other hand, in China from as early as 600 BC, wisdom and continuity with tradition were valued more highly than physical strength or athletic prowess, so that the same distinctive physical characteristics of old age that were despised in the West were viewed in a favourable light (Takahashi, 2000). Confucius wrote:

When I was 15 years old, I set my heart upon the study of wisdom.

At thirty, I planted my feet on firm ground and grew stronger in it.

At forty, I no longer had doubts.

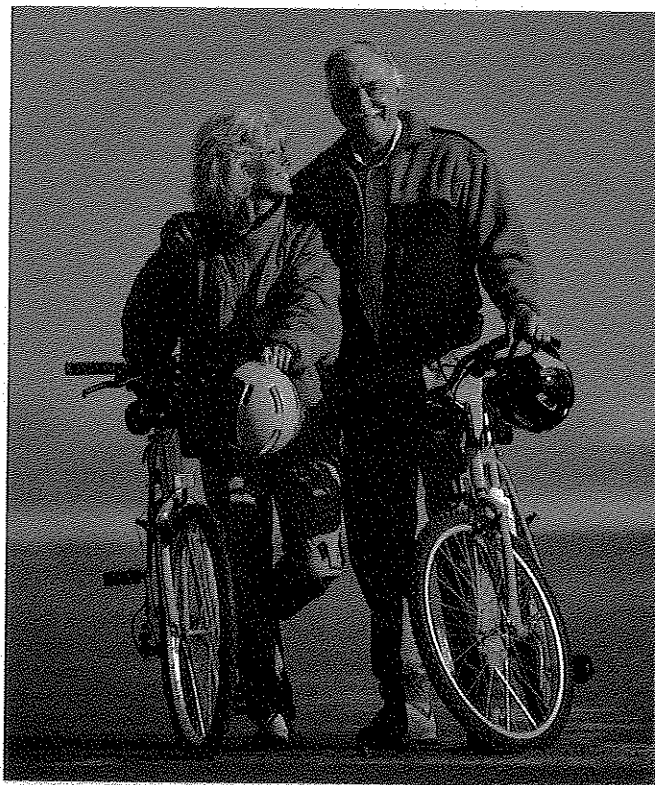
At fifty, I understood Heaven's bidding.

At sixty, there was nothing on earth that could shake me.

At seventy, I could follow the dictates of my own heart without overstepping the boundaries of what was right.
(Confucius, *Analects* II, 4)

Indeed, throughout his own lifetime, circa 551–479 BC, Confucius exemplified these principles. Married at 19, he entered a teaching career in his mid-20s. Deploping the poverty and social unrest of the feudalistic society around him, he read and lectured on the ancient Chinese classics and preached the values of virtue, moderation and respect for tradition both within and beyond the family. In mid-life, Confucius attained a political career as magistrate or minister of crime in his local province. Retiring prematurely at 55 because of political sabotage, he travelled for a short period and then settled in retirement to a life of scholarship, teaching and contemplation until the time of his death (Takahashi, 2000). As noted earlier, the values he cherished continue to be reflected today in the importance placed on scholarship and in the respect accorded to the elderly in many contemporary Asian cultures with a Confucian or Buddhist tradition.

Though evident in Confucius's writing, the lifespan as a framework for viewing the connections between different age periods, and the idiosyncrasies within them, was not fully incorporated into popular consciousness until the 1990s, according to historian J.R. Gillis (2001). He felt that



Older men and women today no longer feel constrained by the images of old age that pertained in previous centuries.

this lifespan perspective had opened a new era in the social history of adult life at the start of the 21st century:

Today age is seen as more subjective, more contingent [than during the twentieth century] ... We are told that how we age is up to us, dependent on how we eat, exercise and medicate ourselves ... Ageing has ceased to be seen as some invariable law of nature, to be discovered and obeyed. It is ... a challenge that confronts every generation and to which there is no one answer, only an ongoing dialogue with ourselves and others about the meaning of age. (p. 8816)

In other words, the lifespan as we now know it today is likely to change over the course of this century. With no single clear recipe or prescribed pattern for how to conduct our lives through adulthood and old age, the opportunities for continued psychological development are likely to be wider than ever before, and the possibilities for new styles of ageing that may remould history are exciting to contemplate. All the more reason why the scientific study of lifespan development is imperative in order to redefine the boundaries of psychological developments that have already stepped outside many of the rigid frameworks of the past.

Age and society

In addition to its key place in personal plans, cultural practices and popular consciousness across eras in history, chronological age plays a role in society through formal laws regarding the legal age to marry, drink alcohol, drive a car, vote, run for political office or have a cosmetic procedure such as a tattoo or body piercing (Peterson & Siegal, 1998), as well as informally through society's reactions to people of different age groups who either conform to, or deviate from, social stereotypes about how people of different ages should conduct themselves. You need only pick up a newspaper to see this for yourself, as is illustrated in Box 1.4.

The normative social clock

Pressure to conform to age-appropriate standards of behaviour is applied to people of all ages. The command 'Act your age!' means something different to a toddler than to a 12-year-old, and something different again to an adult of 50. However, at each of these ages the precise meaning of this phrase is usually perfectly clear. Preschoolers are chided for crying or kicking rather than using language to persuade (see Chapter 6) and for generally behaving like babies. Teenagers should not be childish, but nor should they grow up too quickly. Adults in their early 20s are expected to prefer techno, dance and rock music to orchestral classics or opera, and older men and women are expected to have reversed these preferences.

When people step out of line by behaving in a way deemed more appropriate for a person who is much younger or older than themselves, they may incur social disapproval. In 1965 Bernice Neugarten (1968) asked a group of middle-aged American adults to name the upper

BOX 1.4

Activity suggestion Age makes the news

Have you noticed how often simply being unusually young or unusually old makes an otherwise commonplace achievement newsworthy? To prove this to yourself, search your local newspaper for items in which people's ages are mentioned.

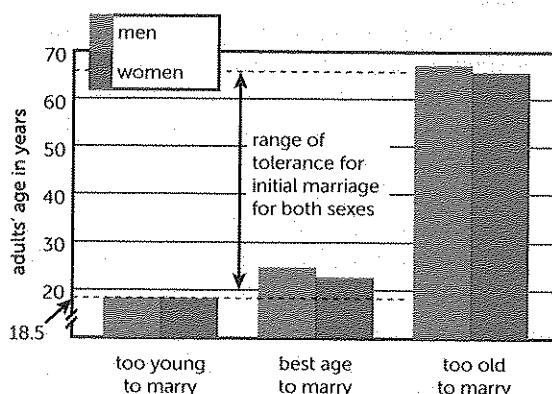
- *Sydney Morning Herald*, Friday, 10 August 2012: Australia's youngest Olympian, Brittany Broben, takes a silver medal for her record-breaking high dive at London's Olympic Games.
- *The Australian*, Monday, 7–8 June 2008: Australia's youngest ever chess grandmaster, Zhao Zong-Yuan, a pharmacy student at Sydney University, credits childhood flute lessons for his success, since sequences of notes resemble moves on a chessboard.
- *The Australian*, Saturday, 11 May 2002: Chinese chef Li Tao, age 24, sets a world record by hand-making 2 097 152 individual noodles out of 1 kg of dough. Each was so thin that 18 could pass simultaneously through the eye of a needle.
- *ABC News (US)*, 18 January 2006: The world's oldest woman to give birth, Adriana Iliescu, age 68, celebrated her healthy daughter's first birthday today.
- *The West Australian*, Monday, 10 January 1983: Mrs Madeline Landers of Narrandera, NSW, age 65, jumped from 800 metres in a parachute jump and landed only 20 metres outside the ground target at Corowa airport on the NSW–Victorian border. Of the jump, Mrs Landers said: 'I felt completely at ease once I got out of the plane.'

and lower age limits for behaviours such as wearing a two-piece bathing suit, getting married, starting a career, having one's last child or moving across the country to be near married children. In each case, the socially approved age range was quite narrow. Neugarten (1979) found that adults tended to describe their own timing of important life events in terms of a normative social clock. For instance, they were able to tell her that they had married 'early' or started their careers 'late', and went on to justify their deviation as having been due to some special circumstance such as the Great Depression. She concluded that adults' behaviour is guided by what she called a 'normative social clock'. By this term, she meant our implicit beliefs about cultural expectations for age-appropriate behaviour—both the content of what adults of a particular age should and should not do, and our own plans and intentions either to adhere to or violate these norms.

The social clock, according to Neugarten's research during the second half of last century, exerted a tightly constraining influence on most men's and women's behaviour. But it may be loosening its hold today. It would seem that the rules embodied in the social clock are far fewer than in the past, and that the expectation of adherence to whatever rules remain may be less rigid today than for previous generations.

FIGURE 1.6

Queensland students' beliefs about age norms for contemporary marriage



Source: Peterson (1996), reproduced with permission of Baywood Publishing Company, Incorporated.

To the extent that contemporary adults abide by a social clock at all, they are apt to interpret the meaning of being 'on time' much more generously than their parents or grandparents did. For example, Figure 1.6 illustrates Australian young adults' expected timetable for marriage. Most students believed that adults were not too old to marry until their mid-60s. Nor was any age after 18 years too young. The ranges of acceptable age limits for parenthood, grandparenthood and entering university were found to be similarly broad (Peterson, 1996).

Thus the issue of being 'on time' or 'off time' is an excellent illustration of the impact of recent sociohistorical change on lifespan development. It would seem that the specific issue of whether or not deviation from the social clock hampers psychological development must be considered in the context of the particular era in a culture's history in which the adult happens to be enmeshed.

Nevertheless, even today age norms are not dead. Erdman Palmore (2001) asked a group of elderly Americans if anyone had recently told them they were 'too old' to do something that they personally felt quite competent to do. A disturbingly high total of 43 percent answered 'yes'. Such restriction of people's opportunities by society's (often misplaced or outdated) beliefs about the competencies of the elderly is an instance of a problem known as 'ageism'.

The problem of ageism

The fact that society punishes deviations from age norms with ostracism and ridicule, if not outright legal sanctions, reflects age prejudice. In 1969 Robert Butler coined a new word, 'ageism', to describe this form of bigotry. Like racism and sexism, ageism unfairly limits people's access to certain valued opportunities and prerogatives on the basis of an irrelevant criterion. Box 1.5 illustrates some instances of the ageist jokes and cartoon humour that are familiar facts of life to most of us.

Not everyone is vulnerable to sexism or racial prejudice, but ageism will affect all of us (if we live long enough), at least in contemporary Western societies

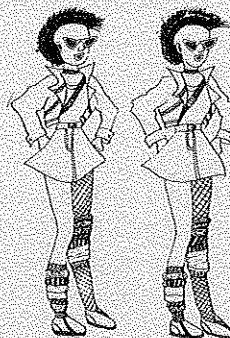
such as Australia, New Zealand and the United States. In fact, based on a meta-analytic review of a total 232 research studies exploring social attitudes to, and treatment of, different age groups, Mary Kite and her colleagues (2005) concluded that ageism is alive and well in modern culture. They found that attitudes were substantially more negative, overall, towards older adults than towards younger ones. Old women continue to face the double jeopardy of ageism and sexism when it comes to physical appearance, but even men are more likely to be presumed senile, forgetful and incompetent after age 65. Kite concluded, along with Todd Nelson (2005), that 'Age prejudice is one of the most condoned, institutionalised forms of prejudice in the world' (p. 252). As she and her colleagues explained, irrespective of the gender of the target or the way prejudice was measured, 'We found bias against older adults ... People do seem to hold clear stereotypic beliefs that age reduces attractiveness ... and competence' (p. 262).

Furthermore, these stereotypes and biases can be damaging to older people's self-confidence and self-esteem, especially since older people themselves are inclined to believe them (Kite et al., 2005; Kotter-Grühn & Hess, 2012). Old people who are reminded of their age and of the health problems that age may bring for some do less well on cognitive and physical tasks than when performing the same tasks under normal conditions (Kotter-Grühn & Hess, 2012). Even more serious are the possible consequences for health and longevity that the research described in Box 1.6.

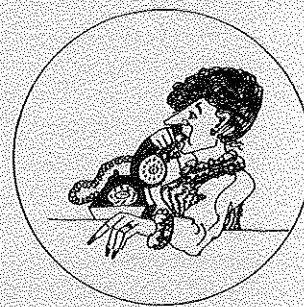
BOX 1.5

A pause for thought Is it wrong to laugh?

Popular culture (cartoons, songs, birthday cards) often humorously stereotype different age groups. Can you identify the basis for the age-related humour below? Researcher Erdman Palmore (2001) found that some 60 percent of American men and women aged over 60 had been the brunt of ageist jokes like these—although, as you can see, ageism is not restricted to the elderly.



Adolescents deplore!
conformity



You've joined a commune?
Mother, you must have gone
senile!

As well as being stereotyped, insulted or ignored, people may be treated unfairly by society owing to the age group they belong to. Examples relating to employment are discussed in Chapters 13, 15 and 16.

Other instances of prejudicial treatment of the elderly include residential segregation, the economic inadequacy of the age pension in an inflationary economy, discriminatory portrayals of elderly citizens in the media and a special vocabulary of insulting terms such as 'old fogey', 'crock', 'crone', 'old bat', 'old bag' and 'dirty old man' that are applied specifically to the aged. But the disability of age prejudice is not confined to people over 65. According to Edgar Friedenberg (1969), adolescence is another frequently stigmatised age period. He argued that:

A juvenile may not legally withdraw from school even if he can establish that it is substandard or that he is being ill-treated there. If he does ... he becomes prima facie an offender; ... law guarantees him nothing, not even the services of qualified teachers. It merely defines, in terms of age alone, a particular group as subject to legal restrictions not applicable to other persons. (p. 67)

BOX 1.6

How can you explain it? Ageism is a health hazard

In a provocative recent study, Becca Levy and her colleagues (2009) measured negative ageist biases in a group of young adults aged 18 to 39 years and then followed the health of these adults for 30 years to examine how psychological variables might influence elderly adults' health (see Chapter 16) and longevity. In early adulthood (average age = 31 years), all these adults were prejudiced against the elderly to some extent. Most believed that old people in general were 'lonely', 'sad', 'helpless', 'forgetful' and less capable overall of managing and enjoying their lives. This is consistent with the widespread ageist biases against the elderly that were described above. Nevertheless, interestingly, there were some individual variations among the 229 young adults aged 18 to 39 in how strongly they endorsed these adverse beliefs about ageing.

Levy kept track of these individual differences and, 21 years later, looked at which of these adults had suffered a serious cardiovascular health problem (e.g. heart attack, stroke) after turning 60. The results were striking. Men and women who had had the strongest ageist prejudices against the elderly when they were young were substantially and significantly more likely to experience a life-threatening cardiovascular event in early old age than the other less bigoted men and women. Furthermore, the researchers matched the groups for gender, blood pressure, smoking history, family heart disease and other likely longevity predictors (see Chapter 18), so that it seemed to be age prejudice itself that led to the adverse health outcome. The results applied with equal force when adults who had their first heart problem between age 40 and age 59 were included. In other words, ageism is a clear health hazard. Beliefs

Although children might appear to be exempt from ageism to an adult's eyes, it is often apparent through their own. The following interview extract reveals the ageist practice of unfair disadvantage through a neglect of children's rights and competencies, as perceived by an Australian seven-year-old:

Adult: Do you know what it means to be discriminated against?

Child: It means when you're not allowed to do something.

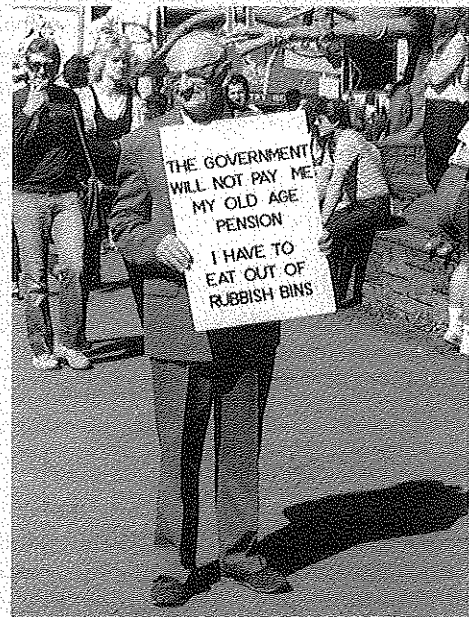
Adult: Are you ever discriminated against because you're a child?

Child: Yes, when they won't let you into something, like the movies or a restaurant ... When they won't give you your own menu ... When Dad won't let me do something like steer the tractor ... When the shop lady won't serve you even though you were there first.

As illustrated in Box 1.5, stereotypes about all age groups can make them the butt of ageist humour, with teens and the elderly being particularly frequent targets.

about ageing not only persist throughout adulthood but also influence health in later life. Clearly we need scientific evidence (see Chapter 2) about what old age is really like in order to overcome this psychological threat to health and survival.

Activity suggestion: Can you think like a scientist and come up with two possible reasons why a young adult who is exceptionally prejudiced against old people might suffer such a heightened risk of cardiovascular problems in mature life? (For answers, see pages 26 and 61.)



Adults who escaped the problems of discrimination and bigotry earlier in life may encounter prejudice in old age, and become politicised by it.

The science of lifespan human development

The accusation that society is ageist highlights the need for clear, detailed and accurate knowledge of what the genuine developmental and age-related changes in psychological functioning over life actually are. We need scientifically valid and reliable descriptive evidence about age groups and age differences. Furthermore, to enable well-informed social planning and lifespan decision making, and to bring ageist discrimination to light, information is needed about the limits of individual variability. Many stereotypes are not complete fabrications. Instead, they reflect inappropriate generalisations from the problems of a few to an image of the majority.

In addition to combating unfair attitudes and unrealistic institutional discrimination, factual information about each phase in the lifespan can be put to a wide variety of positive uses. Like the people quoted earlier in the chapter, we all have impressions about what it means to be a particular age and what our futures are likely to hold in store as we grow older. But are our ideas accurate? Or do they reflect unquestioning adherence to time-worn clichés and ‘old wives’ tales’? We need objective information to be sure. Also, just as we think back to our childhood experiences to try to explain some puzzling aspect of ourselves as we grow older and continue to change, how well we know ourselves at any age will depend partly on our understanding of our continuing patterns of lifelong development.

Sensitive social planning for special age groups also demands detailed knowledge about them. Day-care centres, recreational and educational facilities, residential units and hospitals are some of the many institutions where successful planning depends on an accurate understanding of the needs, interests and capabilities of people of various ages.

Finally, and most importantly, we need systematic scientific study of age–behaviour relationships over the lifespan for the simple reason that behaviour does change regularly and reliably as a function of age (Baltes, 2001). It is therefore not possible to fully understand trends that emerge later unless their beginnings are known. These beginnings themselves cannot be fairly evaluated except in relation to their final outcomes. Thus, psychology—the discipline that attempts to describe and explain all human behaviour—must necessarily include the study of behaviour changes over chronological age from conception through to senescence.

Studying change

Psychology is not alone in its search to understand the process of change. As Larry Goulet and Paul Baltes (1970) pointed out, almost every discipline on a university campus includes a branch or subdiscipline devoted to the measurement of alterations in phenomena with the passing of time. Microbiologists note how cell structures vary over periods of hours or days, historians and



Like the predictable biological changes transforming a young hand into an old one, equally predictable psychological changes are the focus of the science of lifespan development.

anthropologists examine changes in social structures or cultural customs over decades or centuries, and geologists measure variations in the earth’s crust across millions of years.

Within psychology itself, the lifespan developmental approach focuses on longer-term changes than most other branches of the discipline. Learning theorists might measure changes in a learner’s performance over minutes or hours, health psychologists might chart diet and exercise over days or weeks, and a clinical therapist might keep track of a client’s progress over months or years, but the ultimate aim of lifespan developmental psychology is to account for the entire range of behaviour from conception through to extreme old age.

The field of lifespan developmental psychology

Lifespan developmental psychology is the scientific study of the links that exist between chronological age and human behaviour, together with the patterns of change in psychological functioning that arise in predictable ways as human beings grow up and grow older. Consequently, lifespan developmental psychologists strive to understand the continuities and changes that punctuate an individual’s lifelong developmental course from conception to old age (Baltes, 2001).

Lifespan developmental researchers are interested in all facets of human behaviour, including biobehavioural and cognitive processes, emotions, personality, social relationships and mental health. They study these processes across long stretches of time and across complete lives (for example those outlined in Box 1.1 and elsewhere in this book) that weave their complex patterns by drawing together threads from diverse theoretical orientations. As we will see in Chapter 2, lifespan research is informed by traditions ranging from humanistic psychology to cognitive neuropsychology, from behaviour genetics to psychoanalysis, and from social psychology to anthropological and cultural psychology. All of psychology's varied methodologies are likewise brought to bear—from naturalistic observation to tests, interviews and controlled experimentation.

By comparing adjacent age groups, developmentalists examine the changes in psychological functioning that reliably take place as people grow up and grow older. At the same time, developmental researchers are interested in those aspects of the person that do not change with time—for example, in the periods of stable functioning that often arise before and after a developmental transition (Levinson, 1986) and the continuities over time that enable recognition of the infant's budding temperament in her adolescent, adult and old-age personality.

According to Paul Baltes and his colleagues (Baltes, 2001; Baltes, Staudinger & Lindenberger, 1999), three distinct sets of developmental variables are of special interest:

1. *Inter-individual regularities in development.* These are the age-related patterns of constancy or change in psychological functioning that apply to most people as they grow up and get older. Two examples are the toddler's acquisition of language and the mellowing of personality in late middle age.
2. *Inter-individual differences in development.* These are contrasts in the developmental patterns of groups of people growing up and growing old in different geographical, historical, cultural or socioeconomic environments, who may also differ on variables such as gender, health, temperament or socioeconomic background.
3. *Intra-individual plasticity in development.* This is the extent to which patterns of stability or change over the lifespan are flexibly modifiable in positive ways. Plasticity in development contributes to positive developmental gains in psychological capability and affords resilience in offsetting, correcting or minimising loss or damage arising with age.

Core assumptions of the lifespan approach

Researchers who study human development from a lifespan perspective employ a unique set of research methodologies (examined in Chapter 2) and generally agree on a number

of basic assumptions about how development over the whole of life unfolds (Baltes, 2001). There are four core assumptions of the lifespan approach that deserve special attention (Baltes & Singer, 2001; Rutter, 2012). These postulates are:

1. Psychological development is a *lifelong* process. No one age group holds the patent on genuine growth and gains in psychological capacities and functioning.
2. *Plasticity*, the capacity for modification and growth, is a lifelong potential in human psychological functioning. It is almost never too late to grow in genuinely productive new directions. Examples in old age include the gaining of wisdom (see Chapter 16), the development of artistic competence (see the example of Emily Kngwarreye in Box 1.1) and the growth and expression of socioemotional intelligence (see Chapters 7, 8, 15 and 17).
3. *Culture* becomes increasingly important in nurturing psychological development as age increases. Early in life, biological and genetic forces set the directions for development (see Chapter 3). But after early childhood, both directions and opportunities for development increasingly depend on the opportunities that the culture can offer.
4. The *scientific*, objective study of how people function and change over the lifespan unlocks new insight into these core facets and possibilities of human psychological development.

Each of these key concepts will be examined in more detail in this chapter and throughout remaining chapters of this book.

The concept of development

While the field of lifespan human development is concerned with *all* changes in behavioural, psychological and social functioning that obey a predictable relationship to chronological age, there is a special interest in those changes that are genuinely *developmental*. As James and Betty Birren (1990) explained:

Development, as scientists have defined it, implies changes in the organization of behavior from simple to complex forms, from small to large repertoires of behaviors, from fixed ways of responding to demands and needs to large repertoires of behaviors that can be strategically chosen. This suggests that development ends at no specific time and that the organism may continue to differentiate behaviors long after physical maturity, and move toward increasing complexity. (p. 9)

Generally speaking, truly developmental changes correspond to the word's etymological derivation from the notion of 'unwrapping'. In each case some relatively small, indistinct, simple or powerless potentiality is transformed over time into a clearer, stronger, more complex or unique actuality. As Robert Kastenbaum (1993) explained:

Development proceeds as form moves from its potentiality to its actuality. An acorn and an oak are obviously very different from each other, yet also obviously intimately interconnected ... The oak is the actuality of the acorn and the acorn is the potentiality of the oak. (p. 113)

More specifically, changes that qualify as genuine psychological developments usually possess four additional properties:

1. *permanent*, as opposed to merely cyclic or continually reversible
2. *qualitative*, in addition to mere quantitative increments in an already extant capacity
3. *generalisable* across many different generational cohorts within a culture, as opposed to being either idiosyncratic to a particular individual's life history or unique to only one cohort in a particular culture or population
4. *progressively enhancing* of the individual's capacity to function psychologically, as opposed to regressive or degenerative changes.

Let us examine what these criteria tell us about changes that are true developments in human psychological capacity, together with some specific examples.

Permanent change

The notion of development as a relatively permanent change is in contrast to brief changes in human psychological functioning that fluctuate regularly or reverse themselves—such as the alterations in mood that may accompany a woman's monthly menstrual cycle, or the changes in attentiveness, creative capacity and irascibility that parallel daily sleep/wakefulness and hunger rhythms (Luce & Segal, 1966), or the waxing and waning of sexual powers and urges—despite the fact that these may occupy major portions of the life cycle (Kohlberg & Kramer, 1964). In general, developmental changes are relatively permanent and irreversible except in the context of atypical events such as brain injury or physical or mental illness.

Qualitative and quantitative change

The notion that lifespan development involves qualitative as well as quantitative change means that lifespan growth is not simply a matter of gradual changes along a given dimension of psychological functioning. Surprising transformations can also take place, as in biological growth when an earthbound caterpillar develops qualitatively into a soaring butterfly. As the humanistic psychologist Abraham Maslow said of human development:

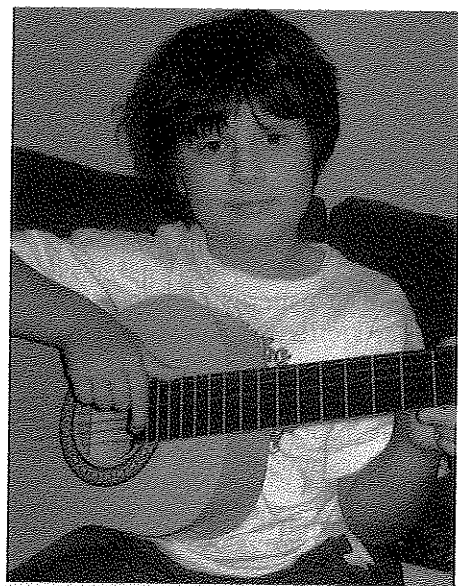
Change becomes much less the acquisition of habits or associations one by one, and much more a total change of the total person, i.e. a new person rather than the same person with some habits added like new external possessions. (1968, p. 39)

The infant's transition from crawling to walking upright is one example of a qualitative developmental change. Once up on two legs, the baby's patterns of posture, muscle use and balance all differ dramatically and qualitatively from the 'four-legged' mode of locomotion that most infants perfect before age one (see Chapter 4). But after taking a few unaided steps and toppling down again, there are many quantitative developments in the infant's duration, speed and grace of walking. Further along in the lifespan, the teenager's transition from a companionable friendship with a same-sex chum to an intimate late-adolescent heterosexual dating relationship is another example of a qualitative developmental change (see Chapter 12). New issues of commitment and intimate sexuality are apt to transform the entire nature of the close relationship (Noller, Feeney & Peterson, 2001). A visual example of qualitative developmental change in children's pictorial representation (see Chapters 6 and 7) appears in Box 1.7.

Normative, generalisable change

Did you learn to play the piano while you were in primary school? While many Australians and New Zealanders of various ages would answer 'yes' to this question, many others would answer 'no'. The growth of expertise on a piano keyboard is not a normative change: we cannot generalise it across our own familiar cultures and subcultures, let alone universally to all individuals growing up between the ages of six and 12 across the world. Thus, piano playing is less interesting to developmental psychologists than changes that are truly normative and culturally universal.

In Chapter 2 we examine some of the research methods that developmentalists use to tease apart general developments from those that are somewhat idiosyncratic. Ideally, the science of human development strives to explain general developmental changes that apply to most



Learning to play the guitar at age 10, while developmental, is a non-normative change applying only to certain individuals even in the same culture.

BOX 1.7

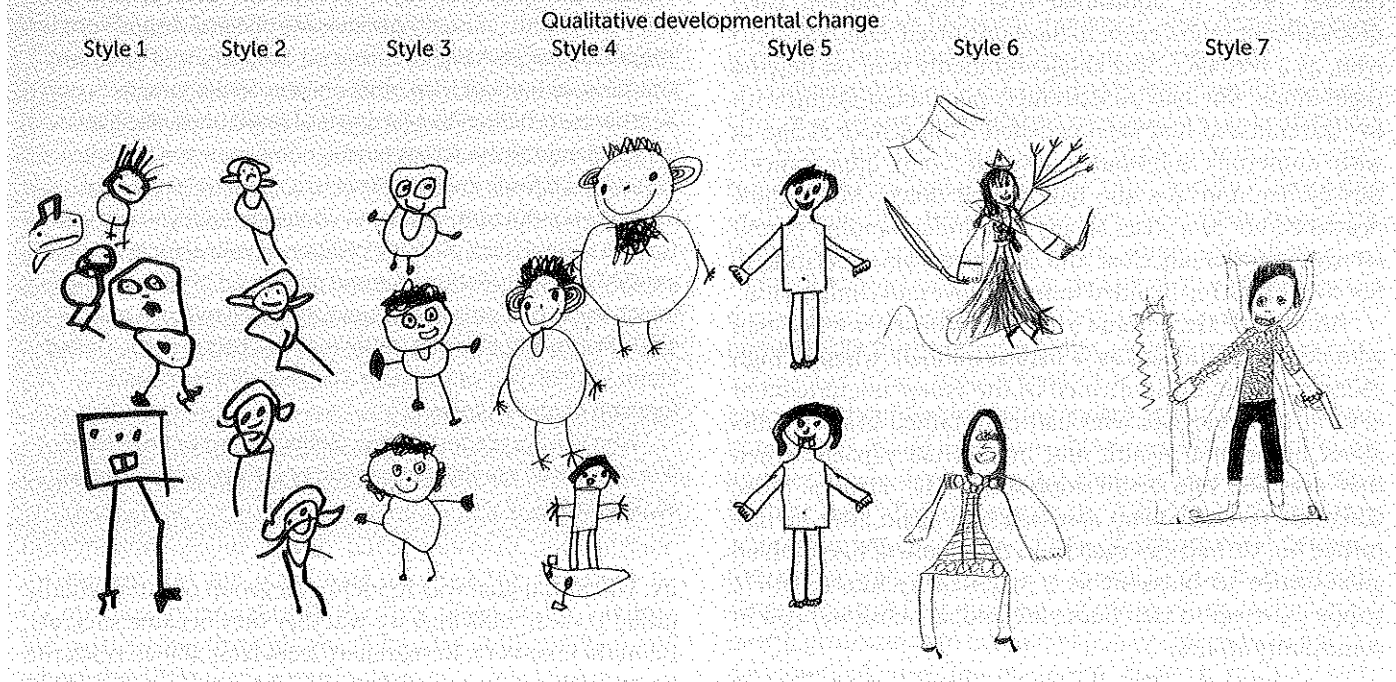
Activity suggestion Development through art

Instructions: Scan horizontally across the rows. You will notice changes in style which are so marked that it may be difficult to believe that each picture is the work of the same artist. These are *qualitative* changes that have developed over several years. Now scan down the columns. Each picture was sketched at about the same time as its partner(s). Only quantitative differences are evident. Yet the artist is a different

person in each case, although of a similar age to the others in the same column.

For further interest: Visit a day-care centre or primary school and ask several children of various ages to draw a picture of a person. Look through the drawings and list all the qualitative changes you can discover between younger and older artists' work (e.g. inclusion of a torso, differentiation of fingers and toes, realism of bodily proportions).

Reference: For general reading about the fascinating topic of children's artistic development, consult Goodnow (1977).



people most of the time, rather than changes that are confined to particular cohorts of people or to particular eras in a culture's history.

Progressive change: The actualising of hidden potential

To be described as 'development', a change should improve the individual's ability to cope independently with a wide range of varied situations. That is, development entails 'an increased capacity for self-regulation, a larger measure of relative independence from environmental fluctuations' (Nagel, 1957, p. 16). For example, during toddlerhood, the child's acquisition of meaningful speech opens new vistas of communication and the acquisition of information through what others say, as opposed to merely through direct experience. Similarly, during old age some (though not all) healthy adults acquire 'wisdom' (see Chapter 16). This new cognitive attribute qualitatively enhances their abilities to plan, reason and give sensible advice (Baltes, 1993). The life stories in Box 1.1 illustrate this. For example, the concern for present and future social justice that both Zhou Enlai and Kath Walker expressed through their political activities and activism were qualitative advances in personal self-expression with cognitive attributes similar to Baltes'

(1993) definition of wisdom. The increases in optimism and life satisfaction that were observed in a recent Australian comparison between adults in their 20s and in their 70s (see Figure 1.7 on next page) is another vivid example. Significant gains on both dimensions arose in Australians who were over the age of 70 (Maher & Cummins, 2001).

Life-cycle surprises

As the lifespan approach studies genuinely developmental changes of these kinds, it provides an integrating perspective that can help to clarify the long-term consequences of early developmental trends. Sometimes, the outcomes of this longer view are surprising; as it seeks continuities and discontinuities in behaviour patterns from one age to another, the lifespan outlook frequently reveals unexpected links that clarify the meaning of particular behaviours at a particular age. Experience plays an important role in the way an early disposition will emerge in later behaviour. When Jean Walker MacFarlane (1975) charted personality development through the first half of the lifespan, she noted that an individual's position in relation to the group may change, with some precocious children becoming ordinary adults, and vice versa. She wrote:

We had not appreciated the maturing utility of many painful, strain-producing, and confusing experiences which in time, if lived through, brought sharpened awareness, more complex integrations, better skills in problem solving, clarified goals, and increasing stability. Nor had we been aware that early success might delay or possibly forestall continuing growth, richness, and competence. (p. 221)

MacFarlane gave two examples of optimistic life-cycle surprises from the 'resilient' adults who turned out far better in adulthood than their troubled early development might seem to have promised. One was a girl who, as a teenager, was single-mindedly bent on defying regulations. She had an extremely poor relationship with her parents and had been expelled from school at age 15 with numerous subsequent juvenile court appearances. But by her mid-30s she had settled down. MacFarlane described her as a wise, steady and understanding parent whose exceptionally close and sensitive style of relating to her own offspring blended humour, love and compassion.

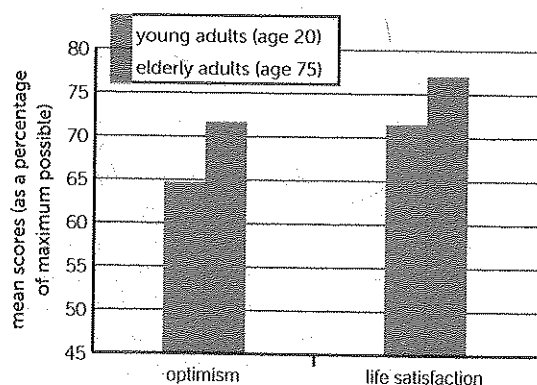
Another of MacFarlane's life-cycle surprises was a man who described himself as 'a listless oddball' when in high school, an opinion confirmed by the independent team of clinical psychologists who had entertained grave doubts about his mental health and intellectual capacity when they assessed him as an adolescent. The surprise arose when the research team assessed him again after he had turned 30. He had emerged from the gloom of his troubled adolescence to blossom as a talented architect with a happy marriage, a rich home life and an active interest in community affairs.

Longitudinal studies with unexpected twists

The longitudinal method (see Chapter 2) involves following a group of people through major portions of their developing lifespans. In 1921/1922 Louis Terman began a seminal longitudinal study of cognition and personal-

FIGURE 1.7

Optimism and life satisfaction in Australians aged 20 versus 75 years



Source: Maher, E., and Cummins, R.A. (2001). Subjective quality of life, perceived control and dispositional optimism among older people. *Australasian Journal on Ageing*, 20(3), 139–144.

BOX 1.8

How can you explain it? Cheerfulness, conscientiousness and longevity

Imagine you are a member of a research team that has just embarked on a comprehensive study of the lifespan development of a large group of healthy 11-year-olds. The sample has been carefully selected to ensure good physical and mental health, and all the boys and girls included in it have above-average intelligence. Using standard well-validated personality tests, you discover two children (Sunny and Bobby) with unusually positive and cheerful dispositions. These children earn higher scores on dimensions of optimism and sense of humour than other children in the sample. Another two children (Ernest and Pru) score unusually high in conscientiousness (always doing homework and helping around the house). You now have to wait 60 to 70 years to observe your outcome measure—longevity—but you manage to keep careful track of all the children in your sample as they develop through adolescence and adulthood. If your findings match those of a similar longitudinal study (Freidman et al., 1993; Martin & Kubzansky, 2005) that was begun in the United States in 1922, you will observe a survival difference as a function of cheerfulness.

Who will live longest: Sunny, Bobby, Ernest or Pru? Why? (For an answer, see the next section of the text plus Chapters 16, 17 and 18.)

ity. His initial goal was to identify a group of intellectually gifted 11-year-olds and see whether they became successful in their careers. Researchers were later able to track the length of life of these healthy and highly intelligent children as they grew up and grew old. The results of assessments over more than 50 years (Friedman et al., 1993; Martin & Kubzansky, 2005) produced some intriguing life-cycle surprises. First, personality was a statistically significant predictor of longevity. If you attempted the exercise in Box 1.8, you will already be aware that two personality features, cheerfulness and conscientiousness, are significant predictors of longevity. Even so, you may be surprised by the strength of the associations, equalling such well-known and powerful physiological predictors as serum cholesterol and blood pressure. What was even more surprising was the direction of the association. The happiest, most cheerful children in Terman's sample (like Sunny and Bobby in Box 1.8) had significantly *shorter* lives than children who had been low in cheerfulness at age 11. These latter were most likely to be survivors at the age of 80.

What could account for this unexpected link? A number of possibilities suggested themselves to the research team and we examine several of these when we look at health and longevity in old age in Chapters 16 and 17. For example, in Chapter 16 we will explore how psychologically driven health behaviours (e.g. exercise) and cultural factors (e.g. reading) can influence the pace of physiological ageing. Smoking cigarettes, drinking alcohol to excess and being obese are all known risk factors for a shorter life. Is it

possible that those unusually cheerful children in Terman's sample who began life on the extreme of rosy optimism may have been too optimistic and happy-go-lucky when they reached old age? Did they perhaps ignore health warnings and continue to smoke, eat unhealthily, abuse alcohol or take on an excessive burden of other known lifestyle risks? Were they so optimistic that they perhaps denied early warning signs of potentially curable adult health problems until it was too late? In Chapter 16 we will see how cognitive knowledge of biological ageing can be used to advantage by adults who realistically accept that change is inevitable during old age and plan accordingly.

At the other extreme were the conscientious 'termites' (researchers' affectionate epithet for the volunteers who devoted their entire lives to this longitudinal study and continued to contribute while in their 70s, 80s and 90s: Martin, Friedman & Schwartz, 2007). These people (like Pru and Ernest: Box 1.8) substantially outlived other gifted participants who as children had been lower in conscientiousness. Perhaps the hard-working, academically motivated, helpful personality qualities that had distinguished them from other equally intelligent 11-year-olds had continued in old age to motivate their love of learning and helpfulness to others, two qualities that are associated with long lives (see Chapter 18) and also with successfully continuing psychological growth in old age (see Chapter 16).

Meanwhile, we need to remember that this important information would never have come to the surface if Terman and his team had not had the foresight to (1) measure personality in the first place and (2) follow the participants through seven decades of life to the point where the differences became clear.

The adult development of 'late bloomers'

As well as integrating psychological concepts between one life phase and another, the lifespan approach also enables a clearer understanding of individual people, since a person's behaviour at any given age includes some characteristics that are elaborations of past developments and some that have newly emerged, and that may themselves later be elaborated, reorganised or even contradicted. As Paul Baltes put it:

As development unfolds it becomes more and more apparent that individuals act on the environment and produce novel behaviour outcomes, thereby making the active and selective nature of human beings of paramount importance. (1979, p. 2)

George Vaillant (1990) recruited a group of 94 men in their second year at university and continued to follow their development into their 50s. Based on family home visits, psychiatric examinations and in-depth psychological assessments, one subgroup of them was found to have poor coping skills, a lack of academic aims and worse social adjustment than the rest of the group, and a generally poor prognosis for future development in adult life. While some

of these men's later life histories were in line with these gloomy predictions, not all these men with troubled university careers followed a downward course. Indeed, some showed dramatic developmental discontinuity, becoming 'life-cycle surprises'. These, adult 'late bloomers' displayed such optimal development during their late 20s and 30s that they came out ahead of all the other men in Vaillant's sample during their 40s and 50s with significantly better developmental outcomes (such as a creatively productive career, a happy marriage and warm, loving involvement with offspring) than the subgroup that had seemed to have the greatest psychological potential and developmental promise at the initial undergraduate assessment.

The examples in Box 1.1 illustrate some additional benefits of a lifespan perspective as applied to psychological practice. Children who start out badly may have exceptional developmental potential that remains concealed until adult life. Both George Bernard Shaw and Kath Walker were ordinary students in school who showed no signs of the creative literary genius that was to emerge during mature adulthood. Both of these exceptionally talented adults fit the criteria of life-cycle surprises. As early 'drop-outs' from high school, it is unlikely that anyone assessing their developmental potential during their teens or early 20s would have been able to predict the qualitative and genuinely developmental changes that were to arise in their lives after the age of 40. A therapist or guidance counsellor who had taken a non-developmental perspective might well have posed a threat to this later growth. Thus it is crucial for members of the teaching, helping and health professions to take a lifespan perspective on normal development, drawing on recent research findings outlined throughout the remainder of this book.

Nurturing development through the lifespan

As we have seen, opportunities for genuinely developmental gains in psychological capacity continue throughout life and this fact is likely to have special meaning for people who are involved with the lives of others in a nurturant capacity—including parents of the young, spouses and adult caregivers of the elderly and professionals from many different walks of life, from teachers to gym instructors, retirement planners and personnel managers, as well as therapists, doctors, nurses, counsellors and members of allied health fields.

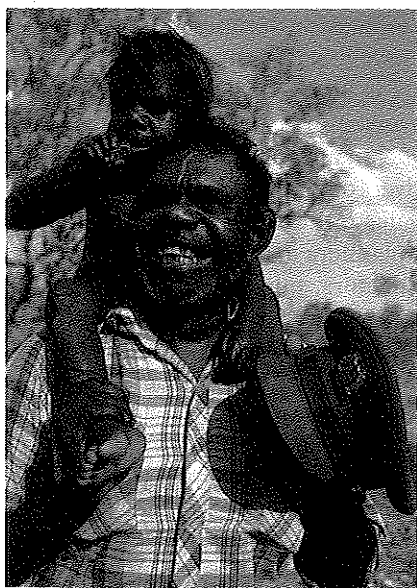
Given that psychological development is a valued, but not inevitable, aspect of an individual's nature, the nurturant other, whether an intimate family member or a professional caregiver, can play a special role in assisting it to happen. At every stage in life, the actualisation of a person's development potential requires a supportive, nurturant environment, social as well as physical. Just as an acorn may fall on bitumen and fail to sprout, or a mature oak tree may be stunted by drought or broken by storm, so also can unfavourable personal circumstances

conspire against human development at any age and block psychological growth. Conversely, just as a plant's exceptionally rapid growth or abundant foliage and fruit can be enhanced by nurturant care, so too can the growth of human beings rise to peak levels when the environment is optimal.

As we see in later chapters, psychological development through all stages in the lifespan is shaped in important ways by the people we share our lives with. Nurturant and capable parents, teachers, health professionals, counsellors, friends, lovers, children and colleagues can all foster individual growth, even under otherwise unpropitious circumstances. This important fact may help to explain some of the life-cycle surprises described in the previous section. For example, according to Paul Baltes and Ursula Staudinger:

Spouses, professional colleagues and members of older generations most likely represent the primary social forces in the acquisition and refinement of generativity. (1996, p. 23)

Some individuals fail to develop to their full potential, and this too requires understanding and nurturing support. Sometimes, simple ignorance of life's developmental possibilities may be to blame. The example in Box 1.6 shows how inaccurate beliefs about ageing, persisting into old age, undermined physical as well as psychological health in one group of American adults. This demonstrates how important it is to know as much as we can about the developmental potential of all age groups, so that such anti-developmental outcomes can be avoided. As another example, several decades ago the belief was widespread that the adult brain was incapable of neural regeneration. This led to non-optimal medical, professional and therapeutic treatment of adults with brain injury. Stroke patients were taught to accept the inevitability of neural



By nurturing the growth of those younger than themselves, mature adults develop generativity.

degeneration and few therapeutic interventions for older brain-injured adults were attempted. Today, thanks to discoveries of the amazing learning capacities of adults over 70 (Baltes & Staudinger, 2000), speech therapists, physiotherapists and occupational therapists who work with elderly stroke victims are empowered to use strategies to foster new learning, building on a sound knowledge of normal lifespan development (Nottebohm, 2002).

In addition to generative concern, patience and respect for individuality, practitioners who work with developing human beings of all ages require a sound understanding of the overarching principles and solid empirical facts of lifespan developmental psychology. The descriptions, explanations and research discoveries about development that make up the rest of this book are designed to pave the way towards this kind of understanding among those who spend their lives with others, as offspring, parents, friends or helping professionals.

Developmental optimisation

Optimisation involves applied interventions designed to maximise individuals' opportunities to develop their psychological potential to the full. The broad goals of developmental optimisation (Baltes & Staudinger, 2001) can begin even before a baby is born. Expectant parents, for example, can optimise their child's chances of a healthy and normal birth by refraining from smoking cigarettes during pregnancy (see Chapter 3). Health educators might similarly optimise children's physical growth and psychological adjustment by helping parents and teachers to understand how diet, exercise and play assist optimal development in childhood (Chapters 7 and 9). During adolescence, optimal health can also be assisted via scientific understanding of how brain development is linked with teenage risk taking (see Chapter 10) and via interventions to improve teens diet, body shape, exercise and health practices to ensure safe sexual intercourse (see Chapters 10 and 12). In old age, learning new skills can optimise cognitive functioning (see Chapter 16) and exercise can benefit both mind and body (see Chapters 16 and 18).

In Chapter 2, we will examine how optimisation of development is put into practice as one of lifespan psychology's basic scientific goals. Then, throughout the remainder of the book, we will look at specific examples of optimisation research targeting particular age groups and particular psychological processes. For example, the question of how to optimise neurocognitive development prenatally will be explored in Chapter 3. Chapters 5, 13 and 17 will examine how emotional attachments to other people can shape optimal psychological growth, and Chapters 7, 11, 15 and 16 will explore how thinking and memory can be optimised from childhood through to extreme old age. But before we consider what the process of facilitating psychological development involves, we briefly consider some of the people and cultural assets that can optimally nurture the psychological growth of human beings of all ages from unborn infants to senior citizens.

BOX 1.9

A case in point **Optimising health education with traditional Indigenous art**

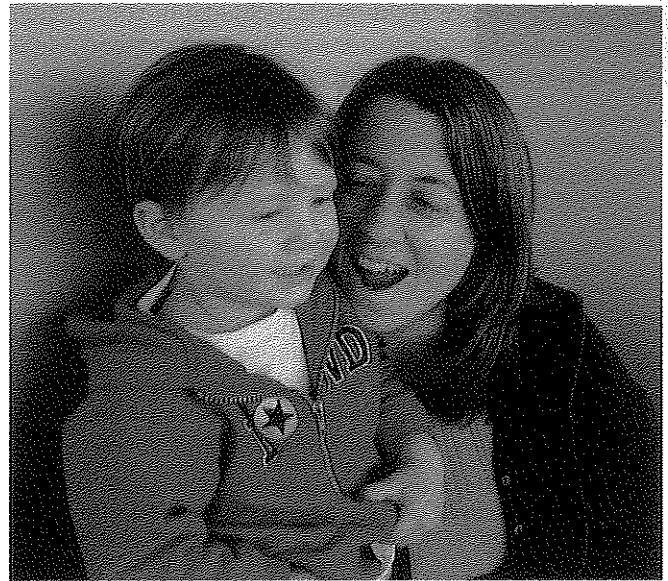
At an innovative clinic at Oenpelli, near Kakadu National Park in the Northern Territory, health professionals discovered an optimal method for conveying health information to Indigenous adult patients. They commissioned a group of senior artists from a remote traditional community in Arnhem Land to use their skills in painting the inner anatomy of animals and people to create professional tools that doctors have already found highly useful in explaining complicated medical conditions such as diabetes, hepatitis, heart conditions and blood pressure. The pictures assisted in overcoming language barriers and exploited the sophistication of traditional Indigenous physiological knowledge as transmitted pictorially. Hugh Heggie, one of the doctors at the Oenpelli clinic, had undertaken the experiment after observing that the Indigenous elders who were entrusted with the sacred knowledge needed to paint animals on bark had a highly developed medical knowledge. 'The artists have a more intricate knowledge of anatomy than many mainstream European doctors because of their experience', Dr Heggie explained. Paintings convey information distilled through many generations of hunting animals for food. 'Given that organ systems are generally the same in all mammals, the artists understand the basics of hearts, kidneys and blood flow', said Heggie. 'They also know a lot about the nervous system and bones' (Jackson, 2008).

Parents and developmental optimisation

A lifespan perspective on parenting suggests that the parents' role in nurturing optimal development in their offspring is both a lifelong process and a reciprocal one. Even after children grow up and leave home, parents have many opportunities to nurture their sons' and daughters' development as adult equals. At the same time, the concept of lifelong development as a possibility (Baltes, 2001) suggests that interaction with children and the tasks entailed in parenthood may themselves stimulate parents' own progress towards ever higher levels of psychological maturity. For example, one seminal, in-depth interview study of 18-year-olds and their mothers (Kasser et al., 1995) showed that mothers who were warm, nurturant and gaining a sense of personal acceptance and achievement via their parenting had teenage offspring who were likewise nurturant and keen to contribute to the development of their communities and future families as they grew older. This suggests reciprocal, long-term developmental contributions of older to younger generations, and vice versa.

Optimisation through education

Teachers who have a sound knowledge of lifespan development, and hence an astute awareness of the developmental opportunities and pitfalls affecting different age groups, can play a crucial role in helping to optimise development



Nurturant parenthood fosters optimal psychological growth in both generations.

at all ages through the lifespan. This role may be particularly critical at important educational transitions and turning points in the life cycle. This includes preschool and kindergarten teachers, who can smooth the preschooler's initial route into formal education (see Chapter 7). We all remember gifted teachers from our primary and high school years (see Chapters 9 and 11, respectively) who inspired and sustained our learning, social development and planning for the future. But it is also crucial for cultures to offer education opportunities later in life to cultivate and enhance the cognitive potential of mature and elderly men and women. These adults may then continue to exercise their minds and develop new cognitive strengths through old age (see Chapter 16). At the same time, their knowledge and motivation to learn may be recruited to assist younger members of the culture, as in grandparenting programs in preschools and grandparental care for young family members (Goodfellow & Lavery, 2003).

In fact, teachers of mature adults encounter some of the same problems faced by teachers of children and adolescents. These include questions of how to motivate learners to do their best, how to help them to organise their learning and how to assess their progress. But there are also special challenges and rewards in the teaching of mature students. An important prerequisite for optimising both teaching and learning is an accurate knowledge of the unique psychological characteristics, strengths and problems of adulthood and old age. A positive attitude towards the learning potential of older men and women, grounded in the research evidence that is discussed in Chapters 15 and 16, will help teachers to bring out the best in their mature students. We now know that the learning process as a psychological attribute has no age boundaries.

According to G. Fischer (2001), a lifespan approach to education is even more critical for the 21st century than adequate early schooling. This century is accelerating the

already fast pace of technological change in conjunction with job redesign, occupational obsolescence and rapid individual job change and career restructuring (see Chapters 14 and 15). According to Fischer, this means that fewer adults in future decades will still be pursuing the same careers at 40 that they were educated for at high school or university. He explains:

Most people see schooling as a period of time in their lives that prepares them for work in a profession or for a change of career. This view has not enabled people to cope well with the new realities of our world that: (a) most people change careers several times in their lives even though what they learned in school was designed to prepare them for their first career, and (b) that the pace of change is so fast that technologies and skills to use them become obsolete within 5 to 10 years. (p. 8837)

The optimising roles of health and helping professionals

As a consequence of their varied crisis interventions and their many opportunities to provide nurturant care for people of all ages, most nurses, doctors, therapists, social workers and other professional caregivers are closely attuned to the unique physical characteristics of each age period in the lifespan, and exceptionally aware of the striking bodily changes that emerge as people grow up and grow older. The risk is that an understanding of the normal processes of healthy biobehavioural and psychological development may become undermined when contacts

are limited to sufferers of atypical illnesses and injuries encountered in the atypical environment of a hospital or doctor's surgery. To counteract false preconceptions, a sound understanding of research evidence on normal patterns of healthy growth through the lifespan is needed.

Some studies of attitudes towards old age suggest that members of the health professions are more vulnerable to myths and ageist prejudices and stereotypes about old age than members of the general public (Gatz & Pearson, 1988; Peterson, 1993a; Pruchno & Smyer, 1983). Sadly, a view still held by many counsellors that the best goal for adulthood is stability in psychological functioning, delaying the inevitable and unmitigated losses of old age, may lead to intervention strategies that are often limited to medication or resignation. These views, as shown in later chapters, are no longer tenable in the face of recent lifespan research.

Looking forward

Thus a lifespan outlook offers to supply developing adults, as well as parents, carers and the members of many people-oriented professions, with a more accurate understanding of the promising developmental opportunities arising throughout life, and with useful feedback about the life-long antecedents and consequences of their immediate plans, projects and intervention efforts. As a result of this integrating continuity within the discipline itself, certain core ideas and key issues arise again and again as we explore human development chronologically in this book. These guiding themes offer an integrating perspective that provides a sense of continuity through the book and across the human lifespan.

CHAPTER SUMMARY

Healthy human beings can continue to grow and develop psychologically throughout the lifespan, long after biological growth in stature has ceased. A lifespan perspective seeks to understand this developmental potential by watching how humans grow and change psychologically over the whole of life, from conception to extreme old age.

The lifespan approach to developmental psychology reveals that both biology and sociocultural experience influence how people progress through life's stages. This progression reflects the continuity and discontinuity of development. The lifespan is punctuated by normative transition events (e.g. career entry, marriage), which happen to most people at roughly the same point in life. These predictable upheavals are important triggers of developmental change.

Age is scientifically significant as a marker of these key developmental changes. It also has intense subjective and social significance as part of each person's identity. Over the lifespan, our own age consciousness shapes how we behave, feel and think, both now and in the future. In every culture and throughout history, society has treated people distinctively as a function of their age. For example, in many Eastern cultures, past and present, old age is revered as a time of wisdom, seniority and social respect. Similarly, via a lifelong process of age-graded attainment of knowledge and ceremonial celebration, traditional Indigenous Australian culture has recognised the wisdom and leadership of elders who have earned the whole community's respect. But in modern industrialised communities with heavy reliance on modern technology, older adults' knowledge rapidly becomes obsolete and adults may fear growing older from the time they reach the age of 25. Ageist bigotry can make matters worse.

Scientifically, lifespan developmental psychology seeks to understand the connections between age and psychological functioning, and to explore patterns of change that are (1) permanent and cumulative, (2) both qualitative and quantitative, (3) culturally universal and timeless, and (4) progressive in bringing about gains in psychological capacity and function.

Lifespan developmental psychology's focus on the potential for genuine adult growth and gains in cognitive, emotional and social strengths long after biological growth in stature has ceased has had wide scientific significance. 'Life-cycle surprises' emerge when we explore a human life from start to close, and new awareness of the brain's enormous neurocognitive plasticity and flexibility during maturity has arisen in part through this accumulation of behavioural evidence. Scientists who study psychological growth over the whole of life are also concerned with developmental optimisation through intervention research that promotes growth and creates a positive balance of gain against loss.

For further interest

Activity suggestions

1. As a practical activity illustrating this chapter, explore age in the media. Collect newspaper clippings, magazine articles, adverts and other pictorial or verbal material on people of different ages and think about how different age groups in society are portrayed. Sort the items by approximate age group and then, with a friend, rate each image in terms of whether it portrays the person (or age group) (a) in a positive light, (b) neutrally or (c) in a negative light. Compare frequencies of favourable and unfavourable images across age groups. Are older men and women viewed negatively?
2. To explore the extent of ageism in your community, and to see which age groups bear the heaviest brunt of it, try the following:
 - (a) Copy the ageism quiz printed in Erdman Palmore's (2001) article in *The Gerontologist* (see References list at the back of the book).
 - (b) Give the quiz by phone or as an anonymous questionnaire to friends of yours of different ages and compare scores by age. Discuss similarities and differences among age groups with your classmates.

Multimedia

- For a fascinating glimpse of the history of childhood in Australia, view *Australian Childhood: Changes over 200 Years* (Equality Videos, Sydney, 1994: 24 minutes).
- To learn more about Oodgeroo Noonuccal (Kath Walker), whose lifespan development as a poet and activist featured in Box 1.1, take a look at the video *Kath Walker: Poet and Activist* (Equality Videos, Sydney, 1995: 16 minutes).

My Virtual Child

You may wish to use the MyVirtualChild or MyVirtualLife simulation (www.myvirtualchild.com or www.myvirtuallife.com) to explore examples of the ideas related to lifespan development and the parents' role in optimising their children's psychological growth described in this chapter.

- *Merrepen* (Australian Film Commission, Sydney, 2005: 24 minutes) is a vivid documentary of three generations of Indigenous women in a traditional Aboriginal community at Daly River, who today still practise arts and crafts (e.g. basket making) that have been passed down from one generation to the next for many centuries. The film also illustrates lifespan integration of cooperative social relationships between members of an extended family who support and help one another and acknowledge the group's unique needs and strengths.
- *Contact* (Martin Butler & Bentley Dean for Aboriginal Studies Press, Canberra: DVD, 78 minutes) is a multi-award winning documentary of an Indigenous Australian group's first contact with European Australians in 1964, similar to Emily Kngwarreye's (see Box 1.1) experience decades earlier.
- *The 100 Club* (Flick Chicks, Kelvin Grove, Queensland, 2012: DVD, 30 mins) is an Australian documentary that charts the lives, achievements and aspirations of members of the world's only social club for centenarians, illustrating some very positive features of extreme ageing.