Developmental Psychology for the Helping Professions

Evidence-Based Practice in Health and Social Care

Brian Sheldon

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Also by Brian Sheldon

BEHAVIOUR MODIFICATION: Theory, Practice, and Philosophy (1982)

COGNITIVE-BEHAVIOURAL THERAPY: Research and Practice (1994)

EVIDENCE BASED SOCIAL CARE: A Study of Prospects and Problems (*with Rupa Chilvers*) (2002)

RESEARCH AND PRACTICE IN SOCIAL CARE: Mind the Gap (2002)

A TEXT BOOK OF SOCIAL WORK (*with G.M. Macdonald*) (2009)

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Developmental Psychology for the Helping Professions

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For Rita Malpas Sheldon,
a natural in this matter of child development,
and for Professor Geraldine Macdonald and Dr Jane Dennis
of the Cochrane and Campbell Collaborations,
who already know what I think of them.

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Preface

The idea for this book grew out of my (rather positive) experiences of teaching multidisciplinary, postgraduate and post-qualification courses in applied developmental psychology at the universities of London, Bristol, Queen's Belfast, and as part of the Centre for Evidence-Based Social Services (CEBSS) project based at Exeter. The subject itself is surprisingly under-taught on professional training courses, having often been sidelined into modules to make room for discussions of 'new' fix-all political initiatives. Yet without such a grounding, how are staff to make valid and reliable assessments of problems? That is, unless equipped with a template of normal/average development, how are they to know when their clients'/patients' position on any number of curves indicates a cause for concern? Also, since the best predictor of likely success in interventions research is a close, logical 'fit' between the known causes of problems and what is subsequently done to attempt to ameliorate them, without a knowledge of the usual patterns of development, from where are we to get our leads on causation and the likely course of problems? Methods-led approaches and policies will fill any vacuum left behind where we have a poor understanding of aetiology: 'We tend to use an X approach at this clinic; this department is committed to a Y approach' and so on. 'On what evidential basis?' is the a priori question.

Such concerns have led me towards a number of principles that should underwrite the design of multidisciplinary courses, and these form the manifesto for this book. They are as follows.

Health and social care staff are similarly motivated and face problems that are more alike than they are different. Coordinated contributions to different aspects of complex problems are, research unsurprisingly shows, better than expert action taken against one aspect alone, and the rest regarded as 'context'. Teaching and debating together, so that mutual respect for overlapping viewpoints and skills develops, helps to prevent the formation of 'silo' identities and the thinking that goes with them. There is, after all, more than enough work for us all, and we need all the help we can get.

Many or most of the difficulties that the helping professions face are the product of a mixture of bio-psycho-social influences, and some initial knowledge of all three ingredients helps with both assessment and treatment. Samuel Butler knew the answer to the conundrum about

specialist vs general approaches long ago: 'Woe to the specialist who is not a pretty fair generalist, and to the generalist who is not also a bit of a specialist' (1912). That is, if you think that 'a little knowledge is a dangerous thing', then try complete ignorance sometime.

Given the number of different theories that exist about aspects of human development and the wealth of experimental evidence that we now have, it is wise to pause when we begin to consider them and to develop some criteria for full or partial inclusion, or full or partial exclusion from the mainstream curriculum. The same caution is also due regarding what gets into, or what stays outside, our practice. The danger otherwise is that we select findings that are confirmatory, professionally flattering or simply comfortable policy-based or practice-based evidence rather than evidence-based policy or practice.

Professional training courses often collude with these known biases when they teach different grand theories of human development alongside each other with little apparent tension. Such 'salad bar' approaches – 'choose what you like and leave the rest' – fail to take note of degrees of logical incompatibility. If the propositions of one are roughly correct, then those of the others often cannot be. Theories must therefore be reduced at some stage to empirically observable propositions, and thrive or perish according to how well they survive empirical tests. Such strictures do not always make for classroom harmony, but nevertheless are necessary for technical and ethical reasons. Thus 'What shall count as evidence in this field?' is as good a starting point for a course as for a systematic review; or, for that matter, a book.

We cannot divorce ourselves from theoretical speculation about the human condition, or what approach might be helpful when something goes wrong in it. Even separate experimental observations will tend to coalesce into a larger picture. Our brains are just not 'wired up' to respond only to the specific results of individual observations. However, our brains also contain cerebral cortexes and can be schooled into a self-denying ordinance regarding what we think and do. Theories have qualities too, and can be assessed against each other. For no one is going to wait for the possible extra guidance that a systematic review update due next month might deliver before deciding what to do or not do with a family coping with the fallout from childhood autism when we see them next Tuesday. If the family are lucky, the would-be-helper will stick closely to an amalgamation of current best evidence, draw the family into a debate about what is known and not known, and create a space in which changing one's mind in the face of subsequent experience occurs without loss of face.

Different research findings, theories or allegedly causal influences tend to be privileged or neglected by different professional groups. These – 'These truths we hold to be self-evident beliefs' – are a bar to good interprofessional communication because they are often vague and implicit or simply wrong. So genetics does not deal much in fixed biological destinies; 'talking things through' sometimes helps and sometimes does not; social class and what comes with it is not a vague sociological construct; and there *is* such a thing as society. Staff need to be aware of these concentric circles of influence and to be persuaded out of the view that only the first two or the last two are their particular concern, or that there are any sharp cut-off points at which one set of factors begins and ends and another replaces it.

This book is rooted in my attempts to apply these priorities in my academic teaching, research and practice. It is an attempt to survey and integrate research on genetic and epigenetic predispositions (which is proceeding apace) with that on the experiential influences on behaviour that we somehow feel should always be predominant (which is dragging its feet a little by comparison). Nature *via* nurture is the theme, and the development of more concerted 'with the grain' health and social care interventions its aim. In this regard, I have tried to write a book that is thought-provoking, but also of some practical use – a contribution at least.

Acknowledgements

About the Author

Brian Sheldon is Emeritus Professor of Applied Social Research in the Peninsula Medical School at the University of Exeter. Previously he was Director of the Centre for Evidence-Based Social Services there. His long standing interest has been in studies of the effectiveness of services for people with mental health problems including children and can lay a claim to establishing the matter of service effectiveness on the agenda in the professions concerned.

The author holds qualifications in psychology (Phd); is a qualified Social Worker; previously a State Registered Nurse; and a Registered Cognitive-Behavioural Psychotherapist, or, as he is fond of saying, he is 'a little multi-disciplinary team'. Brian Sheldon is the author of six books and many research articles on evidence based practice in health and social care. He was an early advocate of a Bio-Psycho-Social model of understanding and treating mental disorders. He was also an early advocate of the use of cognitive-behavioural approaches, and was previously President of the British Association for Behavioural & Cognitive Psychotherapies. His research interests have lain in studies of the effectiveness of social service schemes or therapeutic methods, and in the establishment of evidence-based practice as a routine approach in social care and health. He has continued to practice throughout his academic career.

1
Principles of Evidence-Based Practice

What is known depends upon how it is known.

—Francis Bacon, 1604

The phrase 'evidence-based practice' is in the title because a particular stance on questions of evidence is taken throughout this book. For me, this position is uncontroversial at the level of rationality and logic, but others may disagree, and in any case there are problems of interpretation and implementation that continue to pose difficulties. Therefore, rather than holding multiple (and probably tedious) discussions about study quality, unintended bias, validity and reliability throughout the text, it is better to get these out of the way in one go, or at least to establish some 'Marquess of Queensberry rules' for handling disputes (no spitting, gouging or hitting below the belt).

There are four types of research with which we are concerned in this book:

1. Empirical investigations into the nature of normal/average development and patterns within that. This to provide a template for making assessments and signalling exacerbations.
2. Investigations of the causes, epidemiology, courses and points of tractability of developmental problems and delays, conditions, syndromes and illnesses. The origins of these typically lie within a matrix of genetic, epigenetic, environmental, familial and socio-cultural influences that *interact* together, their 'skeins' becoming 'cable-knitted'.
3. Studies of the effectiveness of interventions, whether predominantly psychological, social, medical or, as is often the case, combinations of these.

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4. Evaluations of the way (2) and (3) are combined into broader theories that attempt to 'join the dots' of empirical observations. Such theories, favoured approaches, plus a few selected studies are what practitioners tend to rely on to guide their behaviour.

Addressing the bias-reduction qualities in these different types of research and how we relate to them, and implement their findings, is the essence of evidence based-practice. Here is a working definition (freely adapted from the work of Sackett et al., 1996):

> Evidence-based practice is the conscientious, explicit and judicious use of current best evidence in making decisions regarding the welfare of individuals in need.

Of course, some of our clients or patients have extant needs, and some have 'needs' thrust upon them, so we are dealing here with ethical as well as merely technical matters. Let us look further into this definition.

Conscientiousness

> Obedient to conscience, (habitually) governed by a sense of duty: done according to conscience; scrupulous, painstaking. (*Shorter Oxford English Dictionary*)

The word conscientiousness reminds us of our ethical obligations to our clients/patients, not only regarding important areas such as confidentiality, a caring and kindly professional demeanour, technically astute and skilful actions, but also with implications for how habitually painstaking we are willing to be. Keeping abreast of current best evidence in various overlapping fields is no routine task, even in the age of the internet. This is particularly the case when we inherit a culture that tends to value hindsight, simplicity and individual professional responsibility (blameworthiness) over considerations of more complex political and organisational factors.

Some examples will clarify this. In the infamous case of Baby P (Peter Connelly), who matched known risk factor profiles quite closely, 60 contacts (medical, policing and social work) were recorded before his desperately sad death from abuse. Therefore, professional contact levels and the question of collaboration and information sharing (a reflex conclusion of all inquiry reports) were not really the issue. The problem was the *quality* of the information shared, and the degree to which it

was *acted* on, and the *quality* of the paediatric examinations (or the lack of them if the child was fractious), not the lack of known risk indicators (see Haringey Local Safeguarding Children Board, 2010).

The point is that assessing the quality of interventions and the quality of evidence behind decisions to act or not to act requires careful judgement by expert people: the 'judicious' part of our working definition. This is time-consuming and distracts us from politically and managerially inspired target clusters made up of things that are easy to count, which at times amount to an unintentionally malign behaviour modification scheme. Such target-setting works rather well clinically (Emmelkamp, 2004; Sheldon, 2011), so why should we expect it not to be influential when applied to professionals for narrower, sometimes inappropriate purposes, such as managers at risk of career damage, or the government of the day needing to look more re-electable? Thus, social workers now spend 70–80% of their working week in the office carrying out administrative tasks. It has become more important that assessments are on file and that records match pro-formas than that a case file contains examples of well-monitored, evidentially based, good work. We might almost call this virtual reality social work (see Sheldon & Macdonald, 2009). The political action taken in the Peter Connelly case was to order the sacking of the Director of Children's Services *pour encourager les autres*, but the question is what exactly it would encourage the others to do. Probably *not* to take better care regarding the professional calibre of the staff they employ (there are hundreds of unfilled vacancies, and no wonder); not to introduce better post-qualification training in risk assessment; not to take the long-promised 'hard look' at whether increased organisational accountability measures do more harm than good and result mainly in 'frozen watchfulness'; and probably not to *implement* Eileen Munro's excellent report on child safety and social work training (2011), but in fact to 'tighten up' all round (once again).

The point of this discussion is to urge on the reader the idea that a review of evidence prior to intervention is not merely a clinical responsibility, it should also weigh on policy makers and managers. They need to be just as aware of the omnipresence of side effects, which exist independently of good intentions (see the systematic reviews available at www.campbellcollaboration.org). All new schemes, reorganisations and 'shake-ups' are *interventions* and will very likely affect professional behaviour and thus patient/client care, and all involve opportunity costs. A good illustration of the latter is the recent writing-off, at a conservative cost of £12–30 billion, of (yet another) NHS computer

scheme. Such wasted sums could have done a lot for home care or child-protection services, or funded 36 new general hospitals, as King and Crewe (2013: 199) highlight:

> From its inception, the whole thing had been either, at best, a mess-in-waiting or, at worst, a mess already apparent. It began, more or less, at a meeting in Downing Street between a Prime Minister who knew next to nothing about computers and a clutch of computer enthusiasts. It was wildly ambitious. It was far from being essential. No one ever seems to have subjected it to a serious – or even a back-of-the envelope – cost–benefit analysis . . . No one ever thought to ask medical administrators and practicioners whether it was a high-priority project from their own point of view, or how they expected this ambitious new programme to mesh with their existing IT arrangements, or whether they would want to opt into the new system, or, come to that, whether they believed that the new system could actually be made to work. The timescale proposed for the project was ludicrously short.

Not all calls for a stonger emphasis on evidence-based policy-making and practice involve increased expenditure. Indeed, sometimes the opposite is the case. For instance, the group controlled trial of clinical, quality-of-life and community tenure outcomes for frail, elderly people conducted by Trappes-Lomax et al. as part of the CEBSS project (2003) showed that these were as good or better if the patients/clients were in receipt of good, reliable, home care sevices immediately on discharge from hospital than if they went first to a bespoke residential rehabilitation centre with a £6.2 million per annum share of the local authority budget.

And it gets more difficult still. Were we *prospectively* to apply child-care risk factor schedules (see Macdonald, 1999) to all or most inner-city children, then the number of false positives and false negatives that would be thrown up would create a civil liberties outcry. Distinguishing the troubling from the desperate and the desperate from the dangerous should be a matter of cautious professional judgement, yet our services are driven more by ad hoc advice from journalists in air-conditioned offices in Wapping. The *Daily Telegraph*'s reaction to the Peter Connelly case was: 'Social workers too slow to take children into care?' After the inevitable increase in receptions (which always happens following an inquiry), the subsequent headline on 13 April 2010 was: 'Social workers too quick to take children into care?'

Case study 1.1

From the early/middle part of the developmental spectrum is a (now) 17-year-old adopted boy diagnosed with moderate to severe attention deficit hyperactivity disorder (ADHD) plus oppositional disorder (see DSM-V [American Psychiatric Association, 2013] for both of these). He determinedly and persistently bends or breaks all rules. He has been expelled from both state, private and specialist schools, one toddler group, one play group and one day nursery – all for aggressive behaviour. He has had regular brushes with the police, chain smoked and drank under age, has tattoos and collects knives. At the same time, he is kind to his animals, helpful to his elderly neighbours and is loving towards his adoptive mother. As a result of her campaigns on his behalf, he has been assessed by three psychiatrists, multiple GPs and three psychologists (two educational, one clinical). Multiple referrals have been made to social services (more assessments but no action – his file is a foot thick), an adoption support unit (which offered none), an 'attachment disorders clinic' and so forth. Most of the psychological tests applied to him seem appropriate; his WISC results, with subtests, are just above average, except for general knowledge and short-term memory. His (generally cooperative) adoptive parents *live* on internet websites and are in regular contact with volunteer support groups. Nevertheless, at no time in 16 years have these parents been able to procure a single home visit, either for therapeutic or support purposes, or received a family assessment. They came close to a visit from social services until they confirmed that they had never hit the boy and would never contemplate doing so (one made-up story of a childhood shaking might well have changed things).

ADHD is a difficult condition to treat either psychologically or pharmacologically, but moderately effective or at least containing treatments do exist (see Moriyama et al., 2013 for a meta-analysis; Kazdin, 2004 on applicability). Medications such as Ritalin and later, more synthesized preparations are in common use; they have been prescribed, but this young man refuses to take them or takes them only intermittently. No visiting social worker or child psychiatric nurse has been available. Behaviour modification schemes based largely on rewards and cognitive behavioural therapy have both achieved mixed, but *generally* useful results for this

condition (see Hollon & Beck, 2004), but they have never been tried in this case, nor has cognitive training, counselling or family therapy in support of the family. His adoptive parents (evidentially, his best hope) are divorcing and will have to sell their (his) home. We shall return to this case later.

What would conscientiousness have meant in this case? It would have led to much earlier interventions at the sites of the problems (home, school); much greater therapeutic support for the parents; nursing and social care in support of both medication compliance and to set up behavioural and cognitive training programmes; and an active, supportive link between school and home, instead of the parents' evening denunciations and warnings sent in the post. The causes of this pattern of inaction were most probably high eligibility criteria concentrating help on those most in need; the preference of service managers for 'battery' rather than 'free-range' staff; lack of training in evidentially based interventions; and, of course, short-term cost worries. However, there is little doubt that what has been injudiciously not done will cost the agency, and ultimately all of us, a significant amount in the future.

Case study 1.2

At the other end of the developmental spectrum lies an 83-year-old, borderline depressed, recently bereaved, agoraphobic woman in poor physical health. She was admitted to hospital by a locum 'out of hours' doctor, and tests revealed that she had an aggressive form of lung cancer (she did not smoke, and neither did her late husband in case you are thinking passive thoughts). Relatives visited assiduously but lived a considerable distance away. She found the hospital food virtually uneatable: 'I'm used to plain food and all this is spiced up and messed about.' Visitors provided sandwiches, but she lost weight rapidly and was put on a 'red tray scheme' for food and drink. The result was a beautifully produced chart depicting her decline, but there was no coaxing to eat, and so the steady loss of weight continued. No ward round took place. Doctors visited the bedside unaccompanied by nurses and their recommendations went straight into the notes. She had several procedures for pneumonia, was on 11 different medications and the *technical* side of her treatment was intensively pursued.

However, the basic nursing care left much to be desired. On one occasion she asked to go to the toilet, but was told that there were no assistants on hand to help because of recent cutbacks to the budget for agency staff, and that she should 'go in the bed' and get cleaned up later, which was not part of her definition of herself. She tried to make it to the lavatory unaided, drip and all, and fell. She was not physically hurt, but was distressed and fearful. Her wish was to die at home or with relatives, but the medical requirements of her treatment were apparently too much for the local home-nursing and care services, so she died in hospital, in her sleep, and was found only the next morning.

There is now widespread public concern about cases like this, with patients' groups pushing for conscientious care alongside technical interventions: *both*, not one or the other. The Royal College of Nursing (RCN) shows concern, but tends to advance explanations focusing on 'rogue nurses', 'rogue wards' and 'rogue hospitals', pointing to its and the NHS's (admittedly) admirable record overall. Nevertheless, an airline with three recent crashes to explain, which defended itself by saying that *the majority* of passengers landed safely, would be given short shrift. The government blames poor management, but routinely says that it cannot comment on 'individual cases'. Case study 1.2 is the case of *an individual* who was rarely treated as such. The nurses rarely left their computer stations and, by repute and observation, rarely or never engaged in ordinary, morale-boosting conversations with patients. The woman's relatives did make use of the complaints system, but the replies they received were so anodyne ('We at the X-shire NHS Trust are committed to the highest standards of health care' etc.) that they gave up after her death, since it was the *standards of humanity* that they were complaining about. The purpose of case illustrations such as this in a book stressing the need for methodological rigour is not to adduce them in general evidence, but to humanise and illustrate what lies behind figures on care standards (see Care Quality Commission 2013; Francis Report, 2013; Parlimentary and Health Service Ombudsman, 2015). And remember that this account would have constituted evidence for *the patient*.

Conscientious service provision is, therefore, not simply a matter of *individual* attitudes or skills. It is strongly influenced by policy and by the organisational milieu, and it is perfectly possible to be faithful to managerial priorities and end up doing the opposite of what

evidence-based practice requires. The poor standards of care outlined in these case studies are not universal, but they occur more often than is comfortable and for reasons that are not beyond empirical investigation (see Care Quality Commission, 2013).

Leaving aside the lack of ethics in these cases, and the danger that health and local authority staff are induced into becoming the equivalent of insurance loss adjusters, the *technical* evidence for handing choice back to patients, even in small doses, and for an overlap between basic physical care and psychological well-being is compelling. The long-debated need for an integration of health and social care services, in order to manage transitions better (and probably save money), is based on disparate evidence. There is a wealth of scoping material based on different organisational models and investigating feasibility, and many interesting international comparisons are also available (see for example Huang et al., 2009; National Voices/NHS, 2014; Moat et al., 2013; Linertová et al., 2011; Reilly et al., 2013). We also have trials comparing collaborative or integrated care with standard arrangements, and systematic reviews of these (see Fleming et al., 2004; Thota et al., 2012). Furthermore, there are interesting quasi-experimental studies investigating both quantitative outcomes, such as changes to unplanned readmission rates, and qualitative changes, such as greater consumer satisfaction, which provide useful pointers to those who are reviewing services. It is difficult to sum up trends in such a large field, but there are some regularly recurring themes in research reports:

☐ The fields where multidisciplinary collaboration is most well researched and where there has been most practical experience are mental health (particularly relapse prevention), the rehabilitation of frail elderly people and stroke rehabilitation. Here the results are measurably positive so long as we confine ourselves to the main goals: reductions in unplanned hospitalisations, improvements in functional recovery and maintenance rates/levels. When projects set themselves global objectives, they fare less well.

☐ Outside very specialist fields, clients/patients tend not to make sharp distinctions between, or express preferences about, the professional backgrounds of staff involved in collaborative care schemes. They comment most often on the reliability and availability of services and the *way* staff treat them; whether there are 'boots on the gound', as it were, rather than what regiment they belong to.

☐ In systematic reviews one often encounters single trials where no differences in effects are reported, but also no harms. Collaborative

schemes within which most of the changes to previous practice take place at a managerial or procedural level, which are designed to produce efficiencies as much as join up expertise, should not be expected in themselves to improve clinical outcomes if these are not the shared, explicit focus of the project.

☐ The balance of results favours increased interdisciplinary collaboration, the obstacles to which are mainly organisational, procedural, administrative and political, with perhaps a remnant of tribalism in the background. In clinical practice we have the useful measure NNT or ITT – number needed to treat and intention to treat (how many patients/clients have to receive an intervention to yield one clearly improved case). Perhaps policy makers need to develop matching NNA or ITA measures – number needed to *act* or intention to act.

Explicitness

Explicit. Distinctly expressing all that is meant; leaving nothing merely implied or suggested; unambiguous, clear.

Latin, *Explicitus et Libor*, let the book be unrolled. (*Shorter Oxford English Dictionary*)

I like the idea of unrolling plans in front of the client/patient, but more importantly, there has long been a trend in outcome research suggesting that an open, explicit, negotiating style with a goal- and task-centred emphasis produces better outcomes and greater efficiency. This input-for-output phenomenon is known in psychotherapy as 'the dose/effect relationship' (see Howard et al., 1986). This author's meta-analysis, compatible with earlier research (e.g. Reid & Shyne, 1968; Sheldon & Macdonald, 2009), shows that positive influence tends either to occur quite quickly or to stall, after which smaller and smaller gains, or no gains at all, are recorded – decreasing marginal utility, as economists call it.

Such effects are found across the professions using psycho-social interventions, and the idea of an explicit assessment and formulation of problems and explicit priorities in trying to address them within a pre-set time limit (usually 8–15 sessions) can lead to superior results. This was not supposed to happen; under the influence of psychoanalysis, which in diluted form seeped into many professional curricula in the past, long-term and/or complex problems obviously required long-term, complex solutions – otherwise symptom substitution or exacerbated

relapse would occur. In fact, there is no evidence that this is the case (see Sheldon, 2011: ch. 1).

However, some cases do require longer-term involvement, including those with physical problems in the background; cases where there are multiple anxieties such as generalised anxiety disorder (see DSM-V; ICD-10 [World Health Organization, 2015]); or complex cases involving child sexual abuse. The recommended approach here is longer-term support with episodes of more task-centred work to address specific symptoms or problems.

An analogy may help here. Imagine a ball of plasticine, which constitutes the available resources for a given case. It can be rolled out to be long and thin. This is the approach used in 'support' cases, although even here we need to be explicit about *what* is being supported. Provided that such 'drip-feed' approaches are predictable and reliable, and the case is straightforward, then this approach can work. Alternatively, the plasticine could be rolled out to be short and fat. This more intense approach is more likely to be effective in cases where behavioural change is being sought, as in child behavioural disorders. Finally, the plasticine could be rolled out in thin/thick 'knobbly' fashion, where a general programme is maintained in the longer term, but specific goals are applied for specific, modular problems. An example here would be selecting a lack of reliable bedtime routines as an issue leading to school attendance problems and family discord.

Explicitness means not only a deliberate, conscientious choice of explanatory theory and research regarding the nature of clients/patients' problems, but also the way in which such understandings are communicated and shared. This is the approach that we look for and *sometimes* get with our own GPs, after all. However, in psychology there is a certain burden of history to set aside before this 'share your workings out' ideal becomes routine. Here are some of its features:

☐ The conceptions that psychoanalysts and their followers had of clients/patients always suggested the need for a distant relationship. Patients were to be given minimal prompts as to where the secret origins of their difficulties lay. High attrition rates and perceptions of 'uncaring' would-be helpers are ubiquitous in outcome studies. Imagine this being said of any other intendedly therapeutic endeavour: 'It will not pass unnoticed that the findings on patients who had completed psychoanalysis are based on 210 cases out of the original 10,00 (see Rachman & Wilson, 1980: ch. 5).

☐ Sigmund Freud himself saw no point whatever in rational discussion with clients about their problems or their futures, and so immunised

his own field and some (then) co-dependent disciplines against the effects of poor or harmful results from empirical studies. For example:

> Friends of analysis have advised us to counterbalance a collection of failures by drawing up a statistical enumeration of our successes. I have not taken up this suggestion either . . . Statistics would be valueless if the units collated were not alike and the cases which had been treated were in fact not equivalent in many respects. Further, the period of time that could be reviewed was short for one to be able to judge of the permanence of the cures . . . They were persons who had kept both their illness and their treatments secret, and whose recovery in consequence had similarly to be kept secret. The strongest reasons against it, however, lay in the recognition of the fact that in matters of therapy, thinking is in the highest degree irrational, so that there is no prospect of influencing it by reasonable arguments. (Freud, 1949)

☐ We have about 45 examples of experimental outcome studies from the 1960s, 1970s and early 1980s, and many were large scale and with a heroic intensity of exposure to treatment. The majority featured young people with behavioural problems and were preventative in intent, but there were a scatter of others concerned with elderly care, couples therapy, mental health problems and so on (see Fischer, 1976; Mullen & Dumpson, 1972; Orlinsky et al., 2004; Sheldon, 1986; Sheldon & Macdonald, 2009: ch. 3). The results were all dire.

Historically, the turning point regarding the wider use of explicit, time-limited therapeutic approaches came during this period. A number of studies and reviews appeared that challenged the process-dominated orthodoxy. The main recommendations of these reviews began with the breaking-down of complex inter-related problems into modular form, prioritising either according to which difficulties are most threatening and urgent, or selecting something less demanding for motivational purposes if time and circumstances allow, which improves results in less time than the (then) standard approaches.

Secondly, there should be explicit forms of communication about the nature, development and aetiology of problems, as well as their likely course; known traction points and current best evidence on which approaches work most effectively. The best predictor, yesterday and today, of positive outcomes in a study of effectiveness across the helping professions is that there is a close *logical fit* between an ongoing

assessment of problems, and a rigorous application of methods that have been suggested by randomised controlled trials and systematic reviews of these. The enemy of this obvious idea is the power of the routine (see pp. 5–7) and a 'Micawberist' approach to helping: 'something will definitely turn up in this case one of these days'. The landmark study here was Reid and Shyne's (1968) experiment with task-centred case work, where the same or better outcomes were achieved in 8–12 weeks of focused, problem-solving work as compared to much longer periods of counselling (see also Gambrill, 1981). The first review to pick up on their somewhat heretical results was by Reid and Hanrahan (1980), who summarised the positive trends thus:

> In brief one is struck by the dominance of structured forms of practice in these experiments – that is, of practice that takes the form of well-explicated, well-organised procedures usually carried out in a stepwise manner and designed to achieve relatively specific goals. The influence of the behavioural movement is quite apparent and pervasive. (Reid & Hanrahan, 1980: 11–12)

Thirdly, process factors such as warmth, genuineness and empathy remain an important subsidiary factor affecting outcomes across a range of problems and conditions (see Clarkin & Levy, 2004; Sheldon & Macdonald 2009: ch. 6), although they are insufficient in themselves. In other words, one can be regarded as a kindly saint or angel of mercy, but be using an approach that is simply incapable of changing entrenched behaviour and accompanying attitudes. Or one can be exclusively technical and 'Vulcan' while making use of techniques with a known track record in the effectiveness stakes, but finding that clients are not motivated to stay the course. Later reviews (see Sheldon, 1986, 2011; Macdonald & Sheldon, 1992) confirmed the gains made from the incorporation of such explicit, standardised approaches. In any case, modern budgetary constraints (probably for all the wrong reasons and with some side effects) require *courses* of treatment with an evaluation of cost-effectiveness built in. Thus, what was regarded as heretical, too short term and so doomed to failure is now seen by managers as quite luxurious. In all but the potentially *Daily Mail* headline-threatening cases we struggle to implement approaches that are other than immediate crisis containing. Therefore, while the effectiveness research literature is growing exponentially with much better-quality trials and systematic reviews than hitherto (see Maynard & Chalmers, 1997), practitioners often struggle to provide other than 'homeopathic'

doses of what is scarcely known to be helpful, such as dietary advice from non-specialist GPs and nurses in cases of anorexia nervosa (which is known *not* to be helpful), or counselling for ADHD unless it contains a substantial behavioural training element (which it often does not).

No one ever learned to swim by attending seminars on the subject, yet our long-standing cultural preference (both generally and professionally) is for 'look no hands' forms of attempted psycho-social influence. Society accords greater prestige to a lengthy verbal disinterment of the allegedly deep, dark origin of phobias and other anxiety-based conditions than to an approach based on staged exposure by a psychiatric nurse or social worker, which is often seen as mere technical back-up. Nevertheless, the first approach is very unlikely to be effective and would take a long time until this became clear; the second approach would be likely to be very effective over about six weeks and thus represents a bargain. Cognitive-behavioural approaches – explicit examination of thought patterns, explicit behavioural analysis (see Craighead et al., 1994, 2004; Persons, 2008; Hollon & Beck, 2004; Sheldon, 2011) or other similar methods that acknowledge the gap between insight, understanding and overt behaviour (the most underestimated obstacle to clinically meaningful change) – account for a substantial part of the positive results that we find in contemporary effectiveness research. The problem is that the academics, particularly those from the sociological and psychoanalytic diasporas, who can still decide what is on the menu do not always share this view; a particular problem in social work (see Macdonald & Sheldon, 1998; Sheldon & Macdonald, 2009; Sheldon, 2011), where non-directive (arguably, *covertly* directive) counselling still enjoys a lazy, privileged status on courses. A thought experiment: imagine bumping into Carl Rogers (the father of non-directive therapy) on campus, asking the way to the library, and getting back the reply: 'I sense you feel lost.'

Judiciousness

> Having or exercising sound judgement; discrete, wise, sensible. Now *esp*. (a) sensible in relations to practical matters; wise in adapting means to ends; capable and careful in actions, prudent; (b) sensible in intellectual matters; sound in discernment. (*Shorter Oxford English Dictionary*)

When I was a student, about the wisest piece of advice I was given by a (deeply Freudian) supervisor was: 'Don't just do something, sit there.'

This is exactly what evidence-based practice requires. It depends on reading, thinking and planning, and so, particularly today, is somewhat counter-cultural.

When I became Director of the Centre for Evidence-Based Social Services at the University of Exeter (a research and development collaboration between the Department of Health and 20 local authorities in the South West and South of England, charged primarily with the dissemination of 'research of good quality'), my first decision was to set up a large (n = 10 000) random stratified survey of what professional staff already knew. This was in order to produce a baseline of knowledge and research-informed practice, against which to measure later influence. What else would you expect given the centre's title? However, it was quite a struggle to hold doggedly to our 'no interventions before a research review' policy. The instrument used sought not only to gauge attitudes to collaboration, existing reading habits and so on, but for those who said they were engaged in research-informed practice it also contained short 'exam questions' on what they already knew and did. While the enthusiasm was there, the results on existing knowledge were dire. This large group of qualified staff did not really *have* reading habits, did not know what the features of a systematic review are, could not name a single trial of an intervention and did not know *any* client opinion studies except for one that was 44 years old (see Sheldon & Chilvers, 2000). The reaction of the (usually supportive) directors group was that *something* had to be done *now*, and what we needed was 'the delivery' of more 'paper products' (presumably for people to continue not to read).

Such frustrations will be familiar to all staff who are part of projects and initiatives where narrow, and not always well-selected, 'targets' take over. Judicious reflection is harder to procure, because from the outside it can look like procrastination and dawdling. However, the same pressures to *do something* also occur in patient/client cases. In statutory agencies, an overload of referrals and limited resources combine to ensure that only the most demanding and riskiest of cases make it through to being seen. Therefore, risk-containment measures take priority over careful assessment. Once these immediate pressures have subsided, the temptation is to move on to the next urgent, potentially dangerous case, as in the trick of keeping 28 plates spinning at once, which conjurers perform deftly by always focusing on the newly wobbly ones. This policy is about weathering crises rather than resolving them. So although assessment is ideally a definite, collaborative, diagnostic phase near the beginning of a case, it has considerable competition.

I introduce these comments here to make the point that judicious professional behaviour will not always attract reinforcement – you may have to provide your own and/or gather a group of like-minded colleagues around you. Judiciousness implies the weighing of competing claims in the research literatures, deciding explicitly how best to proceed and negotiating your expert views with the expert knowledge that the client possesses of his/her own history. It is what we expect from our doctors, dentists and gas fitters – and remember, social workers and nurses can cause *much* more enduring pain than dentists.

Let us review some of the remaining obstacles to doing so. First, Freud was right, if extreme, in his analysis. Human beings are not entirely rational creatures; we are influenced by emotions in most things that we do and decide (see Damasio, 1994). There are two possible approaches to the fact that our brains are preferentially wired, and that the usual balance between analytical functions and emotions can be easily disturbed (being in love, or feeling that one's status or competence is in question). One can either take the 'postmodernist' view that rational appraisal is therefore a mythical conceit (see Webb, 2001, and my counterblast, Sheldon, 2001) or one can decide to take additional precautions – epistemological and methodological obsessive-compulsiveness in a good cause. A recent neuro-psychological treatise on the particular points and types of judgement call where human brains are prone to stuggle, as with the ubiquitous, but rather flawed notion of 'multitasking', tells us what typically goes awry and why, and what *kind* of extra precautions we should take (see Levitin's *The Organized Mind*, 2015).

Most readers will be familiar with the teasing images of optical illusions presented in psychology textbooks: tables of *obviously* different shapes and sizes that when measured turn out to have identical proportions, triangles shining brightly out of an array of shapes that have no material existence at all, and so on. Even when you know that what you are seeing is not objectively there in that form, it is difficult to make the illusion go away, suggesting that some observational habits are, otherwise usefully, wired into our brains. Such distortions can be readily replicated across all five senses and are mirrored in certain thinking patterns and in the selective ways in which we use memory (see Gregory, 1979, 1986). Perception is thus a constructive activity and it bears little relationship to any camera- or tape recorder-like function. Given that we swim in a sea of *potentially* significant stimuli, evolution, and its gift of learning and conditioning (see ch. 3), has selected alertness to early harbingers of danger or satisfaction, and to assemblies of co-converging stimuli, in such a way that our brains readily see *Gestalt*

patterns in spatially and temporally disparate signal arrays. In other words, we humans have meaning on the brain.

I used to perform the following little experiment in a psychology class. During a discussion of research on the long-term effects of child sexual abuse, I would arrange for one student to leave, mouthing an 'excuse me'. During her short absence one noticed students glancing meaningfully at each other and shifting in their seats. When asked what the trouble was, they would always shrug and look bemused at the question. Persistence, however, revealed fairly definite concerns that the subject matter was particularly difficult for some people, perhaps as a result of personal experiences. The student returned and I would ask her, 'Is everything OK?' 'Yes, sorry, I just needed the loo,' would be the reply. Nevertheless, my confederate would commonly report that her classmates thought the toilet scenario was a cover for something else (which it might well have been), so solicitous behaviour continued after the lecture until an explanation was given. Theories are sticky, and we cannot *not* have them. We almost automatically develop theories about disparate pieces of information; we 'join the dots' in pursuit of more predictive coherence. This effect can also be seen in the way in which professionals approach disparate research findings. Our identities and self-esteem are to a degree tied up in what we typically believe, say and do. We are in possession of settled attitudes (only seriously neurotic people warily evaluate every situation afresh). Therefore, rather than developing all-forgiving 'crushes' on theories or studies (regardless of their methodological origins) that are supportive of a given, familiar, consonant form of practice, we should instead 'stay cool', as we used to say. This sort of thing:

> In studying a philosopher, the right attitude is neither reverence nor contempt, but first a kind of hypothetical sympathy, until it is possible to know what it feels like to believe in his theories, and only then a revival of the critical attitude, which should resemble, as far as possible, the state of mind of a person abandoning opinions which he has hitherto held. Contempt interferes with the first part of this process, and reverence with the second. (Bertrand Russell, 1946: 58)

By coincidence, I have just finished reading Randall Jarrell's *Poetry and the Age*, a masterly dissertation on modern(ish) poetry. His insight into the difficulties that readers have with poetry is basically: 'Why should you expect to find it easy?' Poetry is about the *concentration* of meaning. Research studies also concentrate meaning and experience, and

they too require careful appraisal, not bullet-point lists of answers. That said, researchers could do more to render their papers more accessible to practitioners (see Moher & Berlin, 1997; Goldacre, 2008). At present, academics tend to write for other academics, in the hope of gaining stars from government auditors. The Cochrane Collaboration (see Chalmers et al., 1997) has an admirable plain-English section in every review that it publishes. However, this still leaves the problem of dissemination, which I contend is much more than putting a research project on a website. Studies and policy documents come 'flat packed' and expert help is often required to help practitioners put them together. It is possible to imagine that graduate training should 'condition' students to be able to appraise research, and to spot methodological flaws. This is best done by making a course in critical appraisal the first thing that students hear about after the welcome speech. That is, the learning should be foundational, and applied to all subsequent elements of the course as part of the dialogue between students and staff, so that it becomes generalised and second nature.

Medicine is probably the ultimate applied science and has certainly made the most progress in evidence-based practice, but, contrary to popular belief, it did not invent the idea. Controlled trials were being conducted in psychology, the behavioural sciences and social work before, or at the same time as, the first experiments with antibiotics in the 1950s (see Sheldon & Macdonald 2009: ch. 3). Nursing (Florence Nightingale's pioneering, if rough-and-ready statistical work notwithstanding) has only recently developed a commitment to evidence-based practice on its technical side (there is now a *Journal of Evidence-Based Nursing*), but progress in its community-based aspects is less well developed.

Social workers, with no pills to dispense (the equivalent would be the prescription of sums of money to clients for the alleviation of poverty), face complex, dangerous problems, embedded in powerful sociological factors, and have to use *themselves* in the helping process. Still, they would be well advised to embrace basic scientific principles where they can. The methodological means is available. Unless we do so, most changes affecting the way practice is carried out will be shaped by politically inspired 'shake-ups' and endless departmental reorganisations, which occur with Newtonian predictability whenever a new director is appointed. (I know of no better treatise on what typically happens when questions of evidence are absent from practice or service planning than Eileen Gambrill's excoriating *Propaganda in the Helping Professions* [2012], which I would strongly recommend reading if you can.)

Front-line practice has been studied via randomised controlled trials (RCTs) and systematic reviews of these, but they are too few in number given the importance of the task. Sometimes, too, they produce uncomfortable findings. Long-term counselling based almost entirely on verbal exchanges does little good; 'getting tough' with delinquent children makes them worse (see Petrosino et al., 2013); counselling and dietary advice for anorexia nervosa, or for incipient schizophrenia, does the same, and so too for clinical depression (see Lambert, 2011a); lastly, behaviour management training for foster carers whose children have serious problems makes little impact on the tenure of the placement, although it does make carers feel more confident (see the trial by Macdonald & Kalsovskis, 2003). However, applications of cognitive-behavioural and learning theory, within a task-centred, performance-based model, *do* make a worthwhile difference in such areas (see Sheldon, 2011; Hollon & Beck, 2004). The only problem is that they are not always taught as *mainstream* subjects.

Early experiments with negative and disappointing outcomes (see Sheldon, 1986; Macdonald & Sheldon, 1992) persuaded a whole generation of social work academics, that perhaps 'the appliance of science' was 'inappropriate' to their field:

> Social scientists, like medical scientists, have a vast store of factual information and an arsenal of sophisticated statistical techniques for its analysis. They are intellectually capable. Many of their leading thinkers will tell you, if asked, that all is well, that the disciplines are on track 'sort of' more or less. Still, it is obvious to even casual inspection that the efforts of social scientists are snarled by disunity and a failure of vision. And the reasons for the confusion are becoming increasingly clear. Social scientists by and large spurn the idea of a hierarchical ordering of knowledge that unites and drives the natural sciences. Split into independent cadres, they stress precision in words within their speciality but seldom speak the same technical language from one speciality to the next. A great many even enjoy the resulting, overall atmosphere of chaos, mistaking it for creative ferment. (Wilson, 1998: 201)

Of course, there *are* serious difficulties in studying human beings in their social context, just as there are serious difficulties in teasing out the contribution of social and lifestyle factors in physical illness. Wilson actually acknowledged this, and suggested that the social sciences should

be called 'the hard sciences'. Nevertheless, his review of the benefits of *consilience* – that is, the bringing together of insights and knowledge from different specialisms, such as biology, psychology and sociology – paves the way for better-informed multidisciplinary interventions. Problems rarely fit into one box or the other, after all, certainly not in our fields.

Good progress has nevertheless been made with the idea of evidence-based practice. The Cochrane Collaboration (see Chalmers et al., 1997) has a psycho-social reviews section; the Campbell Collaboration, a sister organisation, maintains reviews on social policy, social work, penology, education and so on. These should be our first port of call when we are looking for secure evidence on how best (and safely) to intervene in the lives of others.

Current best evidence

Let us deal with *current* first. This stricture reminds staff that knowledge of causation, aetiology and course in developmental problems has implications for therapeutic intervention. Serious mistakes were made in the past. For example, worry and frustration leading to increased stomach acid were seen as the cause of ulcers for years, and some patients in the United States received psychoanalysis for them until the mid-1950s. Dr Spock, who wrote a bestselling book on child care, recommended (on no good evidence) that babies should be put to sleep on their stomachs, and in all probability some infants were put at risk because of respiratory inhibition. Anorectics tend to have anxious, somewhat emotional families (well, you would be) and such factors are often the main focus of professional attention, but are they causal or reactive? Therefore, there are obvious ethical and technical obligations on staff to keep abreast of and to appraise new findings.

However, because most of us have been conditioned into 'ribbon of history' thinking about the past and the future, we have a 'things can only get better' mindset. The media conspire with this, announcing 'new scientific breakthroughs' twice a week on slow news days. The idea that new is best can get us into trouble. For example, where there is an established body of evidence, based on well-conducted RCTs and systematic reviews, then we should be cautious of new but discordant reports from single experiments. Science usually proceeds incrementally; ideas should not be given 'sell by' dates in the curriculum. For example, while Piaget's (see ch. 4) findings on intellectual development have evolved and been amended in their particularities, they

have stood the test of time as a paradigm for future investigations, and have been modified rather than refuted. Pavlov, who wrote much of his best work in the 1920s, is still essential reading for anyone wishing to understand how behavioural change occurs. B.F. Skinner's (1953) notion that 'behaviour is a function of its consequences' has been *augmented*, not replaced (see Bandura, 1969; Beck, 1970, 1976; Sheldon, 2011). Current best evidence, therefore, does not always equate to *newest* evidence. The idea requires that we attend to modifications to the scientific consensus, provided that they are based firmly on rigorous research. Where this does not occur, we get into the kind of difficulties recently seen regarding MMR (measles, mumps, rubella) vaccination safety. Staff need to be taught how to interrogate previous findings and to incorporate the new only if it passes the necessary bias-reduction tests.

The problem here is that professional training is often seen in 'ballistic' terms; that is, there is an assumption that one blast of learning will propel us onwards for a lifetime, perhaps with the odd booster session now and again. However, it is worth remembering that basic professional training is foundational – it constitutes an embedded structure on which to build. Post-qualification training remains a haphazard affair in some professions, and will struggle to make good a lack of a priori knowledge. In the CEBSS survey (see p. 14), 90% of existing top-up training was found to be concerned with new administrative procedures.

It is the word *best* in 'current best evidence' that causes most problems, for three reasons:

☐ 'Availability bias', where certain familiar, high-profile issues jump out at us from a background field.
☐ Because we are consonance-seeking beings, it is easier to add to a body of theory or empirical results that we already have in our head than to entertain substantial revisions.
☐ The more our professional *behaviour* has been affected by what we already know, the harder it is to incorporate new and better research.

The qualities of theories

The quality of theories *is* strained. They are not created equal. There are some that have great, purported, explanatory range, but others that have grown out of scattered empirical observations and are an attempt at coherence: 'joining the dots'. The word 'theory' has two meanings in

English: first, the bringing together of plausible, scientifically accepted principles or bodies of knowledge to explain phenomena; and second, abstract thought and speculation.

Many texts and courses on developmental psychology avoid the conflict of propositions present in theoretical writing. However, theories try to explain what either should or is unlikely to happen at different stages, and they cannot all be right, since they predict different things. Presenting them alongside each other without noticing the conflict and leaving the reader to decide gives a 'democratic feel' to the discussion. It is as if theories were like party political views or fashions: good for classroom or office harmony, perhaps, but bad for the development of disciplines, which should get better and better at explaining their subject matter. Here I outline some of the factors to consider when evaluating the validity and reliability of theories.

First, the relativist position that theories are simply points of view and that all are worthy of serious consideration is logically false because many of them contradict each other regarding the causation of psychological and social problems; and we do not actually just consider them, they guide what we *do* and we use them on vulnerable people. To call a point of view or a course curriculum 'eclectic' (from the Greek *eklectikos*, 'selecting such doctrines as please us in every school', *Shorter Oxford English Dictionary*), although a nice-sounding, broad-minded concept, is both logically and ethically at odds with this. Thus, does the development of an adequately functioning conscience depend largely on inherited factors (Spector, 2012) or does it depend on environmental experience (Bandura, 1969)? If both, then how do these two influences interact, and which is predominant in what circumstances? Alternatively, does this socially essential faculty reside in a resolution of Freud's Oedipus complex, wherein sexually inspired mother love is threatened by the existence of a rival? We have all seen *something* like this at work; I experienced it myself when my father finally came back from the Second World War and, without so much as asking, took over from me as the main recipient of my mother's affection. Or is it a matter of having available nearby examples of how to behave (Bandura, 1969), or regular reinforcement (Skinner, 1953) for reading the mind states of others and accommodating them (Ramachandran, 2011)? Or is it all a question of the development, through specific stages, of moral reasoning abilities (Piaget, 1965)? Just recognising all these explanations as 'interesting' and whizzing them up together in some sort of cognitive blending machine will simply not do, as emulsions of logically

incompatible materials are always temporary, at least in an intellectually curious discipline.

The next test of a theory is the extent to which it is empirically grounded. That is, do regular observations by different people give credence to it? More importantly, do things happen that should not happen if it is true? A good example of this kind of refutation (see Popper, 1963) can be found in Piaget's theories of infantile thinking (see ch. 4). According to his theory, infants have no concept of the mental conservation of objects once they are out of sight, which is what makes the game of 'peek-a-boo' so entertaining to babies. They react to the reappearance of a face as if it had previously gone away for ever. But then someone had the bright idea of presenting a teddy bear travelling along a wire in front of the infant, switching off the lights, but continuing to film in infra-red. The child does not in fact give up on the continued existence of the object: its eyes follow the trajectory of the toy, trying to work out where it should be if it had continued moving (see Donaldson, 1978). Thus, Piaget's conceptions of the early stages of intellectual development are awry regarding the age at which children develop certain cognitive abilities.

Thirdly, some grand, all-explanatory theories run no such risks of refutation since they are pre-immunised against criticisms made on empirical grounds. Thus, if you find the idea that your boyhood love for your mother could get out of hand (the Oedipus complex) and that you might risk castration by your competitor, so you had better identify and model yourself on him, then the fact that you have no notion of any such thing ever happening just goes to prove the case: you have repressed the conflict because of the threatening character of the idea. It is the same for little girls, who allegedly feel that they have already undergone the operation (the Electra complex); the fact that no one has ever been able to find such a woman, again testifies only to the power of the deeply embedded secret. The same can be said of wider social theories that purport to offer us a blueprint for how we should live. Marxism, for example, typically results in bloody tyranny, wholesale death and economic ruin. Yet its remaining advocates argue that this negative point of view is the result of false consciousness determined by class position and/or that the recipe has never been *properly* tried. 'Guns are only bad because people misuse them' is the mantra of the American National Rifle Association, missing the point that some things and some ideas have it in them to make evil and wrongdoing *easier*. Eugenics, however scientifically framed, and unbridled global capitalism are two cases in point in my view.

Be wary, then, of theories that purport to explain *everything* – even why you might have difficulty in believing in them. For example:

> I found that those of my friends who were admirers of Marx, Freud and Adler were impressed by a number of points common to those theories and especially by their apparent *explanatory power*. These theories appear to be able to explain practically everything that happened within the fields to which they referred. To study any of them seemed to have the effect of an intellectual conversion or revelation, opening your eyes to a new truth hidden from those not yet initiated. Once your eyes were thus opened, you saw confirming instances everywhere: the world was full of verifications of the theory. (Popper, 1963: 5)

Karl Popper's great idea was that we should learn to prefer theories that contain 'risky predictions'. This is a little counterintuitive; why not prefer the all-explanatory? The answer is that theories are often pre-immunised against disbelief and against contrary empirical findings, and are more like religious beliefs than bodies of knowledge that can be checked. There are many 'postmodern' versions of theories in child development. They all go in for 'pre-emptive disqualification', so that if you disagree with them you are *obviously* a blinkered critic.

It goes against the grain, but we learn more from being clearly wrong than, in a way, being sort of right (see Schulz, 2010). Here is Popper's advice: 'Every "good" scientific theory is a prohibition: it forbids certain things to happen. The more a theory forbids, the better it is' (Popper, 1963: 36). Or take Albert Einstein, who once dismissed a criticism of his theories on relativity as 'not even wrong'.

The practical upshot of all this for our own fields is that we should prefer cognitive-behavioural interpretations of what to do about problems in childhood, because if 'symptom substitution' occurs, as opponents suggest will be the inevitable case, then this will be readily apparent. In fact it does not occur, even in studies designed to uncover it (see Lambert, 2004; Sheldon, 2011; Eysenck, 1985), so the principle of falsifiability is better served by this body of research. Another example would be attachment theory (cue Dvořák's 9th), a ubiquitous feature of courses in child development, but one in real danger of outstripping its empirical base (see ch. 4). Built on a metaphor of Konrad Lorenz's ethological research, topped up by John Bowlby's studies of the psychological effects of child displacement during the Second World War, the subsequent empirical research has produced patchy, overlapping results

at best, yet the theory continues to expand its influence. There is something *like* it at work in early child/parent relationships, but there may be more parsimonious explanations of what exactly that is.

What applies to theories that make their way into textbooks also applies to those that we entertain regarding patterns of possible causation in our patient/client cases. Asking 'What would it take to make me believe that what I think about the origins of this problem is mistaken?' is good discipline. Also, there is often a preference for progress-monitoring schemes based largely on self-reports (which are notoriously subjective and flattering of professional effects). Our goals either need to be anchored in standardized pre–post tests, or to contain an element of refutability. Goals are points to steer by, and the last thing that we or our clients/patients need when navigating choppy waters is a *flexible* point. A recalculated point, given a new fix on a problem, is a different matter.

The next criterion of worth is *testability.* A preferred theory should have a legacy of empirical non-refutations; that is, a research track record showing that the ideas and their clinical implications have survived (so far) a number of rigorous tests. It is surprising that many of the most popular ideas regarding psychological development have yielded so few of these. The ideas remain popular for the following common reasons:

☐ They are usually deliciously complicated, so that if one element comes under attack, proponents can point to all the others as remaining 'promising'.
☐ They tend to offer the possibility of professionally flattering results.
☐ They usually require special indoctrination, tests of which sceptics are unlikely to pass.
☐ They are subject to regular, evasive reformulations, to cope with each new empirical prod.
☐ They tend to splinter into 'sects', as in family therapy where one group has great difficulty in talking to another.

'The narcissism of small differences' Freud called this – and he would know.

The next test in this process of evaluating theories against each other is clinical relevance. What is the *practical* utility of a given set of ideas about causation and aetiology? Do we regularly see improvements as a result of applying a given theory that do not occur if the ideas are not

followed? George Bernard Shaw put it well when he described psychology as being in danger of 'getting to know more and more about less and less'. I have just reviewed an academic paper showing that a group of American university students, assessed as having poor short-term memory, have most difficulty in circumstances such as (guess what?) lectures. Glad to know that for sure, but the 'so what?' test is one I continue to urge on professionals – if you do not see the point of a piece of research, the fault does not *necessarily* lie with you.

The next question concerns the simplicity or otherwise of a given theory. What does it hypothetically propose and predict? This is not merely a matter of presentational style; although a large survey on the reading habits of health and social care staff put impenetrability of the technical language as the second reason for not reading papers (see Sheldon & Chilvers, 2000). Rather, this is a question about the extent to which a theory yields up useful propositions that can be tested straightforwardly in practice. A good example would be found in the treatment of anxiety reactions, where via experiments and practice evaluations quite elaborate procedures have been pared down to their essentials – exposure and the development of less catastrophic cognitive rationales in order to sustain it until the anxiety subsides (see Cooke, 1968; Craighead et al., 1994; Sheldon, 2011). From the research point of view simplicity means fewer red herrings to chase and, from the practice perspective, the chance of efficiency gains.

Correlations are not necessarily causes and *post hoc ergo propter hoc* (after this, therefore because of this) is a logical fallacy. That something happens alongside a psychological condition does not mean that it was the cause of the condition. Let us take an example from the mental health field. Depression usually carries with it profoundly negative, pessimistic, self-blaming thought patterns. Are these the cause of the condition, or do they merely come with it? Lewinsohn and colleagues more or less settled this matter when, instead of choosing clinical samples of the already depressed, they selected a large community sample, administered an inventory for depression and its cognitive correlates, and then waited to see who was diagnosed. Here is a summary of the results:

> Prior to becoming depressed, these future depressives did not subscribe to irrational beliefs, they did not have lower expectations for positive outcomes or higher expectation or higher outcomes, they did not attribute success experiences to external causes and failure experiences to internal causes, nor did they perceive themselves as

having less control over the events in their lives. (Lewinsohn et al., 1981: 218)

Thus, we must take care not to mix up concomitant, symptomatic factors with causes when we think about the origins of conditions.

Finally comes an awkward stricture for those of us who entered the helping professions to try to do some good. When no convincing explanation is available, the best that can be done is to attempt to develop what Karl Popper called 'criteria of relative potential satisfactoriness'; that is, what would a good theory, and a series of probing experiments to test it, look like?

The quality of research

Now we must turn from assessing theories about causation to considering the quality of studies of the effects of *interventions* at various levels (medical, psychological, social) designed to ameliorate the malign effects of problems and conditions. There are several known biases that are ubiquitous in research, which include the following:

☐ *Publication bias*: it is far easier to get a study of positive outcomes into print in any field than a rigorously conducted study with negative results. Therefore, it is essential that reviewers get hold of *all* research material on a particular intervention. This is a particular problem in pharmacology, where studies have been routinely selected for their sales potential, but is thankfully beginning to fade.
☐ *Confirmation bias*: there is a human tendency to select findings from a study that indicate progress based on familiar methods. An interesting device to hold this problem in check is to give expert reviewers only the methodology sections of a paper and withhold the results section, which is assessed separately (see Littell, 2008; Littell et al., 2008). This problem of subjective, often unconscious bias in assessing propositions has long been known about: as long ago as the seventeenth century, Francis Bacon (1604) said: 'It is the peculiar and perpetual error of the human understanding to be more moved and excited by affirmations than negatives.'

Table 1.1 summarises the main approaches to bias reduction in empirical research. This is the standard model, as methodologists might call it, although the problem is that it is not yet standard on training courses, nor in practice.

Table 1.1 Levels of attributive confidence in different types of research

Methodology	Procedure	Attributive confidence
Systematic review of randomised controlled trials, or meta-analysis of controlled trials These look at effect sizes from comparisons of one approach with another, with care, with the standard or with no intervention across many studies of the same type. The case for extending pre-registration for all trials is well made by Roberts et al. 2015 and Miguel et al. 2014	The pre-publication of a search strategy (usually involving both electronic databases and hand searching of journals) against specific inclusion and exclusion criteria. They cover issues regarding relevance and methodological sufficiency. An exhaustive search of data sources, an unvarnished presentation of results and implications and regular updating are other hallmarks.	These studies maximise bias reduction, so much so that almost always the effect sizes (degree of comparative benefit) against hard outcome indicators are reduced in comparison with other methodologies. If well conducted they provide the most secure results. If they produce negative outcomes, then they are still very valuable in advising what *not* to do. See Higgins and Green (2008); Littell et al. (2008).
Single experiments These compare the effects of an intervention with an attention, placebo control or other-treated controls, since attention and belief in the expertise of helpers also have strong effects. Best of all (but rare) are studies comparing three conditions: no intervention, standard intervention and test intervention.	Random allocation to two groups (within which good-sized samples iron out differences between recipients). One group then receives as consistent as possible exposure to the intervention under test. The other receives non-specific attention or another service. Outcomes are assessed against specific quantitative outcome indicators (e.g. readmission to hospital, recidivism). Such findings can be backed up by standardised qualitative tests.	Maximal bias reduction, but single studies can sometimes be errant (either positively or negatively). Standardising (that is, making as uniform as possible) the intervention 'ingredients' poses problems, but large samples help to average out intervention differences. Subanalysis of service-provider variations can also help to reduce this problem. Differential dropout rates require particular attention.

Table 1.1   (Continued)

Methodology	Procedure	Attributive confidence
Single experiments with a non-intervention control group	Random allocation of subjects; some get as consistent as possible exposure to a given approach and others are left to their own devices.	Very substantial bias-reduction properties, but do not tell us how far any differences between groups are due to the specific approaches under test or non-specific attention factors. Replications or even concordant findings from quasi-experimental or pre–post studies increase plausibility.
Narrative reviews These are not usually as exhaustive as systematic reviews and tend to have lower inclusion and exclusion criteria. They can also contain research using different methodologies. In such cases findings should be 'layered'; i.e. it should be possible to see what results come in what proportion from which methodologies.	Authors draw up a list of topics that they wish to search, e.g. 'social work in general hospitals' or 'supported housing for learning disabled people', and then track down likely sources and look for emergent trends and implications.	Suffer from the problem of 'convenience samples', i.e. sources readily available to the authors, and from a higher possibility of selective perception than where a very tight, pre-published protocol is in place. Nevertheless, these are worthwhile and convenient summaries, sometimes coming close to later, more systematic reviews in their conclusions for less cost and labour. A good starting point for something more rigorous.
Quasi-experimental studies	These are comparison studies but without random allocation, therefore we can never be sure that we are comparing like with like, although case-matching can increase confidence.	An underused investigative method since it compares the results (usually pre and post) between areas where an approach is in use and a comparable area where it is not. Very useful for use in social services and health, where different services are routinely introduced in one area but not in another, and so a good source of hypotheses for more rigorous tests.

Pre–post tests
Sometimes known as time-series designs, these compare problems and gains on a before-and-after basis in a single sample.

Baseline and preferably standardised measures are taken in key problem areas prior to intervention (see Fischer & Corcoran, 2004 for an accessible manual). The tests are then repeated at the end of the programme for comparison purposes.

Most evaluations in social and health services are post only (see next category) and so it is difficult to calculate the value added. This approach takes 'snapshots' of functioning on a before and after basis. Nevertheless, it cannot determine the extent to which any improvements that occur are due to the mere passage of time (maturational factors) or to other collateral factors unconnected with the intervention.

Post-test-only measures
This approach reviews outcomes only, without the benefit of specific pre-intervention (baseline) measures.

A sample is chosen against criteria of need, type and extent of problem(s). The intervention is made, and then measures of outcomes are conducted. These can be compared with the general literature.

Since most community approaches and projects are still not evaluated at all, these are better than nothing. They can be improved by standardised referral criteria being in place at the outset.

Client/patient opinion studies
Largely qualitative studies (occasionally with quantitative elements such as scales). Usually post test only, but there is no reason why pre–post qualitative measures should not be taken (there are, however, few examples of this happening).

A sample of clients receiving a particular intervention, or those with a particular set of problems receiving a range of interventions, are interviewed for their opinions on the effects of services and, more usually, on the *way* in which services are provided.

These studies are rich in qualitative detail about what it is like to be on the receiving end of services. However, a common problem is representativeness. Do the respondents in the sample reflect the range of service user and problem characteristics? Random sampling of populations helps here. Such studies should be routine in social services and health as part of the service-planning process.

Table 1.1   (Continued)

Methodology	Procedure	Attributive confidence
Single case designs Largely quantitative measures (although standardised qualitative measures could also be included); see Fischer and Corcoran (2004).	Measures are taken on a before and after (AB design) or before/after/follow-up basis (ABA designs) or even in experimental forms (ABAB designs), where interventions are baselined, the intervention made, then withdrawn, and then reinstated and any differences noted. Mainly used in behaviour therapy, although there is no reason why this should be so, provided that case-specific behavioural change in line with the aims of a given approach are pre-specified.	Should be more widely used by practitioners whatever the intervention method in use. Enable staff and clients/patients to assess progress and adjust accordingly.

There is one further source of evidence to consider, the role of *books* (such as this one) in keeping professionals abreast of reseach in their fields. Although I think that the news of the demise of the book is somewhat premature, books do have both advantages and disadvantages over electronic systems for keeping up to date. The drawbacks lie in the time that it takes to produce a book, and the speed at which they can go out of date. They are fixed in time and nowhere near as readily amended as internet sources when new information comes to light. The advantages of books lie in their electricity-free portability, and the fact that experienced/expert authors (if you trust their judgement) have already done much of the work of reviewing and consolidating research trends and placing them in their historical context; there is more space for discussion of the implications of findings for practice; and they can be paradigm-defining in a way that single studies and reviews cannot. Compare that to the tendency for 'internet promiscuity', inputting to Google the name of a particular problem or condition and alighting on one particular study or review, which may or may not have been updated as yet, to suit your favoured belief or intention, and not reviewing the rest. Of course, you could always opt for the best of *both* approaches.

Before we review the contents of Table 1.1 in more detail, there is an important proviso: namely, that there is no single research strategy that is better per se than any other. It all depends on the research question and how clearly it is framed. Thus, if we seek to know about the typical experiences of children in the public care system, we do not need, and probably could not ethically conduct, a randomised controlled trial. What we do need is a fully representative sample, drawn randomly from a large population of children in care (since they are admitted for a wide range of reasons), and we need to ask them a series of largely qualitative questions in a structured way. If, however, we desire to know whether preventative measures in child care (e.g. parent training courses, family support schemes) do in fact *prevent* reception into care, and whether the longer-term outcomes are better than those contained in national figures, then we do need a randomised controlled trial.

That said, the following sections present a more detailed discussion of the hierarchy of methodological virtue presented in Table 1.1. Such a hierarchy is well established in medicine and applied psychology, but, as already noted earlier, it is still struggling to become a settled idea in social care and in some types of community health service evaluation research (see Neale, 2008).

Systematic reviews

At the top of this hierarchy of procedures likely to encourage methodological chastity lie systematic reviews of controlled trials of interventions. These are a wonderful invention (see Higgins & Green, 2008), which allow us to apply the same scientific principles used in RCTs to syntheses of research evidence. If samples are compatible on key criteria, they allow us to combine results and thus to increase statistical power. Systematic reviews can also help to identify promising subclusters worth pursuing in clinical research. The key features of a systematic review are:

☐ A pre-prepared, published protocol setting out what the standards for inclusion or exclusion will be.
☐ A clearly defined research question with inclusion/exclusion criteria attached.
☐ A review question that specifies the types of population (participants), types of interventions (and comparisons) and the types of outcomes that are of interest.

Thanks to the sterling work of the Cochrane Collaboration (see the Cochrane Library of Systematic Reviews) and, after a slow start

but coming up on the rails, the Campbell Collaboration (see www. campbellcollaboration.org), systematic reviews will come to satisfy many of the needs of practitioners when thinking about the best bets regarding therapeutic schemes for intervention purposes.

Systematic reviews have bias reduction at their heart (see Littell, 2008). They have to be methodologically unforgiving of all included studies, whatever their outcomes. They are thus the product of methodological and epistemological paranoia in a good cause.

Another problem that systematic reviews have to confront when combining studies is different population sizes. Therefore, if smaller studies that pass the bar of methodological sufficiency are included, then what is the proportion of overall effects due to these, as opposed to large-sample-size studies (drag or flatter?). In other words, what is the 'signal to noise ratio'? 'Funnel plots' help sort this out:

> This technique is based on the assumption that, in the absence of significant heterogeneity, study ESs (effect sizes) will be normally distributed around the mean effect. Smaller samples will produce less precise estimates with wider confidence intervals, so the distributions of ESs from small samples will be wider than the distribution from large samples. If we plot the results of each study in a meta-analysis with ES on the x-axis and sample size or a measure of the precision of the ES estimate (standard error) on the y-axis, the result should resemble an inverted funnel. (Littell, 2008: 112–13)

The NNT (number needed to treat) and ITT (intention to treat) calculations (a concept already encountered on p. 9) can give practitioners a clear idea of the potential usefulness of an intervention or procedure. In other words, how many clients/patients would have to receive this intervention to produce a clear case of improvement or recovery against a standardised measure? In health, a fairly high NNT in the case of some dire complaint can represent a breakthrough. In social work a 1 in 14 abandonment of serial juvenile offending over three years would justify a drinks party at the Home Office. Ibuprofen, with small side effects, has an NNT below 2; breast cancer screening as an intervention has a high ratio, meaning that 95–97% of people who receive the dreaded 'further investigation needed' letter turn out to be free of the condition (although note that even these sensible, 'better safe than sorry' interventions have psychological consequences).

Finally, it is important to note that the conclusions of systematic reviews have to be screened to ensure that the authors, pleased by the promise of their findings, do not go beyond the evidence. This accounts

for their somewhat dead-pan (Dalek-like) prose style, but it is probably a necessary precaution. I recently attended a conference on child welfare at which *reviews of reviews of reviews* were the subject of discussion. We can only be *so* secure in our findings, and if the interventions are at all potent, then they will outshine background presentational factors. We were once very lax about how findings were brought into being; a possible danger now is that we become obsessive-compulsive about small, not always *clinically* significant differences.

Single RCTs

Single studies tend to be flattering to existing opinion on how best to intervene, or flattering to a particular professional role. Otherwise, they are the best evidence we have of the effects of an intervention.

There are two main common faults in RCTs:

☐ *Lack of proper randomisation*. Random does not equate to 'haphazard'; it is quite hard to attain. I recall an inspection of my social services department where a 'random sample' of case notes was to be drawn. The inspectors mainly selected the easy-to-reach files at the top of the filing cabinets. However, the local population included quite a number of Polish people, who were likely to have names beginning with Z and W, so this 'random sample' (they meant haphazard) excluded their views on the services they had received. It is interesting that because pattern-seeking and pattern-making form such an integral part of our cerebral functioning, we are consequently very bad at spotting randomness. If subjects are presented with two lists, one of merely mixed-up and the other of truly random numbers, they are more likely to reject the latter because of the occasional sequences such as 234, 56, 123 that are not *that* uncommon in random number tables (see Kahneman, 2011).

☐ *Attrition*: are the fates of those who drop out of an experiment tallied in the overall results? Control group subjects often wander off because, having been assessed, they get little or nothing of interest in the no-treatment or placebo conditions.

☐ Convenience samples, where lots of work is done on nearby, easy-to-access people, who may not be typical of wider populations.

Training courses should therefore condition students to be wary of these problems, because post-qualification, *no one* is going to look up and appraise a series of systematic reviews, before visiting Mr and Mrs W, who may or may not be seriously abusing their children.

Narrative reviews

The main problems with these expert selections of promising research findings are usually due to a failure to move beyond readily available sources (although the internet is changing all this). For instance, there were once two biographies of Voltaire published in the same month, one from two academics based in Paris, and one by a British professor based in Cambridge. There was a startling lack of overlap in the sources used and the conclusions drawn regarding key biographical events, main influences and so on. Indeed, one could well have been reading about two entirely different people. The question is, on what nearby archive material did each author rely, and what did they neglect since it was stored elsewhere? The same problem exists where researchers confine themselves only to their own discipline or profession (see Wilson, 1998).

Quasi-experimental studies and pre–post tests

RCTs are expensive and difficult to conduct. Therefore, in order not to 'make the best the enemy of the good', we might gain *some* prospective knowledge of what happens when a new intervention is introduced in one area (usually as a project) and not in another. Such potentially exploitable patterns are ubiquitous in British health and social services, but are not always studied, nor are the recovery rates of people on waiting lists, of which we have plenty (people on waiting lists for surgery for severe lower back pain often cancel because of 'natural' recovery).

Randomisation to experimental or control conditions is our very best precaution against the multiplication of differences between subjects: the simple variances between and 'untidiness' of human beings and their circumstances. How can we statistically take into a study three or four diagnostic criteria, four or five socio-economic factors, gender, ethnicity, educational background and so on without a *huge* sample? Without randomisation – to which there are still strangely unthoughtful 'ethical' objections – we have a situation in which it is perfectly acceptable to subject an entire population to an intervention of unknown effectiveness, but not half of it, even if the control subjects are to get delayed access should the intervention prove useful.

However, in pre–post tests, the alleged influence recorded at the evaluation stage might actually be little to do with the intervention under test, rather than to changing socio-economic circumstances, changing employment opportunities or simply maturation. This leaves users of such research with the following problems:

☐ Generally, a group-controlled or time-series design is better than nothing; if, that is, the caution usually urged on us regarding its interpretation is actually exercised, no matter how consonant or appealing the reported results.

☐ Pre–post tests are, again, better than no comparisons at all. The obvious problem is that it is not logical to infer a causal effect due entirely or largely to the intervention. The addition of a follow-up period, when the intervention has ceased, does something to boost our confidence.

Qualitative research

The commonest form of qualitative research is the client/patient opinion study – asking service users 'How was it for you?' to establish what they thought of what they got and how to improve on it. Interestingly, the first of these was conducted in a deprived area of London in 1970 (the year *after* we landed on the moon).

Whereas experiments, and systematic reviews of them, have most of their problems at the *front* end – e.g. setting up a strict inclusion/exclusion protocol – qualitative studies have theirs at the *back* end. This is because they generate masses of data on 'how' and 'why' questions, which are more subjective in nature than 'how much' or 'for how long' questions. I once worked next to an avowedly qualitative researcher who listened to hours of tape recordings of clients' testimonies. One could hear the editor's foot pedal clunking next door, and could not but wonder why *that* particular piece of information was less relevant. The answer is that, unwittingly, purely qualitative researchers tend to follow themes; they have to.

Here are some ways in which we could improve qualitative studies:

☐ Preferably, samples should be selected randomly, not just because there is a group of clients/patients available nearby – otherwise the question of *representativeness* arises. Local service evaluations require the same precautions if the numbers involved make a whole-population survey too cumbersome. Two further points of vulnerability are using personnel closely connected with the service as interviewers, and extrapolating results beyond this group to others with similar problems but living in quite different circumstances.

☐ Greater use could be made of standardised measures (e.g. activities of daily living or ADLs, quality of life measures, cope-ability scales, the Rosenberg Self-Esteem Scale, Hamilton Rating Scale for Depression

etc.) rather than basing conclusions on 'telling testimonies' alone (see Fischer & Corcoran, 2004).

☐ Studies could be organised on a pre–post or group-controlled basis.

☐ Interview schedules should be pre-piloted, so that respondents can be asked for more behavioural examples rather than merely opinions about an issue.

☐ Independent interviewers should be used more widely.

☐ Software is available, and should be used more often, to prevent over-selection of given themes when drawing conclusions from data.

☐ A conflict-resolution protocol should be in place to resolve disputes between researchers regarding the significance of particular comments.

Such research is methodologically awkward, but then life and its vulnerabilities are often more about questions of quality than quantity.

Single case designs

These largely quantitative pre–post measures of actual behaviour are standard only in behaviour therapy, but they could easily have wider application (see Sheldon, 2011); if, that is, professionals using whatever approach could be persuaded to attach observable, behavioural indicators to their goals.

The basic idea is simple: a before-and-after comparison of a particular piece of behaviour (see p. 142 for an example). It is hard to overestimate the value of a baseline measure prior to intervention. Quite often, case records claim progress without much of a record of what the a priori rates of troublesome or potentially useful responses were. It is, however, an uncomfortable fact of professional life that some problems improve with the mere passage of time, not necessarily because of any particular intervention.

Twelve basic questions to ask of a research study

Whatever the research design, there are certain questions that we can ask if we wish to evaluate a research study, and these are discussed in this section. Many of the methodological precautions discussed here also apply to primary research in developmental psychology.

1. Is the research question clear and unambiguous?

'To investigate changing patterns in family communication in the direction of increased openness' is a hopeless research question (which I did not make up, by the way) and exemplifies the sort of sectarian, defensive

cosiness that stalled family therapy outcome research for some years (see Sexton et al., 2004). Gurman et al. (1986) observed of the early research that it was characterized by 'a maximum of vigour and a minimum of rigour'. More recent results from systematic reviews remain very patchy, except for behavioural family therapy (see Bjornstad & Montgomery, 2010; Henken et al., 2007).

Most changes in thinking, communication patterns or emotion have visible behavioural or circumstantial correlates that can usually be linked to plausible, qualitative reports from those using the service, always provided that they are not led by persuasive questioning. A nit-pickingly better question than the previous one would be: 'Will early cognitive-behavioural intervention with families with children under 10, involving their teachers, regarding the management of disruptive classroom behaviour, result in lower instances of this behaviour, higher levels of recorded school attendance, and fewer school exclusions in the intervention group than in a randomly assigned group of assessed children who are placed on a waiting list?' The qualitative questions still do not go away, however. What do the children *do* if they attend school more? More time in school could lead to more opportunities for aggressive behaviour, for example. This is not rocket science (it is a little more complicated and messy), just a set of debatable methodological precautions based on the idea of hypotheses as 'self-administered challenges'. Hypotheses must have a ready chance of failure otherwise they are of no use; they must be 'risky' in the Popperian sense. They are simple defences against self-deception, however good the cause.

For a really authoritative source on this issue, look no further than the late Douglas Adams's posthumous collection, *The Salmon of Doubt* (2003). His character Dirk Gently, of the Holistic Detective Agency, consults the Great Zaganza horoscope looking for predictions to guide him on a strange quest:

> First he glanced at some of the entries under other birth signs, just to get a feel for the kind of mood the GZ was in. Mellow, it seemed at first sight. 'Your ability to take the long view will help you through some of the minor difficulties you experience when Mercury . . . ' 'Past weeks have strained your patience, but new possibilities will now start to emerge as the Sun . . . ' 'Beware of allowing others to take advantage of your good nature . . . ' He then read his own horoscope. 'Today you will meet a three-ton rhinoceros called Desmond.'

Now *there's* a hypothesis.

2. Are we dealing with a population or a sample?

An example of a population would be *all* the patients with a given diagnosis discharged from a given hospital or group of hospitals who have been readmitted in the last six months. If researchers wish to argue for the generalisability of any subsequent findings, then these propositions can only be supported by giving careful attention to demographic and case-specific features (e.g. age, urban vs rural domicile and so on, and by a steady build-up of research on the same approaches used in different settings. If we are dealing with a sample (as we usually are), then how was it chosen? That is, who gained entry to it, who was excluded and how similar and diferent might these 'in' and 'out' groups be?

There are several approaches to this question. One could match cases, or yoke together characteristics such as gender, ethnicity, income, levels and categories of problems. However, these approaches, while not worthless, quickly become overcomplicated and impossible to handle when, having selected some allegedly telling factors, we then have to ponder a long list of out-of-frame factors, such as housing tenure, childhood experiences, personality differences, levels of extended family support, or educational background. The best answer to this problem is, where we can manage it, to select large samples; randomise the individuals within them; and then expose half of them to the intendedly helpful regime, but not the controls, or allocate half to monitored waiting lists. This process of randomisation is easily done on a computer, which mixes up the various, potentially influential background differences between participants, and ensures to certain degrees of chance (5 or 1 in 100, usually expressed as $p = 0 < 0.5$ or $p = 0 < 0.1$) that factors that might aid in helpful intentions, and those that pose real challenges to what is being proposed, have an equal chance of ending up as typical in either of the comparison groups.

3. Does size matter?

Appraisers of research are often led astray by visual differences in bar chart figures. An example that I regularly use to test perceptions of the significance of results is given in Figure 1.1. The majority of participants (usually about 65%) opt for the conclusion that there *is indeed* an association between parental separation and a later diagnosis of clinical depression. They do so because of the presence of large numbers and the height of the left-hand bars. However, it is the *ratio* of differences in the four cells to which they should be directing their critical attention; the proportions are the same.
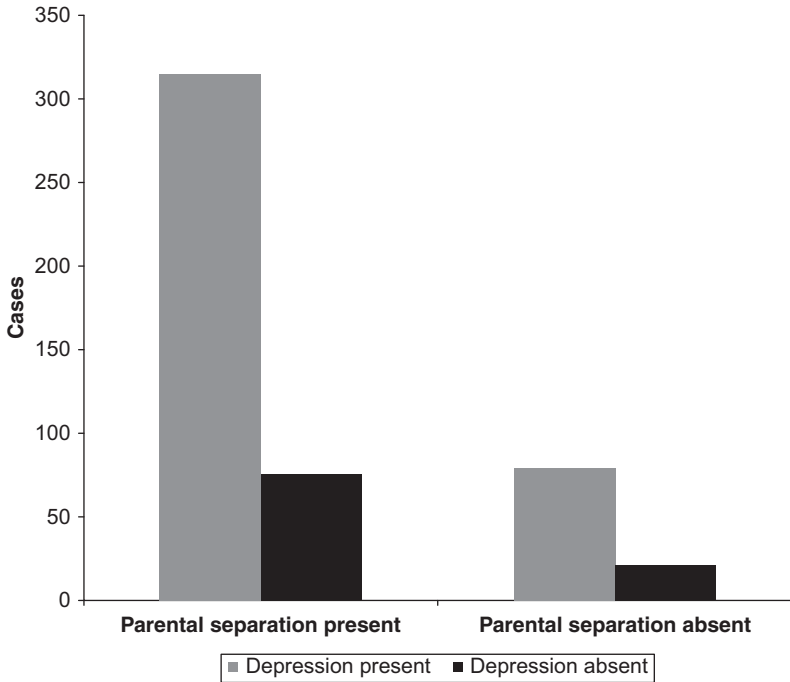
Figure 1.1 Hypothetical data regarding a possible association between parental separation in childhood and later depression
Source: Sheldon and Macdonald (2009).

While small is rarely beautiful in social research (because of the high level of variability in populations), *large* does not automatically guarantee methodological virtue. There was once, for example, a large telephone survey of voting intentions in the United States. It was conducted by the editors of a popular magazine, the readership of which was predominantly middle class. Hundreds of thousands of subjects were contacted by telephone and the vast majority opined that Franklin D. Roosevelt would be defeated in his bid for the presidency. He won a landslide victory on the 'New Deal' ticket. He was voted in by the unemployed farm and factory workers who did not then have telephones, and did not have enough spare cash for magazine subscriptions. I fear that the developing appetite for online questionaires when evaluating services may introduce a modern version of such sample distortion, excluding, or just putting off, many of the elderly and the poor who have limited access to these means of communication.

Stanley Milgram's famous 'obedience to authority' experiments, where a dummy electric shock was administered for failing a memory test (1966, see p. 188), have been well replicated, and the researchers were at pains to ensure that they included a cross-section of the general population, although only against two or three socio-economic status (SES) indicators. So they did select (rather small) samples that included painters and decorators alongside accountants, but then all the subjects were volunteers who answered an advertisement to help study 'The effects of punishment on learning' – who knows what psychological variables were at play in this self-selection. Would you have put yourself forward? So perhaps the common, rather complacent reaction to the findings of this study – 'I would never do that just because someone told me to' – might be a *little* closer to the truth of the matter than the research report allows.

4. What is the claimed level of attributive confidence in the study?

Like social workers and health workers, researchers are not usually in it for the money. On the whole, they very much want to show useful effects that could be extended to others. The supplementary question here is, regardless of the attractions or disappointments of the reported results, can they reasonably be claimed given the methodology employed? In short, pre–post tests cannot securely tell us whether any changes that have occurred are not the results of collateral factors. Similarly, client-opinion studies, although rich in qualitative data, cannot tell us whether improved well-being, functioning or satisfaction measured on a scale is plausibly due to 'us'. The data are suggestive only, and constitute promising raw material for future research. If the interview schedule regularly asks respondents to say *why* they hold a particular view, and they can, then this boosts confidence. But then, the applicability of any of the above caveats depends on what the precise research question is.

5. Are the outcome measures used observational, based on tangible behavioural or circumstantial changes assessed against a protocol, or are they limited to self-reports?

Some outcomes are unequivocally more definite than others. However, even crime levels, rates of school exclusion or figures on reception into care are subject to sociological and political influences. Nevertheless, over time, with enough studies of the same issues and large enough samples, we do get a 'fix' on problems and what might help to ameliorate

them, provided that we give preference to 'hard' outcome indicators. Where qualitative measures are used, what is important is to look for standardised measures. This is an issue of *reliability*; that is, does the same repeated measure, say of self-esteem or of challenging behaviour in children, tend to yield the same scores on repeat measures, and do scores correlate with what actually happens at a behavioural or circumstantial level in real life? For more on this see Fischer and Corcoran (2011).

Self-reports do have an important role, but they should not be relied on on their own because of 'demand effects'; that is, the tendency of clients in receipt of intended help, when asked twice (pre- and post-service), to say something more politely encouraging on the second occasion, or sometimes to deny progress to ensure continued contact.

6. Is it clear how much attrition there has been, either from the whole sample or differentially between the comparative samples?

Attrition – that is, the dropout rate – can seriously threaten the health of research studies, since it interferes with the end representativeness and with the chances of a fair statistical tally. Often the most demanding or troubled clients tend to fall out of the programme early, leaving behind individuals who are better engaged and easier to help. More damagingly, the dropout rate between comparison groups can be significantly uneven, as when most of the control group wander off elsewhere since they are getting nothing following assessment. The important questions are: How many individuals entered the study at the beginning? How many dropped out and do they have any special characteristics? And do the authors deal transparently with this and adjust their results accordingly?

7. Are the statistical tests used appropriate?

There is nothing wrong with using special statistical tests to uncover small but potentially promising effects, but commonly in comparison research X^2 (chi square) tests are applied, or t tests for interval data. If the usual tests are not used, do the authors explain why there is a case for special calculations? For more on this see Neale (2008) and Forshaw (2007).

8. Are the findings professionally or clinically significant?

It is a maddeningly persistent feature of American clinical social work and community health research that small, *statistically* significant findings are reported on problems that would have trouble getting past reception in a British social services department or NHS walk-in centre.

These statistical firework displays are wonderful to behold, but how relevant a guide are they for practical purposes? Only when one does the troublesome sums is one able to consider that the benefits of intervention are very small for the resources expended. We should always look for changes in absolute risk, not relative risk, in evaluation reports, otherwise we may be deceived into thinking that a 50% reduction in or a doubling of a tiny risk is of anything but minimal significance (see Goldacre, 2008).

9. Are there any follow-up measures in place?

Some patterns of professional influence can look quite impressive from the beginning to the end of a project or case series, but then trail off markedly later. One reason for this is that we have not taken enough notice of the advice of respondents in sevice-user studies; namely, that we should consider not jumping completely out of their lives at the end of a specified period, but should check up on maintained progress from time to time, or even give 'booster' sessions and then fade out more gradually. To know that measurable improvements have been made over three months (from time 1 to time 2) reveals little about their staying power and threatens any estimate of cost-effectiveness. An example that springs to mind is that of fast-track, 'bed-unblocking' (a demeaning term that ought not to be used) rehabilitation schemes for elderly people following acute hospital care. What is the point if clients are speedily delivered home, hastily supported there by overstretched home care services, but then end up back in hospital a fortnight later as a result? (However, for more on this see Godfrey et al., 2000; Trappes-Lomax et al., 2002; Sheldon & Macdonald, 2009: ch. 15.)

10. Is the intervention clearly specified and described?

One of the commonest faults of social care and health research is that *what* exactly is being evaluated is sometimes written up in only the most general way. Sometimes the work going on within a project, clinic or residential centre is described in terms of a summary of its 'mission statement'. What the clients/patients receive, why it is thought on the basis of what literature to be an appropriate intervention, and what checks, if any, were carried out to ensure that disparate staff were actually delivering the intervention protocol (if there is one) are often not stated. Statements implying 'We did what we usually do here – roughly this sort of thing – and look what happened' yield little usable guidance for replication. Case-record analysis is a small improvement on this, but then what is written down and what is actually done, as any staff member will tell you in private, are two quite different things.

11. Does the report contain 'weasel words'?

This is the 'most catowners who expressed a preference said their cats preferred Whiskas' problem. How many owners were in the sample from which the 'most' group were drawn? How many *did* express a preference at all? How exactly do we assess the preferences of cats? A new version of this nonsense is 'people with healthy hearts tend to eat more whole grain'; not the other way round, note. Words like 'substantial', where no back-up figures are produced, or phrases like 'it was clear from the comments' should invite the question of how the qualitative comments were selected, and against what criteria. Phrases like 'a typical group of service users' – how many? and how were they selected? – should always arouse in us the key attitude of mind in critical appraisal: respectful scepticism. Journal editors and peer reviewers have a duty here, too, although in my experience it is varyingly discharged. However, if you have taken the lessons of this chapter to heart, you should now be asking yourself exactly what 'my experience' amounts to.

12. Have those who are the subjects of a study or their representatives played any part in its design, and will they have a role regarding future attempts to implement its recommendations?

This is a methodological rather than an ethical point only in the sense that research questions are often sharper and more relevant if service users have a hand in helping to frame them. A tendency to be discouraged is where stand-alone researchers apply batteries of outcome measures in the hope of catching some or any associations, taking the view that such 'scattergun evaluations' are bound to hit s*omething*.

Future directions for evidence-based practice

The CEBSS project (see Sheldon & Chilvers, 2000; Sheldon & Macdonald, 2000; Bilson, 2005), designed to get the results and implications of modern studies of the effectiveness of social care and related health interventions into the hands of professional staff, and to work with management to facilitate this, arrived at the following conclusions.

First, organizational pressures and short-term priorities mean that schemes to establish evidence-based practice as an *enduring* principle face a major obstacle: the fact that senior managers (who have about the same security of tenure as football club managers these days) have to be convinced of the value of the proposition, but, more importantly, middle managers have to be persuaded to share the work of implementation. Practitioners are rarely opposed to the idea in principle and readily

take up training when offered it (see Sheldon & Chilvers, 2000). They are also usually willing to devote time and effort to groups designed to foster evidence-based practice – out of working hours if need be. The two most efficacious sources of support for such 'bottom-up' commitment were, in our experience, local or departmental librarians (who are no longer simply the keepers of book collections, but information- retrieval experts) and training departments, if they can be persuaded to introduce skill-development courses, for instance in critical appraisal of research, or research-update sessions regarding particular client/patient groups. The main point is that an applied research culture has to be *embedded* in, and sustained by, employing organisations; dissemination via websites alone will not achieve the aim of making evidence-based practice the routine.

This was the theme of the 2015 Reith lectures entitled 'The Future of Medicine' by surgeon Atul Gawande. His main message was the need for effectiveness and safety through teamwork and adherence to an agreed protocol based on current best evidence (see Gawande, 2015). In pursuit of this aim he brought in a senior Boeing safety engineer to review procedures in his operating theatre (by repute, one of the best in the world). The engineer pronounced himself unimpressed by the lack of precautionary attention given to small details – not of technique, but of human behaviour under pressure: the need to anticipate that small errors of judgement can quickly multiply, and that well-established routines were too infrequently reviewed in the light of 'near misses', all of which are meat and drink to air safety experts (see Gawande, 2011).

Less famously, I once proposed that similar consilience-seeking advice should be sought by the child protection agencies, then reeling under media attacks over the tragic death from abuse of Jasmine Beckford from Wapping, apparently entirely foreseeable and in full view, as it were, of her state-appointed guardians (see Sheldon, 1987). The problem in such statistically rare, but devastatingly sad cases is distinguishing them *in prospect* (in retrospect it is a piece of cake) from many others very like them (see McGrayne, 2011). The errors of vigilance, small in themselves to start with, multiply and interact. Thus, the member of the defrosting team who puts a piece of protective gaffer tape over the inlet of the altitude sensor of an aircraft (as required by the manual) but who *fails to remove it*, under the influence of the new 'quicker turn-around directives', so that the aircaft computer calculates that it is much lower than it should be and (disastrously) takes over, and the paediatrician who abandons an examination until after the weekend because the *potentially* abused child is 'too fractious at present', so giving the referring

social worker false reassurance, really belong in the same category – of fallible human beings. Such at least understandable errors of judgement can only be compensated for by designing precautionary checking *systems* based on the psychology of factors known to influence human judgement (see Kahneman 2011; Thiele 2006). Often these influences matter little, but just occasionally the consequences of not attending assiduously to them are catastrophic.

We in health and social care could also learn a great deal about safety and how to build it into our routines from studies on what typically goes wrong in military conflicts, where groups of highly trained, expert people, focused on a particular task, for what seem to be the best of reasons, ignore large amounts of contrary intelligence (Operation Market Garden at Arnhem in the Second World War and the invasion of Iraq are telling examples). Do read *On the Psychology of Military Incompetence* by Norman Dixon (1978) and perhaps Sheldon (1987) if you see the parallels with our own fields that I do.

Secondly, much of the work of CEBSS and other research and development projects in health and social care amounts to *remedial* education of already professionally qualified staff. Working with universities and colleges (forgive me, 'teaching and learning providers') was the fifth and last priority of the CEBSS project at its inception, but experience suggested that it should have been the first. This for two reasons: first, the baseline survey (Sheldon & Chilvers, 2000) showed minimal ideological opposition to the idea of evidence-based practice (this is largely the preserve of academics; see Webb, 2001), although there was some scepticism about what would happen if some solid findings clashed with current departmental routines. Secondly, it also demonstrated close to complete ignorance of research findings pertinent to the various fields concerned and little knowledge of how to appraise the methodology of such studies. The project instituted a long series of intensive courses to address both problems, all of which were well received – 'nice to be *taught* something for a change' was a common reaction (see Sheldon et al., 2005) – and showed measurable pre–post increases in knowledge and research-appraisal skills. Nevertheless, it was still something that should have been a primary feature of professional training, not offered as a post-qualification add-on.

2
What Comes with Us?

> I am not yet born, O hear me.
> Let not the bloodsucking bat or the rat or the stoat
> Or the club-footed ghoul come near me...
> I am not yet born, console me.
>
> I fear that the human race may with tall walls wall me,
> With strong drugs dope me, with wise lies lure me,
> On black racks rack me, in blood-baths roll me...
>
> —Louis MacNeice, 'Prayer before Birth', 1944

It all begins with the division of a single cell, the nucleus of which contains the DNA (deoxyribonucleic acid) blueprint for a human survival machine (see Dawkins, 1976). The adult human body contains circa 70 trillion of these cells, which are regularly dying and being replaced, and are all capable of replication to an astonishing degree of accuracy. However, tiny faults and small differences do get through and are the basis of evolutionary selection. Some errors shift the direction of development in a positive way, some combine and produce susceptibilities to illness, and to behavioural and/or psychological excesses or deficits. At the heart of cells are long chains of proteins arranged in a double helix fashion (the chromosomes), each cell hosting 23 pairs, made up of specks of protein (the genes, of which we have surprisingly few, and many of which are the same as those in mice, snails and chimpanzees – 95% in the latter case). With 50% of the combined biological blueprint from each of our parents, our genes have an enormous impact on the structure and economy of our body and, through the formation and 'wiring-up' of our brain, a very considerable impact on our behaviour. Given this amazing complexity, and this ballistic force on physical development, would it not be astonishing if it were not so? That is, if given the evolution of brains (the most complex object in the

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known universe), genes merely concerned themselves with eye and hair colour, height and so on? In fact, they are concerned above all other things with the replication and survival of their hosts, which implicates the behaviour of those hosts.

Despite the vitality of this all-pervasive force, we had no choice until quite recently but to study only phenotypical effects – behavioural and transmission patterns – and infer backwards (see Dawkins & Dennett, 1999). Darwin knew nothing of genes, and there is much that we still do not know, even though we now have a map of the human genome. To begin with there is a missing 95% of untraceable influences, whether in cell differentiation or in common diseases. Recent research implicates 'junk' or non-coding DNA inside the genes and this is present in every cell of the body – the equivalent of dark matter in astronomy, perhaps. We know it is there, but not what it does, and assuredly it wont be there for nothing.

Genes act in concert; there are very few *genes for*, not even for neurons, hair or liver, let alone for alcoholism or schizophrenia. It depends on which are turned on or off in what combination. Every cell carries the *entire* blueprint, but then *differentiation* occurs (see Carey, 2012). This means that something operates on the genes to modify their actions. These epigenetic influences are now the subject of intense study and researchers are using such terms as 'the epigenetics revolution' and 'the new Darwinism' (see Spector 2012) and positing that the standard gene/environment separation model is a mirage (see Fox-Keller, 2010). Clinical implications are as yet hard to come by, but I discuss some ideas in this book.

Genes influence our responses towards whatever environment we happen to be born into, but are themselves susceptible to influence by that environment, which can turn them on or off, up or down. Their predispositional expressions are also modifiable by counter-influences in the environment. There are 30 or so genes implicated in obesity, but these may be counter-balanced by the effects of famine. Tobacco consumption accounts for only 20% of causal factors for lung cancer; 40% of the people who carry the predispositional genes implicated in schizophrenia do not develop it.

In short, human beings, however much we like the idea, are far from being *tabulae rasae* (blank slates) on which experience writes (see Pinker, 2002). Yet until quite recently, this was more or less the view taken in most textbooks on developmental psychology, and it remains a dominant idea on training courses, and in popular culture. We wish it to be true, because otherwise, the argument runs, the love and care that

we pour into our children; the labour of health visitors, social workers and psychologists; and the endless pursuit of 'excellence' in education (supplying politicians with raw numerical data by which they can claim that distant policies formulated by *them* are responsible for our children getting cleverer and potentially more economically productive) are all *perhaps* in vain.

An earlier generation of pioneer psychologists (Galton, 2012 [1883]; Burt, 1940) took this view of inborn talents and deficits. Francis Galton founded the eugenics movement, and we all know where international expressions of racial superiority that fed off such ideas eventually led. If you look at the historical record, it is truly surprising which cuddly figures supported selective breeding and worse. George Bernard Shaw (of *Pygmalion* fame), for example, wrote letters in support of euthanasia (murder) for the mentally defective, 'providing that it is done humanely and scientifically'. Social workers and nurses stationed on Ellis Island, Upper New York Bay, in the early twentieth century were employed to turn back immigrants with neo-phrenological signs of genetic defects (e.g. sessile ears, prominent brows) allegedly linked to recidivism under the influence of Lombroso (1911). This is how genes got a bad name.

A later generation of psychologists after the Second World War recoiled from this kind of view. Their perspective was that environment, experience and learning could transform anyone into pretty much anything (see Skinner, 1953). Or, as the Jesuits believed, under the influence of Ignatius of Loyola, 'Give me a child until he is seven and I will give you the man' (the other 51.8% of the population being left to their own devices, presumably).

As a result of the application of scientific principles to psychology we now know much more about the question, but still the polarisation of genes versus environment lingers (see Pinker, 2002). The philosopher Mary Midgley reflects on the distortions that follow from such pendulum swings:

> Any explanation that evoked culture, however vague, abstract, far-fetched, infertile and implausible, tended to be readily accepted, while any explanation in terms of innate tendencies, however careful, rigorous, well-documented, limited and specific tended to be ignored. (Midgley, 2003: 143)

There are signs now that the weight is now swinging back again, given that there is a wealth of studies showing clear, largely environmental influence (see Sheldon, 2011). Such polarisations are aided and abetted by the mass media, whose idea of a balanced discussion is to pit

two opposing experts against each other and let them slug it out. Little patience is shown when discussions touch on the *relative* contributions of innate and environmental factors. Some people have given up on the idea altogether and just say 'both', but this will not do. Both of *what* exactly? How *much* of both? Influencing each other *how*? With what *thresholds* of behavioural interaction, leading to what *particular* clinical conditions, with *what* levels of tractability? We should be debating this discipline-defining, consilience-reinforcing topic in a more considered manner – as free from ideological bewitchment as possible.

In 2010, Evelyn Fox-Keller wrote her challenging book called *The Mirage of a Space between Nature and Nurture*. I think that she is more or less right about the cable-knitted strands of biology and environmental experience, but note that she is right *after* a scholarly discussion, not as a result of an a priori mindset that, since unravelling these strands is a complex business, we should just take up a position somewhere in the middle. Some aspects of human development, and problems that arise during it, are strongly influenced by biology – which does not mean that they are more intractable. Examples include language development (whatever the language you talk in), Huntington's chorea and bipolar disorder. Some aspects hover in the 60/40% range (e.g. intelligence, temperament, schizophrenia, clinical depression), while others are largely learned behaviour (many behaviour disorders in children and social skill deficits). However, many of the ills that come our way are subject to biological, epigenetic *and* environmental influences (see Table 2.1). One thing of which we can be sure from the research is that development is both an inside-out *and* an outside-in process, which unfolds in an orderly sequence. All definitions of development, whether from textbooks or dictionaries, concur on the key words, such as the definition from the *Shorter Oxford English Dictionary*: 'The action or process of developing; evolution, growth, maturation . . . a gradual unfolding, a fuller working out.'

Let us now discuss in more detail some of the influences outlined in Table 2.1 below. What it is important to remember as we do so is that these influences are *interactive* to varying degrees and they develop over time. It therefore takes considerable methodological sophistication to tease out their relative contributions and to identify leverage points for intervention.

Genetic influences

There are a myriad of genetic factors influencing human physiology and behaviour, as well as susceptibility to illness, so we must be selective. The

Table 2.1   Influences on development

Influence	Description
Genetic predispositions	All human traits are heritable to some degree, with genotypic differences giving rise to phenotypic (behavioural) variances. Most genetic variables interact with environmental conditions. Individual differences, e.g. in IQ, personality, creativity, and height, are influenced in this way, as are developmental conditions, e.g. ADHD, dyslexia, autism spectrum disorders, and illnesses such as bipolar disorder, depression and schizophrenia.
Epigenetic influences	These influences depend on the prior environmental experience of the birth family (usually on extreme experiences). Interacting gene clusters are turned on or off, up or down, by methylation, which can be triggered by environmental conditions, e.g. famine, trauma, stress. These influences can have shorter-term, inter-generational effects.
Evolutionary influences	The whole of human development is influenced by natural selection, from body shape and size, to basic drives, aggression, social cooperation, sex and assortative mating. Sometimes these traits remain dormant in environmental circumstances where there is little apparent need for their persistence.
In utero and birth experiences	The first vital stages of development occur not after birth, but in a warm, protective, nutrient-rich sack inside the mother. Trillions of viruses and bacteria are filtered out, and an orderly progression of increasing cellular diversity occurs, forming, e.g., arms, fingers and bones from the third to the eighth week (unless your mother took Thalidomide). The diet of the mother (think globally here) will affect this, as will various other insults to the foetus, e.g. use of drugs, alcohol, injury or illness in the mother, lack of folic acid etc., and will have later developmental consequences for the child. The evolutionary trade-off of large heads to hold large brains and a narrow exit route, prone to injury and infection, are well reflected in global mortality and life-expectancy rates. In the developed world we manage the risks with great technical care, but still not perfectly. Thus, anoxemia, prematurity and birth trauma can all have lasting effects on the developing brain. Social class, ethnicity and poverty still affect these statistics.

Neuro-psychological influences	The factors already detailed plus environmental influences can influence brain structures and connections and create 'favoured' neural pathways, hence influencing future cognition, affect and behaviour.
Attachment	The long period of vulnerability and dependence of human children requires from both mother and child a 'fixation' of each on the other. Babies have face recognition wired in. Most mothers develop high levels of sensitivity and empathy towards the needs of their infants. Where this fails to happen, e.g. in post-natal depression, serious personal or family problems or very adverse circumstances, such factors have consequences for the course of later child development.
Learning	Acquired behaviour and associated cognitive patterns, as well as acquired emotional reactions to stimuli, either through their rewarding (reinforcing) consequences or by association, are semi-persistent, particularly if they are acquired in the early developmental stages. Humans shape the environment of consequences, and that environment shapes them.
Maturational factors	We change in our internal make-up over time: we can do less of some things as we age, and more of other things. We respond to different cues at different ages (compare 9-year-olds to adolescents). Some faculties improve as we age, e.g. emotional stability; some decline, e.g. computational speed. Some conditions occur more often (e.g. the dementias as a result of living longer and not dying before we get them). Not *all* problems are grown out of or into, however.
Socio-economic and cultural influences	These are not separate influences from the above, as eventually they sit inside us. The capacity for language and even grammar is inborn, but some people speak French; with that comes a large raft of cultural assumptions and preferences – a meta-reinforcement of traits and values, basic life choices and adaptive behaviour. Life chances are strongly influenced by societal and economic conditions. Compare the likely influence on character, motivation and self-esteem of 15 years of unemployment and unaffordable housing versus a difference of five IQ points.

two areas of greatest interest to those of us in one of the helping professions are the *temperament* of young children and how it reciprocally affects their relationships with parents or carers, and the origins and development of *personality.*

Research on children's temperamental development reveals measurable differences in conditionability and reactivity, even in the very early stages. There is compelling evidence that animals, and even insects, display stimulus-seeking/stimulus-wary differences, and that with selective breeding these traits can be established in new populations, showing them to be very biologically driven (see Weiner, 1999).

Genetics, working through evolution, endows new babies with a few basic reflexes essential for survival: crying, suckling, eye-to-face fixation, fear of falling, fear of sudden loud noises, grasping, small physical searches for warmth and containment. All of these are very unpromising in the short-term survival stakes that rule the life chances of the rest of the animal world. Imagine a rabbit kitten whose instincts regarding a large bird shadow, or a strong smell of fox, were to make a loud, continuous noise and hold on tightly to its fleeing mother. A new-born foal is a walking, herd-following horse in about ten minutes. Humans, on the other hand, are programmed for a long (given the increasing demands of society, an *increasingly* lengthy) period of dependency and learning. This 'bonding' interaction, with the mother in particular, is the genes' best, long-view bet for a child's genes being passed on, particularly if there is a partner in charge of perimeter security. How this close interaction evolves is conditioned by the sensitivity of the mother (see Bakermans-Kranenburg et al., 2003 for a review of the professional implications of all this) and by inborn temperamental factors in the child, amounting to the foundations of a little embryonic 'personality'.

Mothers have known for thousands of years that their babies are different from birth, or are so even in the womb, but psychologists, apart from a few early speculations, only caught up with the idea in the 1960s. Early pioneers were Thomas et al. (1968), who tried to investigate the question empirically. Here was/is the issue, a counter-cultural one to take up at the time:

> As physicians we began many years ago to encounter reasons to question the prevailing one-sided emphasis on environment. We found that some children with severe psychological problems had a family upbringing which did not differ essentially from the environments of other children who developed no severe problems. On the other hand, some children were found to be free of personality disturbances

although they had experienced severe family disorganization to parental care. (Thomas et al., 1968: 2)

Most clinicians will have encountered this phenomenon of surprising vulnerability or unexpected resilience in children (see Newman 2003). If these differences are not directly linked to environmental circumstances, then where do they come from? The approach that Thomas et al. took was to draw a sample of 181 young children (0–6 months) and observe their behaviour against a protocol with dimensions scaled from low to high. They used expert observers, and gave due attention to mismatches and to dispute resolution. Concordance was high (circa 80%) and attrition low. Here are the main behavioural dimensions:

☐ Level and extent of motor activity.
☐ "Rhythmnicity" or degree of regularity and predictability of functions (eating, sleeping, wakefulness, elimination).
☐ Responsiveness (degree and type) towards a new object or person (acceptance, interest or withdrawal).
☐ Adaptability of behaviour to changes in the environment.
☐ Thresholds of sensitivity to stimuli.
☐ Intensity of responding and energy level in responses.
☐ Degree of distractibility from what the child is doing, observing, or during a given pattern of behaviour.
☐ Attention span and degree of persistence in a given activity.
☐ Child's general mood or disposition, whether usually cheerful, calm or crying, pleasant and responsive, or "crabby", avoidant or sociable.

The researchers were interested not only in the extent and tractability of these dimensions, but in their combinations ('temperament' comes from the Latin for 'a new mixture'). They also paid attention to the children on the shoulders of the response curves (which you and I are more likely to see). They collapsed these point scores into three typologies – 'easy babies', 'slow to warm up babies' and 'difficult babies' – and followed them up for 21 years. The results were as follows:

☐ When clinical outcomes were later compared, e.g. for referral for professional help, 70% of the children in the 'difficult' group (parents were blind to these categorizations) were so referred, compared to 18% of the 'easy' group.
☐ The categories had considerable predictive value regarding the presence/absence/extent of behavioural and emotional problems, and over the type of circumstances in which they were expressed.

☐   Temperamental traits were quite enduring, not exactly not suscepti-
ble to influence by environmental circumstances, but resistant to, or
amplified by, such external pressures or advantages.

☐   Attempts by parents and others to counter adverse temperamental
traits were effective according to the position of the child on the
shoulders of the distribution, and the extent to which behaviour-
shaping approaches were designed to go 'with the grain' of the
child's temperament, rather than against it.

These results, from some time ago, remain important because later
research projects addressing the same issues have come to very simi-
lar conclusions (see Caspi et al., 2003; Rothbart, 2011). The importance
and the persistence of inborn temperamental characteristics should
be reflected in the advice given to parents about the behaviour of
their children, otherwise they (and we) are fighting nature, and will
probably lose.

The stability of temperamental traits

Contemporary research reveals a number of overlapping trends in this
field. The infant does indeed bring quite a lot with him/her into the
world. These traits, preferences and preoccupations come from within
the child, but are strongly influenced by the behaviour-shaping power
of socialisation. This reflects more than the template that parents have
in mind, but also the influence of the nursery or school, the culture
into which the child is born, chance life events, and the particular set of
historical/socio-economic pressures present as the child is growing up.

To underline the point about the interactivity of inside-out with
outside-in factors, consider the following parental testimonies from a
child development study. First, John:

> John was my touchy feely baby. From the first day in the hospital he
> cuddled and seemed so contented to be held that I could hardly bare
> to put him down ... We took him everywhere because he seemed to
> enjoy new things. You could always sit him in a corner and he would
> entertain himself. Sometimes I would forget he was there until he
> started laughing or prattling. (Hetherington & Parke, 1986: 85)

This is every new mother's idea of what her baby will or should be like,
but consider this testimony from the same project. Let us call this child
Damien:

Nothing was easy with him. Meal times, bedtimes, toilet training, were all absolute hell. It would take me an hour and a half to get part of a bottle into him, and he'd be hungry two hours later. I can't remember once in the first two years when he didn't go to bed crying. I would try to rock him to sleep but as soon as I tiptoed over to put him in his crib, his head would lurch up and he would start bellowing again. He didn't like any kind of change in his routine, new people and new places upset him and so it was hard to take him anywhere. (Hetherington & Parke, 1986: 85)

Whatever the proximal causes for this upset, think also of the distal effects on the parents – particularly in regard to feelings of attachment. Remember that the KGB largely abandoned beatings and electroshock towards the end of the Soviet era in favour of the much more effective approach of sleep deprivation.

Think also about the 'fruit machine of life' effects of a child being born to young, inexperienced parents, or to a single mother isolated from her family, perhaps with a visiting boyfriend who has a drug or alcohol problem. Consider the effects of inadequate accommodation and poverty (the regularly found correlates of child abuse). Increasingly, temperament-based interventions research has this collision of childhood predispositions, parental skills and social circumstances at its core. Assessments are based on notions such as 'goodness of fit' between the parent's circumstances and aspirations and the child's natural temperament (see McClowry et al., 2008). Case study 2.1 is an illustration.

Case study 2.1

A member of the public telephoned social services to say rather breathlessly that her neighbour, a young woman, was pacing in the garden, in the rain, rocking her crying baby with 'exaggerated movements', and that by turns was yelling and imploring the child to be quiet. The neighbour feared for the child's safety. An urgent home visit revealed the following:

☐ Since the mother had brought the baby home from the hospital a few weeks ago, he had slept irregularly, unpredictably and for short periods, crying most nights and for much of the day.
☐ Attempts to distract him or soothe him by changing position etc. had either no effect or made him worse. He cried whether he was picked up or put down.

- ☐ The child was slightly underweight, but neither the GP, a consultant paediatrician nor the health visitor could point to any specific medical problems or issues over his care, either during pregnancy, the birth or subsequently.
- ☐ The couple were up against it financially. They lived in a small but clean terraced house and the marriage was reported to be basically stable, but they were having a growing number of rows about the child and his care, and an apparent loss of interest in sex.
- ☐ Most worrying were the mother's statements comparing her expectations of what it would be like to have a baby and the disappointing reality; plus her frequent observations that the child *chose* his moments for maximum disruption, or could *tell* when she was tired. She reported growing estrangement from her own mother: 'If I have to listen to one more piece of bleeding obvious advice I shall scream!' This baby's mother had read lots of self-help books, always tried to follow medical advice and had tried various different approaches to feeding, pacifying and putting down, all to little or no avail. She said she felt 'useless' and was convinced that she was at fault: 'I try to transmit my love but no one's receiving.'

The risks in this case were that exaggerated rocking might turn into shaking; that the consequences for mother's psychological health and well-being could be serious; and that the marriage might not survive the current levels of exhaustion, disappointment and guilt.

The point of intervention was the vicious circle that the child's behaviour had set up. He closely matched the items on Thomas et al.'s (1968) variables for a 'difficult' child. The parents had an understandable reaction of casting around for solutions to what they were sure was a failure of care, and then abandoning them if they were not readily effective. Thus the child's reactions were negatively reinforced (see p. 146) and the temperamental excesses were being shaped and amplified, displacing any 'effortful control' from the child as a normal reaction to soothing and comfort (see Rothbart et al., 2000).

The approach used in this case was as follows:

- ☐ A case conference of the four professionals involved (health visitor, GP, social worker, paediatrician) was held to ensure a

coordinated approach. The paediatrician agreed to examine the child once again and give a clear opinion; the GP agreed to become more involved with the child's health as necessary, and to monitor his prescription of the mother's tranquillisers. The social worker and health visitor were to collaborate on a record-keeping scheme by the parents regarding fractiousness, and to set up a behavioural scheme that also involved looking at the mother's problems (e.g. inappropriate self-blame; see Sheldon 2011). Attempts were also to be made to explain the dynamics of the case to the apparently well-disposed but advice-prone grandmother. Furthermore, there was a plan to include the father in more hands-on care rather than his established role of offering support to his wife. This approach was outlined at a family meeting and received (slightly sceptical) assent.

☐ A single case design (see p. 146) was set up using a simple baseline measure of agitated behaviour over one week, versus a new regime where approaches to pacification were stuck with and monitored for much longer periods than had been typical. An attempt was also made to encourage the mother to cuddle the child during the short periods when he was *not* being fractious and to introduce new sparkly toys to arrest his attention. Regarding bedtimes, having settled the child and ensured that he was warm, comfortable and fed, the parents should feel free to ignore him for periods before picking him up.

These were the results of this composite approach:

☐ Probably the most effective element was the discussion with the family of differences in children's temperaments, plus a few cognitive challenges and reinterpretations to the mother's thinking about her own skills as a parent.

☐ There was an emphasis on interpreting anger and dislike as perfectly normal reactions in adverse circumstances, and this was also helpful.

☐ The paediatrician's diagnosis that what the parents were up against was 'constitutional' and not their fault held sway in the background.

☐ However, it was the hyper-reliable regime and a willingness to let the child's behaviour extinguish before coming up with

a new set of stimuli that were most visibly effective. The number of fractious episodes gradually fell, giving the parents something positive to reinforce. Crying episodes fell by 40% during week three and by 60% at week six, graphically visible improvements that gave the mother a greater sense of control. She ceased 'tiptoeing' around the child when he happened to be quiet, but engaged with him.

☐ The grandmother's help was enlisted for little respite shopping breaks, plus one or two evenings out alone for the parents, but with no off-the-cuff advice to be given. Overall, the advice that 'some babies are just like this and have to be survived' was taken to heart.

Temperament and attachment research and its implications

Research on the nature of innate temperamental influences continues apace (see Rettew, 2013; Guerin et al., 2012). This has brought with it the development of better standard assessment checklists and greater reliability levels. The concept of infant attachment, derived metaphorically from Lorenz's ethological studies of animal imprinting, is also the subject of some research effort, with clinical offshoots (see Van Ijzendoon et al., 1999; Cassidy & Shavey, 2008). The problem is the paucity of RCTs to test hypotheses central to the idea. What we have typically is 'scattergun' research programmes featuring both attachment theory plus temperament and personality theory. This makes meta-analysis and systematic reviews very difficult to mount. We have only three of these at the time of writing (see the earlier discussion and also Miller et al., 2012; van Ijzendoorn et al., 1999; on the clinical implications see Wasik et al., 1990; Lieberman et al., 1991).

Interventions featured in RCTs are rather effective in producing changes both to insensitive parenting and to attachment level and security. The most promising approaches (as elsewhere in the broader literature) feature a behavioural focus, of known short-term duration. Cognitive-behavioural approaches outperform others. Broader, multi-component, attachment theory–based interventions do less well (see Kazdin, 2004; Bronfenbrenner & Morris, 1998).

We have a fair amount of research showing that innate factors, of measurable dimensions, strongly influence parent–child interactions, but that, apart from the possibility of some pharmacology later on, there is little we can do about it except to use tailored environmental influences to counter these factors, and immunise parents against self-blame

or theorising about malign intent on the part of the child. The current consensus in research can be summed up as follows.

The power of the 'not your fault' message should not be underestimated, whether it covers adverse temperamental differences or even autistic spectrum disorders.

There is some good evidence of efficacy from the pioneering work of Thomas, Chess and colleagues and their clinically based programmes, but less for 'off-the-peg' project work based on attachment theory. The work of Rothbart and colleagues over many years shows that a specific 'bespoke' clinical approach containing 'experiments' for carers to try out produces better results.

Applied behavioural analysis is rarely outrun in the effectiveness stakes; so 'back to the future', then. Other more allegedly 'complex' and modern therapeutic approaches tend to succeed according to the extent that they incorporate these learning theory–based elements. There need be nothing 'mechanistic' about it (see Sheldon, 2011; Gambrill, 1977).

Modern approaches to early childhood rearing difficulties are characterised by an emphasis on the features of the child (it was not always so) plus the personality and approach of the parents or carers. Thus, if there is high anxiety and a resultant emphasis on obsessive care in the face of what parents interpret as stress, then these features will be as much of a focus of clinical work as the child and his/her behaviour. The key concept here is 'goodness of fit' between two sets of predispositions currently set on a collision course.

A series of sad and troubling cases have urged on us the need to take more seriously the spectrum of post-natal reactions, including post-natal depression (see Gelder et al., 2012). This often un- or mis-diagnosed condition affects about 1 in 10 mothers. The range in prevalence studies is from 1 in 20 to 1 in 4, showing the need for greater diagnostic standardisation. The problem is that unless the symptoms appear suddenly (as they can), then they can be misinterpreted as the 'baby blues', which many women experience. The Edinburgh Scale, administered by health visitors at around two months post-birth, can miss early symptoms and allow foundational patterns of care to go awry. This measure is also less well standardised for ethnic minority populations, where unfamiliar cultural beliefs can intrude.

DSM-V takes the view that post-natal depression is a variant of major depressive disorder (see pp. 98–9) with a scatter of other features such as irritation, obsessiveness and paranoidal thinking (e.g. extreme misattributions of the child's behavioural 'intentions'). However, there is undoubtedly a genetic component at work in this condition (see McGuffin et al., 2002b). Other causes are not as well understood given

the damage that post-natal depression can do. For example, hormonal imbalances (progesterone/oestrogen) following birth, and birth traumas, also lead to increased risks, but hormone replacement therapy is not straightforward and in some cases can make matters worse.

One of the greatest dangers in this condition is its speed of onset in some cases, which can easily catch professionals off-guard. Another is where obsessive-compulsive precautions regarding the safety of the child (whether due to a pre-existing OCD condition or part of a post-natal reaction) are seen as proof of danger (e.g. the removal of all the knives from the kitchen) rather than as an obsessive thought pattern about 'the very worst that *could* happen'. Ultimately only psychiatrists can call this one because, however closely involved they are in the case, any health visitor or social worker who leaned towards the second hypothesis and got it wrong would be seen by the legal system as ignoring an *obvious* warning and cry for help. The question is what help and for what exactly. Both SSRI (selective serotonin reuptake inhibitor) medications and psychological treatments have been shown by Cochrane reviews to be very helpful – once the diagnosis is clear (see Gava et al., 2007; Soomro et al., 2008; see also Sheldon, 2011: 51–2).

None of the above factors will amount to much, however, if therapeutic intervention fails to take account of the social pressures affecting the families concerned. Unemployment is a known cause of depression and self-anaesthetising behaviour; poverty is depressing in itself with or without an extra, noisy mouth to feed; and 'learned-helplessness' reactions ('nothing works') are also a component of which we are aware (see Gilbert, 1992). Furthermore, depression is a known component of blighted childhoods. Thus we see that there are two prevalence gradients at work in early attachment problems, from strongly child-originated, provocative factors to strongly carer-generated ones. So, forget blank-slate assumptions about the overriding power of the environment, forget also 'genes for' biological factors determining how children turn out – these are highly interactive sets of influences, and the relative strength of each varies across individuals *and* circumstances.

Unless there is an obvious threat to child safety, routine practice in both health and social care often amounts to glancing, containing, risk monitoring and 'support'. Quite frequently there are few negotiated objectives, doses of timescales or progress- monitoring schemes in place. This suits the implicit 'behaviour-modification' scheme that operates in large organisations, ensuring that data from what is easy to measure – such as number of visits, number of health checks, vaccinations, school

attendance – are gathered and stored as a defence against some imagined future litigation. Not surprisingly, such routines do little or nothing to promote active, sustained, evidence-based engagement for a defined purpose (see Sheldon & Macdonald 2009: ch. 4). Such factors underlie many of the scandals that have come our way, but the proposed answer is usually a new management structure or better file sharing, not changes in the quality and extent of face-to-face practice.

Biological influences on personality

Generations of psychology textbooks saw personality as a set of semipredictable, behavioural, affective and cognitive tendencies that only coalesce in adolescence when the child is preoccupied with questions of identity. Interestingly, psychoanalysts referred to the stage before as the 'latency period', when psycho-sexual dramas were on hold while we learned long division and the names of capital cities. Nothing could be further from the truth.

Personality is a construct emerging from our evolutionary need to predict and evaluate the behaviour of others, either to forestall danger, to confirm group membership or to assess the suitability of potential mates. Its origins can be found in early infancy and before, and its building blocks, as revealed in longitudinal studies, are the temperamental predispositions substantially born into us (see Caspi et al., 2003; Guerin et al., 2012).

Let us begin with a definition of personality. There are hundreds to choose from, just as there are scores of words to describe characterological differences. I still like Allport's pithy original: 'The dynamic organization within the individual of those psychophysical systems that determine characteristic behavior and thought' (Allport, 1937/1961: 28).

The term personality comes from the Latin *persona*, via its Greek *prosopon* (προσΩπον) 'a mask for the stage', meaning masks were worn in classical dramas to indicate identity, role, set-piece motives and likely future behaviour given the circumstances. Interestingly, we tend to like a measure of rough predictability in others, since it allows scope for our expectations to be fulfilled. Charles Dickens's characters, whether heartwarming, capable of redemption or incorrigibly roguish, give rise to warm emotions in us because we can usually guess what will definitely turn up one of these days, to paraphrase Wilkins Micawber. However, predictability is almost a term of abuse in modern culture. To call someone 'dependable' is half-hearted praise at best, yet as parents, we invest colossal amounts of time and energy in ensuring that our offspring

conform to certain rules, roles and precepts. We like *governed* individuality. We prefer it when lovable ('that's ma girl') free-spirit choices *follow* graduation. We live in concentric circles of groups, and this involves being able to read the likely intentions and interests of others and avoid unnecessary conflict. Thus, few of us are immune to anxiety when someone says 'but I thought that you always said that' or 'that's strange, he's always said that he thinks you are the best teacher he's ever had'. Read about Festinger's 'theory of cognitive dissonance' (1957) and try it out for yourself.

An amusingly exasperating feature of teaching first-year psychology is that students tend to the view that there are no genetic influences affecting them other than eye, hair or skin colour. They believe that *they* are largely impervious to the shaping power of conditioning and that their views, values and beliefs are self-constructed, and based on free choice. Moreover, they consider that they would certainly intervene to help someone in distress no matter how many other people were present, would never cheat, and certainly would never inflict apparent pain on a subject just because an experimenter told them to (Elms & Milgram, 1966). This is a charming conceit, but self-deceiving, particularly when one involves these students in little analogue experiments. Shortly after discussing conformity research, I used to say casually at the start of the next lecture: 'By the way, you know I'm not stuffy, but it *is* usual in this college for students to stand when a lecturer first enters the room.' There were very few examples of anyone remaining seated the next time, when we were able to discuss the power of conformity. 'But *you told us . . .*' was the common reaction – exactly.

The sense of self that (unless displaced by serious mental illness) we all have as the core of our being is probably a somewhat illusory conception, as many experiments in neuroscience testify (see Brooks, 2013). Nevertheless, this sense of a self-directed, unique, inner 'I' is the keystone of personality. Believing it to be true, and developing a 'theory of mind' regarding the thinking, feeling and behaviour of others, has obviously conveyed an evolutionary advantage. It may be a *necessary and functional* fiction (see Swaab, 2014; Dennett 2003).

Allport's definition, if we dismantle it, points the way to the essential elements of personality. Here are the key ideas:

☐ Personality, which is not a thing, or a brain site, but *is* entirely brain dependent, is a set of cross-situational behavioural, cognitive and affective tendencies. It is a systematically organised and dynamic phenomenon. We monitor our own behaviour and measure it

against a template of how someone like us should be behaving to live up to the expectations of significant others.

☐ Personality has an underlying physical basis. That is, we inherit some specific tendencies that we combine each with the other; the experiences of our parents affect the genetic 'tuning' (epigenetics) by which the central nervous system in particular is 'wired up' (see Spector, 2012). Developmental factors and experience also influence this underlying physiology, and are influenced by it. For example, brain scans of London taxi drivers trying to acquire 'the Knowledge' of the vast warren of streets in the capital differ greatly from baseline to completion stages. The drivers' brains have been 'rewired' by their experiences (see Ramachandran, 2011). The brains of physically, sexually or emotionally abused children register marked differences to controls. Brain injuries (see Sacks, 1985) and strokes alter personality, as does the neuronal degeneration seen in the dementias (see Magnusson, 2014, and ch. 6). However, environmental experience, whether physical or psycho-social, cannot account for the variance or lack of it that we regularly encounter in twin, adoption and cross-fostering studies (see Table 2.3). Correlations between very early temperamental manifestations and later trait expression and combinations are remarkably close. In other words, active, outgoing, change-tolerant infants tend to grow into active, outgoing, adventurous teenagers; 'slow to warm up' ones, into more introverted teenagers.

☐ Against all this physicality we must apportion a role for the enormous range of environmental experiences (planned and unplanned, contrived or accidental) that affect the direction and the quality of our development (see Chapter 3). Our experiences and reactions to these also influence the environment in which we live. Lovely pastoral landscapes are like that because we made them such, so that they can feed us; there is nothing *natural* about them.

☐ The typical sequences of our behaviour, thoughts, appraisals, attributions and values, and of our emotions, arousers and drives, are not fixed over time, nor completely by situational influence. Thus personality traits are probabilistic, not determined (or might it be readily *determinable*?).

Dimensions of personality

Extensive factor analysis of trait descriptions has resulted in a consensus among research groups (see Hogan et al., 2011) regarding the main predispositions underlying other, smaller, branching tendencies

Table 2.2   Five predictive dimensions of personality

Dimensions	Continuum of typical characteristics
Extraversion–introversion	Outgoing, talkative, energetic, assertive vs quiet, shy, reserved
Agreeableness	Sympathetic, kind, affectionate vs cold, quarrelsome, cruel
Conscientiousness	Organised, responsible, cautious vs careless, frivolous, irresponsible
Emotional stability	Stable, calm, equable, contented vs anxious, 'temperamental', unstable, unpredictable
Openness to experience	Creative, intellectual, open-minded regarding new information vs simple, shallow, unintelligent, set in ways

that are more situation specific (see Table 2.2). These are the 'big five', as they are generally known. These characteristics are held to be qualitatively and quantatively stable under *most* environmental conditions, but then, well brought-up children can be taught to kill in times of war, and normally stable, calm people can lose control in the face of severe provocations. The question is: How *much* environmental pressure vs how *much* consistency?

Traits can either be situational – for instance when someone is close to obsessional about a particular record collection, but relaxed about most other things – or pivotal – a central trait that influences most other aspects of behaviour.

The main clue to personality factors at work is when cardinal traits influence behaviour over and above the contingencies present in the nearby environment. Thus, there is little scope for extraversion in the exam room, but some people may ask for more windows to be open/closed than average. There is little scope for bonhomie at a funeral, but some people are more likely to venture the opinion that 'he wouldn't have wanted us to be sad' and bring the occasion closer to a wake.

The various traits will be discussed in more detail in what follows.

Extraversion–introversion

Readers may be thinking that they are indeed controlled, quiet and careful in some situations and outgoing and talkative in others, and that they consciously choose what they want to communicate about their free-spirit selves. 'Up to a point' is a sensible conclusion from

the research. Purely situational, learning history–based formulations are hard to defend, but then so are conceptions of very deterministic, biologically driven accounts of character. It is the mixture of these two that makes for the probability of a given pattern emerging. There is also the 'back catalogue' of learning experiences through which the individual has been conditioned, which accounts for fairly reliable probabilities, plus the amount of effort, self-monitoring and emotion that accompanies doing something that is 'against the grain' of the basic personality.

Personality traits can interact (see Fig. 2.1). Thus, a combination of moderate extraversion and high agreeableness can be very pleasant to encounter (provided that you are not too shy and careful to respond), but high extraversion and low agreeableness usually add up to intolerant/bombastic behaviour. Mild introversion with high conscientiousness equal a dependable, non-intrusive colleague on whom one can rely, but one you do not necessarily invite to the pub after work.

Therefore the behavioural correlates of personality exist to varying degrees, and interact to differing extents, to produce more complex mixtures. A key factor is level of expression.

The higher the scores for extraversion/introversion on the EPI (Eysenck Personality Inventory) the less flexible and contingency-inspired the behaviour, and the more powerful the environmental cues and constraints need to be to influence behaviour. On the far shoulders of a curve of normal distribution we find personality disorders (quantitative extensions of common traits with severe social/clinical implications); for instance, for introversion this position might represent highly socially phobic, obsessive, high-anxiety individuals.

Figure 2.2 (p. 66) reflects the fact that most of us, most of the time, retain the capability of adapting behavioural expression to the contextual, culturally approved signals in the environment that promise positive reinforcement, acceptance and avoidance of trouble. Smaller
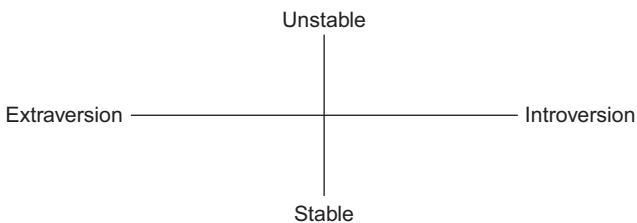
Figure 2.1   Eysenck's formulation of personality dimensions
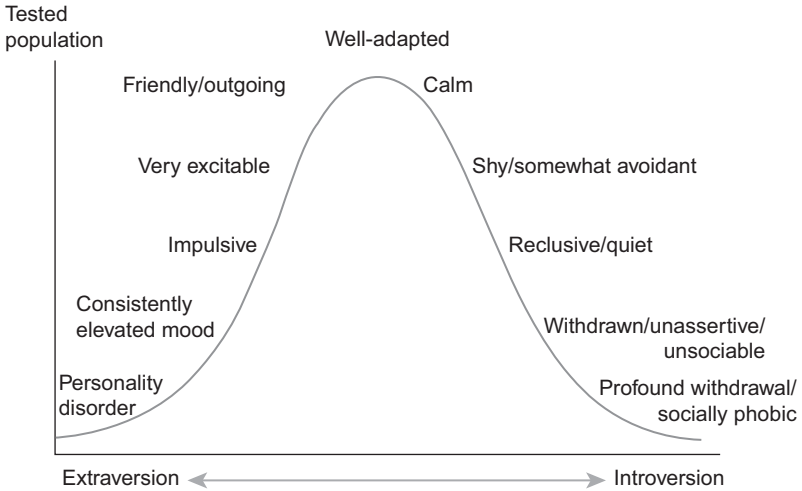
Figure 2.2   Distribution model of trait dimensions

and smaller numbers on the shoulders of the curve can *just about* manage this via attempts to influence the environment; fewer still find it very difficult indeed or have to try to fake it; and at the extremes a few people have personalities so inflexible that the pervasive, manipulative pursuit of their own aims virtually determines how they behave (the variants in forms of psychopathy are discussed in Dowson and Grounds, 1995).

It is tempting to add schizophrenia on the bottom right of Figure 2.2 and mania on the lower left, but then these are *qualitatively* different conditions, not merely quantitative extensions of norms. The case could be more plausibly made for depression, which often accompanies manic conditions (bipolar disorder), but not for the paranoid delusions, nor the religious fervour and sense of invincibility that often accompany this illness. These are orthogonal.

Molecular geneticists are engaged with the hypothesis that certain combinations of genes in particular locations give rise collectively to trait expressions to various extents (see Plomin, 1994, 2002; Plomin et al., 2002; Rutter, 2006).

Observed differences in the psychological, behavioural and emotional reactions on the extraversion–introversion axis show, with the aid of GSR (galvanic skin response) recordings, that extraverts are stimulus-hungry individuals prone to sensation-seeking and

impulsivity. Counter-intuitively, their nervous systems (NSs) 'filter' environmental stimulation, and so they tend to pre-amplify them, either by seeking out stronger effects or by manipulating the environment to create them. Introverted individuals, on the other hand, being prone to sensation shyness, take measures to tone down or avoid situations that would normally require an outgoing response.

An analogy might help. The variances suggest that some people appear to possess (as it were) 'Ferrari nervous systems', wherein a little environmental pedal stimulation quickly drives up arousal to uncomfortable levels. Others on the opposite shoulder of the distribution appear to possess 'Citroën 2CV nervous systems', wherein considerable stamping on the environmental gas pedal is necessary to increase output. Counter-intuitively, the Ferrari NS model applies to introverts, who are stimulus reducers, working to modify incoming stimuli and to avoid any firing up to dangerously high levels. The Citroën 2CV NS reactions belong to extraverts, who pre-amplify stimuli in order to increase emotional feedback levels. Most of us, in the middle of the curve, are Ford Foci, capable of occasional bursts of speed in the right conditions and happy to pootle along when not. We have long-standing empirical backing for this idea of differences in conditionability (see Figure 2.3), which has implications for the design of therapeutic programmes. More recent research using EEG, CAT and MRI scans has shown differences in responses and related biochemical changes, particularly involving dopamine neuro-transmitters (higher levels in introverts than extraverts).

The rest of the trait expression, which we experience psychologically and socially, is dependent on environmental interaction. Some things are harder to learn for extraverts (pausing and thinking, delayed gratification, working steadily for long periods without seeking distractions). Introverts tend to find social interaction, initiating contact and acting on impulse more stressful. Thus there are some people who, in old Hollywood terms, are more likely to go for 'Hey, why don't we put the show on right here in the barn?' and those who want to check the fire insurance policy first. Either tendency can get one into trouble or frustrate the process of getting out of it. The immediate clinical implications for all this will be seen if you compare the treatment programmes necessary for clients in Case studies 3.2 and 1.1).

Eysenck also posited a psychoticism–neuroticism axis for his model, the former characterised by the dominance of endogenous factors, the latter ruled by a broader range of semi-inborn traits contributing to anxiety and avoidance. His later thinking led to a proper 3D bell shape,
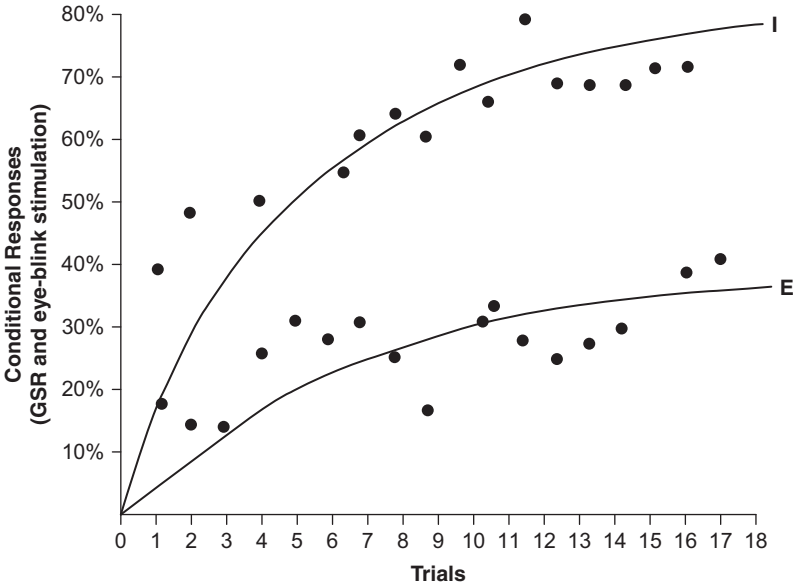
Figure 2.3   Conditionability in introverts and extraverts using EPI scores
Note: The figure represents the different rates and extent of conditioning to a tone fol-
lowed by an irritating puff of air into the eye, as measured on the GSR machine (measuring
pre-arousal to the tone, and the reaction to the tone alone later). Introverts are found to
be punishment sensitive and require substantially fewer paired associations (adapted from
Franks, 1956).

with all these factors interacting. Of all the personality traits this has
the highest rates of inter-observer reliability, and the greatest range of
applications.

Agreeableness

This dimension is also assessed in a bi-dimensional way. Agreeableness
is a predisposition, unless circumstances strongly conspire, to be sym-
pathetic towards others, kind and non-defensively affectionate. The
other half of the continuum heads towards wariness, coldness, quar-
relsomeness and looking after oneself first as a default position; that
is, unless particular circumstances trigger extraordinary efforts at affec-
tion or empathy. Mobsters famously love their mothers; the young man
with serious attention problems discussed in Case study 1.1 is devoted
to his dog and tries hard to be devoted to his adoptive mother – but
more through words and small gestures than deeds requiring sustained
effort.
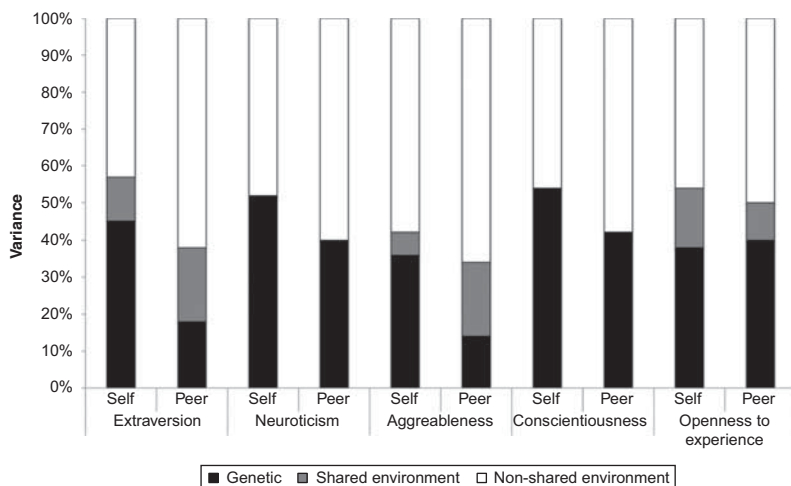
Figure 2.4   Genetic and environmental influences on personality
Source: Adapted from Riemann et al. (1997).

Variance in these factors in twin studies settles around a mean of 45% for genetic influences, but remember that personality research always ends up in self-reports. It can be bolstered by including the testimony of others who know the person, but there is always an element of subjectivity. Figure 2.4 provides some representative data from twin study, gene–environment interactions using the five-factor model.

Early misinterpretations of Darwin, and much later of Dawkins's selfish gene notions, questioned why if natural selection was the basic, ineluctable driver for all things biological, then how come we are so routinely agreeable to each other? How have we developed societies and civilisations that have led us so far from the mere protection of family gene pools, and so to modify our basic drives for survival, mating, food, shelter and security at *any* costs? (For a discussion of this see Braudel, 1995.) Not even the industrialised horrors of the Nazi death camps, nor the paranoidal cruelty of the Gulag archipelago (see Bonhoffer, 1967; Levy, 1987; Solzhenitsyn, 1974) can altogether suppress acts of befriending and mercy – although those in charge had a damned good try.

The point is that apart from being the most aggressive creature on the planet, *Homo sapiens* is also the most socially cooperative. With a little reflection, it is easy to see how this faculty was selected. Humankind's ancestors were physically unpromising primates, not particularly strong,

fast or equipped with claws or powerful jaws. Rearing their young required a long period of nurturance if the vulnerable period of childhood was to be survived. Thus, collective arrangements, the pre- signalling of helpful intentions, divisions of labour and shared sentry duty would all have helped prevent predation or internecine conflict, and so led to improved efficiency in food gathering and hunting. It is interesting to note that women on average score more highly on the agreeableness factor than men. Possibly they had to aeons ago.

Agreeableness depends on empathy, the ability accurately to guess someone else's mood state and needs, to infer their thought patterns, and to have a ghost of the feeling inside oneself that others have. This faculty is helped along by our possession of what have been called *mirror neurons* and other associated brain circuitry (see Ramachandran, 2011), the operations of which are reciprocally reinforced by a lengthy process of moral and social learning. Babies in the womb are intensely selfish, taking what nutrition they need from the placenta regardless of the effect on the mother. Sometimes one twin will, because of their position in the placenta, hog more of the available supply of nutrients, even if the health of the mother or sibling is put at risk. Yet babies are intensely selfish without *knowing it* (a fact that some hard-pressed parents find difficult to believe). If toddlers were six foot tall they would kill us all.

Learning the skills of group living obviously depends on the reinforcement of desirable social responses and the discouragement of selfish impulses. However, alongside this comes an innate but shapeable capacity for imitation, first copying the facial expressions and emotional displays of the mother (try bobbing your tongue out at a small baby – but try not to get caught, it leads to misunderstandings) and later, as cognitive skills develop, an ability to read others' feelings and intentions. These inborn capacities are the beginnings of the trait of agreeableness. As always in neurology, we have learned much from studies of failures in these systems, as in autism spectrum disorders and personality disorders, where the ability to consider the perspective of others is diminished (see Rutter, 2006; Richer & Coates, 2001).

The research of Baron-Cohen (2011) and colleagues suggests that four sets of genes are strongly implicated in the development of empathy. One is the sex-steroid group (CYP11bi); another is a group known to be related to social/emotional behaviour (wfs1); the others are groups promoting neural growth (NTRK1 and GABRB). MRI scans show the effect of the latter differences in that connections between the cortical (calculating, impulse-inhibiting) parts of the brain receive only weak signals from the limbic system, which turns on and controls the

volume of the emotional 'soundtrack' to our behaviour. Counteracting these 'hardwired' factors are the 'software' factors of experience and learning: the inculcation of trust, reflections of personal worth, and not-*very*-conditional love despite the last unfortunate incident. (If you want *un*conditional love, then get a Labrador, is my advice.) Children with empathy are more likely to develop a theory of their own value and are somewhat immunised to encounters with others more programmed towards selfish goals.

Conscientiousness

We have met this attribute before in a discussion of the requirements of evidence-based practice (Chapter 1). There it was characterised as a careful, sober, assessment of complex data. Few sets of stimuli are as complex as those found in social interaction. This trait too is partly inherited and partly developed though experience. It is linked to introversion – no one likes the sound of Larry the 'happy-go-lucky' air traffic controller, or Freda 'the fun-loving' eye surgeon. When it might matter to us, we prefer cross-situational traits such as these: 'organised, responsible, duly cautious, rather than careless, frivolous, or irresponsible' (Zimbardo and Gerrig, 2010).

In addition to introversion, conscientiousness correlates quite well with stability (see the next section), delayed gratification, patience and persistence. There are many occupations, and many everyday tasks, that require it, *a fortiori* the task of bringing up children. How this trait dimension is understood and evaluated depends somewhat on 'cultural receptors'. To be called 'highly conscientious' in a reference for a job as a surveyor, a bank clerk or a pensions actuary, is fine, but what about in advertising or fashion design?

In order to behave according to the strictures of conscience, one has to acquire one in the first place. Most children do, and in quite orderly stages, as we shall see (see p. 185). However, the ability to consider the needs, rights, wants and perspectives of others is strongly dependent on the encouragement of moral reasoning. This civilising capability requires conscientious attention from those trying to inculcate it.

The most telling estimates of the extent to which this trait is inborn come from adoption studies of identical twins reared apart. These show inherent concordances between 40% and 60% (see for example the Minnesota Twin Study, https://mctfr.psych.umn.edu/twinstudy/). These influences are shaped both by the planned environment of socialisation and the accidental environment of life experience, but in itself conscientiousness can be a morally neutral trait, depending on the

circumstances of its phenotypic expression. Adolf Eichmann was a dedicated, highly conscientious public servant with an eye for efficiency and logistics, remember.

Emotional stability

Stability:

1. Firmness of character, resolution, steadfastness. Now also, mental soundness.
2. The quality of being firmly fixed or placed; resistant to displacement or over-balancing, ability to maintain equilibrium. (*Shorter Oxford English Dictionary*)

There is a constant battle in human development between emotion-driven, amygdala-driven impulses, and rational, cortical reappraisal of circumstances. This also occurs between right- and left-brain functions (although it should not be forgotten that the two hemispheres are *very* interconnected and mutually dependent; see Damasio, 1994; Ramachandran, 2011; Kahneman, 2011). Indeed, it is easy to see where Freud got his notions of the id and the super-ego from. Darwin (1871) put it less tautologically when he wrote in *The Descent of Man* of 'the indelible stamp of lowly origins which humans bear in their bodily frame'.

So, the attribute of stability as a measurable feature of personality produces yet another bell curve. On the left-hand shoulders are those whose behaviour is typically less likely to be overridden by emotion or a stray set of contingencies; and on the right, those who exercise little cognitive control of such factors much of the time. Again, introversion–extraversion is the most co-related of the personality dimensions. Twin study variance rates show that a tendency to be governed by anxiety (signals of impending pain/discomfort/failure/adversity plus the motivating effects of negative emotional arousal themselves) is an inherited disposition. In the clinical part of the spectrum, anxiety disorders and phobias (see DSM-V) appear to have inherited levels of over 30%, which of course leaves up to 70% of the variance to be accounted for by epigenetic and environmental factors, and underlines the fact that we can be schooled in anxious reactions to the world, to the fear of failure or to disappointing others (see McGuffin et al., 2002b). Anything that reduces our anxiety is negatively reinforced (see ch. 3) and becomes part of our behavioural repertoire, for instance constant hand-washing, rituals, excessive conformity and other avoidant reactions (see Rettew, 2013; Gelder et al., 2012).

Stability also has cognitive components, although the evidence is that these are concomitant, maintenance factors, rather than causal. In most cases where anxiety-driven instability is a feature, one regularly encounters catastrophic thinking, and extreme reliance on worst-case scenarios and early-avoidance procedures. The other end of the stability spectrum can be characterised by a failure to learn from previous experience or by emotionally driven reactions to immediate circumstances: 'I feel so good/excited/happy about this that I know everything is going to be different *this* time'. Talk to any unhappy, pregnant teenager who is amazed that (freely available) contraception was really necessary for just this one time, when everything seemed so right and natural.

Role models of general stability are an important influence on children. If non-panicky, generally rational, competent adults, who clearly believe in their own problem-solving abilities, are available nearby, then children start to imitate them. They also develop a 'schemata', a cognitive template of the kind of person they are or want to become, because the approach has been seen to work (see Bandura, 1969 and ch. 3). Thus we learn to self-monitor and to rein in our emotional reactions. Much more difficult are situations where the expression of emotion does not come easily, as due emotions are not undetectably easy to fake.

Therefore, we develop an idea of what our personality is, and/or should be, and evaluate ourselves against this model as if we were an external, appraising observer of our own thoughts, feelings and behaviour.

Openness to experience

This dimension ranges from being creative, intellectual, curious and open-minded in the face of new experiences, to simple, emotionally shallow, unintelligent, defensive reactions to new information: another continuum of cross-situational typicality in thinking, feeling and doing. One encounters these variations in professional life. Some clients/patients genuinely seek to understand their predicaments and underneath the worry are curious about their origins; others clearly have no-go areas and pre-defined expectations about how their problems should be fixed. The health and social care services unwittingly reinforce the latter position by reflex prescribing of antidepressants without much curiosity, or referrals for vague 'support'. Short-term, 'off-the-peg' solutions, rather than initially time-consuming, tailor-made ones (which are more effective in the long run), are in fashion, all in the name of 'efficiency' (see Sheldon and Macdonald, 2009: ch. 3; Lambert, 2004).

This dimension is influenced by intelligence, and also by the introversion/extraversion dimension.

Genetic factors, all interacting with environmental experience, counterintuitively play a part in shaping the kind of person we become and the kinds of problems we are pre-disposed to suffer (see Plomin et al., 2002). Moreover, although these life-shaping personality traits persist across the age span (see Guerin et al., 2012), they are crucial during early childhood development where they help physiologically to rig the market for later learning experiences. Thus, some things become easy to learn and absorb, others hard or impossible to learn. The figures for specific cognitive abilities and capacities are equally persuasive regarding the contribution of inherited factors (see Chapter 4). '*Much* comes with us then' is the interim conclusion of this chapter.

This discussion of the relative stability of traits and the contribution of both nature and nurture to them often clashes with other psychological research findings showing that behaviour can sometimes be surprisingly situation specific, and that manipulating environmental contingencies can produce high levels of conformity (see Peters, 1971 for a startling classroom-based experiment in which children were routinely mocked and discriminated against on the basis of eye colour. When blue was arbitarily changed to brown halfway through exactly the same adverse reactions were obtained). Thus environments can override personality traits, just as personality traits can override specific environments. It is the relative strength of each of these forces that determines the behavioural outcome.

Behavioural and emotional problems in childhood and adolescence

When we want to tease out the relevant influences of biology, inheritance, epigenetic factors or very early developmental experiences versus everyday learning, we must turn again to twin studies, of which we now have plenty (see McGuffin et al., 2002b; Rutter, 2006). However, as with 'subprime' mortgages, if previous, more methodologically relaxed studies are bundled up with more recent, rigorous research, we have an inflation effect with which to contend. The problems with some of the old material were that monozygosity (100% of genes in common) vs dizygosity (50% of genes in common) could not always be accurately tested; that twins 'reared apart' were sometimes only apart a couple of miles and continued to be part of a semi-permeable extended family; and that

Table 2.3 Main approaches used in twin studies to establish variance

Type	Features
MZ vs DZ comparisons	Twins reared in (allegedly) the same environment, some with 100% genes in common and some with 50%.
Family studies	Investigations of the prevalence of traits, events and disorders in relatives at different levels of consanguinity.
Adoption studies	Identical twins reared apart: how similar/different are they on a variety of measures?
Cross-fostering studies	These exploit the eventuality that children with no family history of disorders themselves are fostered by people who develop them. What is the environmental influence? How 'catchable' are e.g. mental illnesses?
Twin registries	We now have many large, international databases of MZ and DZ twins and therefore increased statistical power to measure similarities and differences against socio-economic and other factors in longitudinal studies. Thus meta-analyses are now possible.

measurements of environmental/upbringing differences tended (and indeed, still tend) to be relatively crude. Most of these problems have been sorted out over the years, and I concur with Steven Pinker that these findings on the influence of inherited traits are probably the best scientific data available to psychologists (Pinker, 2002).

Studies such as those summarised in Table 2.3 have shown significant effects on a wide range of problems (e.g. child and adolescent mental health conditions) for decades, although the 'cultural receptors' for a serious discussion of them, and how other epigenetic and environmental effects interact, have not always been in place.

Conduct disorders

The most common problems in childhood and adolescence are 'conduct disorders' (see DSM-V), a general category of antisocial behaviour, somewhat resistant to the influences of socialisation. These conditions have the following features:

☐ Usually there is evidence of some adverse temperamental excess going back to early childhood (see p. 5). This is particularly the case regarding impulsivity and lack of any remorse for anti-social excesses (see Baron-Cohen, 2011).

☐ Cross-situational patterns (impulsive or self-gratifying behaviour across the board in a number of different situations, rather than situation-specific reactions), form the cause for concern in such cases.

☐ There is often some history of abuse or neglect, but clinicians need to assess how far this is an 'end of tether' reaction to severe provocation and how far it was always present, and so more likely to be causal than reactive. Just reciting a politically correct mantra that there is *never* a valid or at least *understandable* reason for less than ideal parenting simply alienates those who need our help.

☐ Poor parenting capacity is often evident in adults who were themselves brought up in adverse circumstances, or have drug or alcohol problems.

☐ The child fails to notice and cognitively process cues of impending trouble/conflict, but perhaps below the level of ADHD criteria.

☐ There is a lack of available models to demonstrate more effective social skills or approaches to conflict resolution.

☐ There are adverse influences from peer groups. Interestingly, in my clinical experience, children with very challenging behaviour rarely seem to show attention deficits or lack of persistence in finding a group of rather similar, bad-behaviour-reinforcing peers as a source of (misplaced) approval.

☐ Unwitting attention for bad behaviour and a lack of understanding that *reinforcers* (contingent strengtheners) need not look anything like our usual idea of rewards. Did you ever belong to a class at school where successful attempts to get the teacher to lose her temper were a cause of glee? (No, neither did I, but I have *heard* of such cases.)

☐ For some children, challenging behaviour is a form of avoidance – a 'rain stopped play' effect, if, that is, you are no good at the game.

Research suggests a continuum of causes and maintenance effects in these cases, from temperamental excesses through to more situation-specific, behaviour-management deficits. Often, a structured changing of contingencies can lead to quick and enduring results (as in Case study 3.3). They are enduring, that is, if they *continue* to attract positive reinforcement. However, this is the very last thing that seems natural to adults with memories of a back catalogue of very difficult behaviour.

Below these general features lie a few definite clinical syndromes, where some innate factors are present and collide with environmental features that are less than sustaining to the young person (see Rutter, 2008; Sheldon, 2011).

Let us look at what genetics and epigenetics research can tell us about these problems. Turkheimer's influential paper (2000) and Pinker's engaging analysis of the research (2002) lead us to three conclusions about this:

☐ All behavioural traits, including those that cluster together to form dimensions of personality, temperament or character, are, to varying degrees, heritable.
☐ The measurable environmental effect of being brought up in the same family is surprisingly smaller than predispositional genetic influences.
☐ There is a dimension in nature/nurture research that is not straight-forwardly accounted for either by genetic inheritance or by the shared environment. Logically, these variances must be due either to non-shared learning experiences, to different inter-uterine experiences or to other epigenetic influences. Remember, however, the (underestimated) influence of peer groups, different school experiences and varying parental expectations of different children. All this led Spector (2012) to entitle his book on the subject *Identically Different* and Carey (2012) in Chapter 5 of her epigenetics book to raise the question: 'Why aren't identical twins actually identical?'

Some of the new directions of genetic–epigenetics–environment research are discussed in what follows. For example, when we assume that a given genetic variance only accounts for n% of phenotypic expression – 'the environment' – we in the helping professions tend to do so eagerly, because environments can always, potentially, be fixed (discuss). But what exactly does the word 'environment' mean? The womb is an environment and is not completely shielded from outside influences and threats; the mother's body, and what has happened to it, is an environment for the foetus. In the case of twins, the other foetus positioned differently on the placenta is a somewhat different environment. Alcohol, drugs and stress hormones such as cortisol can be a feature of the early environment for children, and have powerful effects at the very time that the script for future brain development is being written.

Furthermore, when we say that identical twins 'shared the same environment', what does this mean? Social scientists have rested con-tent with analogue measures for too long; that is, children shared the same building, had the same parents, went to the same sort of school. But then they may have had very different peer groups or

school experiences, or different roles in the same family. Think back to your own childhood. Did your parents treat you the same as your brother/sister? Did you respond to/hate the same teachers? Did you have the same role in the family? Because your sister was musical, did you take up the piano? We can learn much about the interaction of nature and nurture from the study of highly specialised talents such as musical ability; it is strongly heritable but in a non-specific way, and is correlated with mathematical ability. A test of the environmental hypothesis, that skill depends mainly on being well taught and engaging in lots of diligent practice, can be found in the outcomes of the Suzuki method – essentially behaviour modification for young musicians – in which intensive training and rehearsal does indeed lead to marked advances in performance ability, but to few really brilliant musicians. Studies of these and top performers in other fields have suggested that 10 000 hours of practice are required to achieve excellence in a creative field (see Gladwell, 2008).

If both twins got free school meals (not a bad predictor of later disadvantage), did they regard their provision in the same way? Shortage of enough money to guarantee a regular diet for children might have direct effects on concentration and school performance, but the indicator stands also for a range of other social factors of known sociological importance; that is, no money for food = no money for books = low educational expectations = no room for private study at home = role models with low occupational expectations. This certainly works *statistically*. In non-selective schools in poorer areas, 1 in 5 pupils will be entitled to free school meals; in those areas that have retained selection, only 1 in 50 grammar school pupils are thus disadvantaged – their middle-class parents tend to be able to buy a house in the pricy catchment area, or undergo plausible religious conversions to make their offspring eligible for faith schools with a good academic record. However, buried in these predictive statistics are aspirational parents with little spare money who nevertheless find some for books (a major theme in twentieth-century Welsh literature, and Scotland has 'The lad o' parts'). Furthermore, some children brought up in shared, educationally understimulating environments go off to find interesting books in the (free) public library, but their siblings do not. So you *can* become a professor if you are the daughter of a postman and a dinner lady, it is just statistically unlikely.

Each twin child has the other in his/her environment, and so *reactive* differences can also build up in pursuit of different routes to a separate identity (see Chapter 5).

Society, whatever its current preoccupations happen to be, is also an environment, as is the historical period in which you happen to be born. For example, 1894 and 1921 were particularly unlucky periods in which to enter the world for boys in Britain. Whatever the material circumstances at the time, there were two world wars lying in wait. Thus, the analogue measures of the social sciences, at least as employed in twin studies, are much less specific than the correlations (remember that this is what they are) of genetic variance investigations. Researchers routinely decide that environments are 'very similar' based on two or three socio-economic variables and, even with factor analysis, they quickly run out of statistical power. Thus, in any debate about the relative contributions of nature and nurture, the ever-tighter results of biological researchers always trump the results of another, fuzzier, very interactive, less controllable subject group. Particularly in the hands of journalists and pop scientists, this leads us towards the unpalatable conclusion that consistent love, decent expectations and good schools have but a small tangible impact on where individuals end up. Commentators normally add that 'of course this does not mean that your tireless efforts as a parent are to no avail' (see Pinker, 2002), but it is hard to see why not in their frame of reference.

There are several possibilities to explain these somewhat counter-cultural findings. The first is that environmental effects are indeed powerful, but that we are at present too fixated on the genetic predispositions where most scientific progress has recently been made to give the findings due weight. Arguably, we have swung from too little focus on biology to too few hard-headed examinations of the shaping power of the environment. Second, epigenetics is a relatively new science. Its late development is due to the sheer empirical power of Darwinism, and a desire among biological researchers to avoid the heresy of Lamarckism (that giraffes pass on long necks to their offspring because of all the necessary stretching for the nicer leaves higher up in the trees; see Fox-Keller, 2010). Third, we know from studies of early abuse and neglect of children, and from follow-ups of these, that early environmental experiences do have lasting effects on later behaviour and create a susceptibility to psychological disorders (see Rutter, 2008). In reassuring us in this way, genetics researchers, who usually know enough psychology to realise that the environments of children are unlikely to be this impotent, are looking to social and developmental psychology to raise their game and help balance the equation.

However, other kinds of influences can also affect later development. The common research example used here is based on the effects

of the Dutch famine during the Second World War (see Carey 2012: ch. 6). The Germans, under increased military pressure after D-Day, sequestered all available food, leaving the occupied population to starve; an environmental effect *par excellence.* Famished mothers with three-month-term babies in their wombs later gave birth, as would be expected, to smaller babies. However, even though the food supply improved, these same children *remained* smaller than average all their lives, despite later good nutrition. Moreover, mothers who were severely malnourished *very early* in pregnancy gave birth to children for whom later obesity was a common problem. More surprisingly, these effects were and are detectable in their grandchildren too.

Explanations have concentrated on the hormone cortisol ($C_{21}H_{28}O_5$) produced by the adrenal glands. The more environmental pressure we experience (stress), the greater the production of this hormone via a 'thermostatic' function in the hippocampus region of the brain. Such effects have been studied not only in generalised deprivation states, but also in cases of severe abuse in childhood. These victims have higher levels of cortisol, show a higher likelihood of experiencing psychological problems and more severe mental illnesses (e.g. depression) and are at greater risk of committing suicide. The key ideas here are not billiard ball causation but increases in *susceptibility* – an additional epigenetic burden where, if later environmental conditions are adverse, then individuals are less resilient in the face of them:

> During an abusive childhood, this signalling cascade is very active. In many abuse survivors, this system keeps signalling as if the person is still trapped in the abusive situation. It is as if the thermostat on a central heating system has malfunctioned, and the boiler and radiators continue to pump out heat in August, based on the weather from the previous February. (Carey, 2012: 237–8)

The main lesson of epigenetics research is that genes and gene interactions, particularly those affecting brain development and thus later behaviour, are *mutable*. That is, they are switched on or off, and remain on or off, for long periods via a process called DNA methylation and via the modification of histone proteins. This allows alterations to the activity of genes to be influenced by other external influences (see Spector, 2012).

Although troublesome to families (who may well have other difficulties too), conduct disorders can lie just below the syndromic,

diagnostic requirements of DC: 0–3R (see Egger et al., 2005) and below the age thresholds for much of DSM-V and ICD-10. The influence of these manuals and concerns about the medicalisation of behavioural problems notwithstanding, such publications are to be welcomed in my view, because they are a necessary step in establishing epidemiological patterns, in ensuring that we try to employ a common language, and in assessing treatment effectiveness for particular conditions.

That said, there are some circularities in these (ever-expanding) categories. Thus, the reason for Jake's constant refusal to obey reasonable family requests and his resistance to all discipline is the fact that he suffers from oppositional defiant disorder, which we know he has because of his refusal to . . . and so on. But taxonomies are still important, because if we cannot agree on key behavioural elements, and on the levels of these that constitute more than severe naughtiness, then we are unlikely to progress with understanding the manifestations that indicate that the condition is intractable. Indeed, a good way of discovering whether a pattern of behaviour is due merely to an excess of a certain temperamental style or something more serious is to put in place reasonable, reliable containment measures and see what happens (see p. 142).

Depression in childhood

It is hard for most of us to imagine, but DC: 0–3R contains evidence of depressed toddlers. These conditions are usually associated with emotional neglect mixed with unpredictability (a recipe for learned-helplessness reactions; see Seligman 1975 and Gilbert, 1992) and with bereavement in early childhood. There are some problems with this literature, however, as I will now discuss.

Childhood now officially extends to 18 (although no one really thinks of a 17-year-old as a child), and we know that many mental health problems first manifest themselves in adolescence (e.g. depression, some types of schizophrenia, mood disorders, eating disorders). The cut-off point is therefore somewhat artificial, because we may be dealing here with the first stages of life-long struggles, and yet we catalogue the conditions by birth date. This fact has probably led to an underestimation of genetic variance for major depressive disorder in adults, because relapses have tailed off over time or as a result of treatment. The point is that extra sensitivity is needed in the treatment of mental health problems in children, just because they *are* children and so have a range of vulnerabilities that can make their underlying conditions worse.

We know that early manifestations of depression are due proportionally to various factors:

☐ strong familial predispositions;
☐ strongly adverse environmental factors (see Brown & Harris, 1979), e.g. bullying at school, including, increasingly, internet bullying (21% of 8–11-year-olds report experience of this);
☐ class position in general, and all that comes with such categorizations (which doubles the rates);
☐ bereavement as a child, particularly loss of a mother;
☐ acrimonious divorce with shaky contact arrangements;
☐ severe family problems (see Halsey & Webb, 2000).

We also know that there are influential protective factors in some cases (e.g. a supportive extended family), but also that the lack of control and threat to developing identity and basic security that these circumstances bring can tip the developmental balance.

Epidemiological studies place the rates of childhood depression at 2.7% and depression in adolescence (13–18 years) at 5.7%. Given the number of children in the population, this is therefore not an uncommon disorder (see Lewinsohn et al., 1999). Furthermore, if a major clinical-level episode occurs in childhood, there is a much increased rate of relapse in adulthood. Add to this a higher rate of suicide in adolescence (seven times more likely than in early childhood depression, perhaps because teenagers have increased access to the means) then unless it responds readily to treatment, depression tends to turn into one of the more treatment-resistant forms in adulthood. It is hard to avoid the conclusion that this is a disorder manifesting itself in different forms according to the developmental and environmental pressures that are present.

Cox et al. (2013) offer a systematic review of what might be done to ameliorate the effects of this condition. From current best evidence, the most effective interventions for depression in childhood are as follows:

☐ Early, decisive, DSM/ICD-based diagnosis; referral from primary care to specialist help; maintaining 'watchful waiting' in mild cases with as much family support as necessary (see NICE, 2007). We know who is going to do the waiting, but who exactly is going to do the watching is a moot point.
☐ Adaptations of cognitive-behavioural therapy (CBT) have a good track record, and these are increasingly 'mindfulness'-based approaches (CBT with a little eastern promise). However, although treatment in adult depression has been the subject of many

good-quality systematic reviews, the number of trials devoted to childhood depression is small and they are of mixed quality (see Cox et al., 2013). There is some evidence of immediate benefit from CBT, but not of lasting results – its *main* benefit in adult manifestations (see Sheldon, 2011). Some forms of early-onset depression in childhood remind one of the old distinction between 'endogenous' and 'reactive' depression, and it may be that child cases, without obvious provocative environmental features, constitute an early manifestation of the former.

☐ The newer antidepressant medications are slowly reclaiming their reputation for their relatively safe, mood-lifting effects. However, outcome research still produces mixed results. The selective serotonin reuptake inhibitors that act on brain chemicals such as serotonin and dopamine are in routine use. The newer norepinephrine dopamine reuptake inhibitors (NDRIs) and dopamine disinhibitors have been shown in 14 trials to have some beneficial effects (see Hetrick et al., 2012 for a Cochrane systematic review), but the positive effects here are modest, with a continuing association with suicide for those on antidepressants (of whichever kind) compared with those given a placebo. A hard fact of professional life is that suicide risk often increases as depressed mood begins to moderate. Then, enough motivation for self-harm returns, and the demands of faltering recovery can seem too much to contemplate (April is indeed 'the cruellest month' for these patients/clients).

☐ Why *should* we expect a pill capable of elevating mood in the short term – but with notable side effects – to solve problems of family stress and relationship failure, abuse and bullying? This in the context of a world that is currently very economically unfriendly to young people, with relentlessly demanding educational requirements in the background? Compared to the 'quick fixes' in prospect from pharmacology, there are relatively few trials of approaches that seek to ameliorate the social and psychological factors that are often involved in this condition. Such patterns are still seen sometimes in the medical literature as 'symptoms' of a brain chemical imbalance, not as causes of biochemical imbalances. However, where this (seriously underfunded) research has been carried out and reviewed, there are some promising signs for prevention and treatment, provided that we tailor the inputs to the particular developmental and social circumstances of the young person. Cognitive-behavioural therapy and cognitive therapy are probably the most promising psycho-social approaches we have, as long as they are adjusted for the stage of language development that the child has reached (see Kazdin, 2004; Sheldon, 2011).

☐   There is evidence for the effectiveness of a tailored mixture of CBT plus newer-generation antidepressants in combination, which allows time for supportive, social case-work approaches to address any triggers or maintenance factors in the young person's family, peer group and educational environment.

Case study 2.2

David, a 9-year-old only child, was referred to a child and family guidance clinic by his school and GP. The predominant problems was selective mutism at home and to a lesser extent at school, although he had normal language capability. He would only speak to one or two of his teachers at school on a one-to-one basis. Understandably, he had accumulating problems in reading and English but was above average in Maths. His mood was always one of weary acceptance. There was little facial expression, no laughter, reported weight loss and some sleep disturbance. The child psychiatrists entertained thoughts of an autistic spectrum condition, but thought that depression was more likely. Hearing problems were excluded early on.

The social history of the family was most intriguing, both in respect of what the parents revealed and in the differences that emerged between when they were seen separately and when they were with David.

There was a long marital dispute following a number of affairs by the mother. She was a lively, extrovert person who, after a number of relationships featuring violence, settled for a quiet, studious, arts centre manager as her husband. She often ridiculed him during interviews, and separately said that he was 'a bit of a wimp, but at least a nice wimp'. A long-running 'game' of rows, arguments over trivia and the flaunting of outside affairs by dressing up beforehand and coming home drunk had begun some years before. The husband's reaction was low-level 'guerilla warfare'. He brought home more and more work, feigned preoccupation and indifference, but intercepted letters, followed his wife when she went out and listened in surreptitiously to phone calls. He had even installed a hidden recording device in the house.

There was no provable physical violence, but a constant level of emotional abuse (e.g. constant derision by the mother). More worryingly, there was evidence of her deliberately setting up

situations where her son was bound to fail or not to comply, and then taking some pleasure in punishing him. There was no proof of actual physical abuse, but the mother had clearly researched the limits of the law in this regard. What was eerie was that most discussions of these incidents were accompanied by a smile from her. At a multidisciplinary case conference, the social worker concluded her report by saying: 'This family makes the couple in "Who's Afraid of Virginia Woolf" look quite stable.'

The child was removed to a residential child psychiatric clinic for a psychological assessment, but mainly to allow space for conjoint couples therapy (see Sheldon and Macdonald, 2009: ch. 10). This offer was taken up but only lasted for 2.8 sessions, the mother storming out when the husband tried to read out a long list of symptoms from a psychiatric handbook to support his view that he had married someone with a personality disorder (quite plausible). He recited the list in a cool, intellectual fashion and would not be deterred.

The priorities in this case quickly moved to child protection, but there was much legal haggling involved (emotional abuse is much harder to prove than physical abuse) and a care order was eventually granted, against which the *mother* appealed, saying it was 'a personal insult'. The child was given interpersonal therapy by a specialist at the residential clinic. He cooperated, except that he continued to speak only rarely, apart from providing minimal answers to specific questions. A behavioural scheme was tried to check out the tractability of his mutism. This involved desensitisation to social situations, an element (based on Premack's principle; see ch. 3) whereby he could earn time out of general classwork for time alone, as well as time with his favourite (i.e. least-demanding) teacher and for his preferred (solitary) activities. An attempt was made to construct a low-demand environment, and play sessions involving a tape recorder produced a reinforceable increase in voluntary speech.

David was eventually fostered, but the placement produced no particular alterations regarding his mood or his willingness to speak. A second attempt with a more experienced older couple saw steady increases in speech levels and a noteworthy elevation of mood, however. Antidepressant medication was also tried, but seemed to produce increased anxiety alongside only modest gains in mood.

In summary, the best hypothesis that the team could arrive at regarding the causes of this boy's condition, having ruled out medical conditions in step-by-step tests, was that he had learned that when he was caught up in constant, emotionally laden, threatening skirmishes, the safest option was to stay silent. There was no familial history of depression in either of the parent's families, and none evident either. The assessment pointed instead to a learned-helplessness reaction to an impossibly demanding, manipulative set of family circumstances; which was, of course, only a working hypothesis. Some of David's behaviour suggested an autistic spectrum condition, but if so, this was at the mild Asperger's end on tests, and in any case this diagnosis would not have greatly changed the treatment plan. The other, more plausible alternative was to ask ourselves how the majority of children who were not really wanted by their mothers, without as-yet-undetected medical conditions, would react to such a bizarre, emotionally unsettling family environment. The plan, therefore, was to distance him from it and observe the effects.

The parents eventually divorced. The child remained in foster care, received help from an educational psychologist, psychiatrist and behaviour therapist, and slowly but steadily began to speak again and to perform in school if the environment was sufficiently sheltered. There were no 'breakthroughs', but rather small and steady, labour-intensive gains, the developmental damage already having been done.

Overanxious disorder in childhood

Children and adolescents who fall into this diagnostic category exhibit symptoms including generalised anxiety, particularly regarding school; excessive worry about punctuality; apprehension regarding (objectively) small risks; and catastrophic thoughts about disasters, such as air crashes, car crashes or asteroid collisions. Furthermore:

> Children with this disorder may be overly conforming, perfectionist, unsure of themselves, and tend to re-do tasks because of excessive dissatisfaction with less than perfect performance. (DSM-V: 473)

The role of worry (anticipatory fearfulness with a ruminatory aspect) is the focus of recent research, plus there is an overlap with more frankly obsessive conditions. Catastrophic thinking patterns, even

about prospects that have *never* manifested themselves in reality, and temperamental tendencies towards self-blame have also received attention (see Lambert, 2011a).

A possible reason for the increased reporting of anxiety disorders in children is that now there is ostensibly rather more for them to be anxious *about*. It is not so much the big fears of old, such as early parental death, untreatable illness, failed harvests or the workhouse, but the smaller 'micromorts', and the all-pervasive targets, benchmarks and tests that have come to define educational experience today. We live in an increasingly complex world with more things to go wrong, especially if you have the imagination for it.

In twin studies the heritability of anxiety disorders in children regularly comes out between 37% and 59% (see McGuffin et al., 2002b; Rutter, 2008), variations in the expression of anxiety being mediated by the learning experience in particular environments. Trauma, neglect, abuse, chronically unsympathetic parenting and bullying at school are all factors known to precipitate pervasive anxiety reactions.

Increasingly, genetic researchers are finding common links with obsessive- compulsive disorders, depression and eating disorders (particular in girls in the latter case). The link may take the form of a partially inherited tendency to hyper-vigilance and a personality-based bias towards punishment sensitivity and introversion (see Case study 5.2, and Deater-Deckard et al., 1999).

Psychological research has long shown that the environmental correlates of generalised anxiety in children include parental styles that are unpredictable, overdemanding and based on sanctions and disapproval rather than praise and reward. Inconsistency plus disapproval and regular reliance on punishment emerge as the main predictors (see Rutter & Hersov, 1995). Children can thus be *taught* to become nervous wrecks, particularly if they are constitutionally predisposed to high anxiety (see Rutter, 2006). In addition, children who have a major role in caring for physically or mentally disabled parents are over-represented in prevalence statistics. However, outcomes are modified by the level of wider family support available, the way in which children 'frame' their roles, the level of support available from professionals and personal resilience factors (see Newman, 2003). This condition often persists into adulthood (if untreated). For a riveting account of what it is like to have it in chronic form, see David Adam's *The Man Who Couldn't Stop* (2014).

In terms of interventions, effective psycho-social approaches do exist (see Kazdin, 1997; James et al., 2013; Sheldon, 2011), notably cognitive-behavioural therapy, cognitive therapy and other talking therapies. Pharmacological interventions, particularly fluoxetine, also show

clinically relevant reductions in anxiety (without troublesome side effects, so far), as measured by the Paediatric Anxiety Rating Scale. The advantages of psycho-therapeutic approaches over pills alone are the possibility of longer-lasting results, the avoidance of dependency, and parental preference.

Pervasively increased anxiety in children and adolescents tends to attach itself to any number of situations or settings, including school or other people (social phobia), and can produce numerous near-phobic, panicky or obsessive-compulsive reactions.

The diagnostic criteria for this junior version of generalised anxiety disorder are a little different than those in adulthood, but the underlying neural mechanisms may well be similar. These conditions are not easy to treat with (otherwise effective) behavioural methods (see Emmelkamp, 2004; Lambert, 2011a), since desensitisation to one aspect still leaves others in place. Thus there may be too many targets to deal with at once, and the results may easily be mistaken for 'symptom substitution'. Nevertheless, behavioural experimentation, alongside an examination of thoughts and feelings and their origins, remains a key treatment ingredient (see Sheldon, 2011; Lambert, 2011a).

Obsessive-compulsive disorder in childhood and adolescence

The presentation of OCD symptoms in younger people (more common in boys than girls) are similar to those found in adult conditions; that is, anxiety regarding the imperative of checking small details, repetitive actions, hoarding, constant hand washing because of a fear of contamination, ritualistic behaviour, and catastrophic thoughts about failing to carry any of these precautionary things out.

There is a cultural baseline to consider in childhood cases; that is, as yet relatively ill-equipped children inhabit an (increasingly) demanding environment over which they have limited control. One way of managing this is to pick on small, unlikely details and take close control of *them*, since so much else is beyond ready influence, and to engage in repetitive rituals to make the patient/client feel safe in *some*, tiny accomplishments. Repetitive behaviour itself also calms anxieties, as when we pace up and down before an important interview. So, avoid walking on cracks in the pavement and the bears will not get you (that there are no bears outside captivity in the UK, and that it is *cars* you have to watch out for is beside the point). The better-safe-than-sorry feelings of 4–6-year-olds are a feature of the childhoods of most of us. I must confess that I still wave at single magpies, since a *tiny* gesture forestalls widowerhood. Thus a massive loss can allegedly be obviated

by a small effort – no harm in it, it costs nothing, and it has worked so far.

The mass media also casually trade in anxiety, health scares and child abduction risks. The latter (by strangers) are roughly the same per head of population as they were in 1946, but haven't childhoods changed?

Just-in-case vigilance and checking are probably a product of evolution, when the risks were more dire and watchfulness was a life-and-death matter, but they can take over our lives – even young lives. The lifetime prevalence of childhood OCD is 2.5% in the developed world, and just a little lower across all cultures. The modal age is earlier in males than females (6 rather than 15 years) and it typically has a 'waxing and waning' pattern.

OCD causes serious consequences for educational attainment and can lead to severe disruption to family life. There is an underlying genetic basis for the condition (see Kelly, 2010; Pato et al., 2002; Eley et al., 2002) and a strong correlation with neuroticism and introversion as measured on the EPI. Heritability ranges from 40–50%, although there is a shortage of good twin studies in this field. Those we do have suggest an overlap between genetic predisposition, personality inventory scores, anxiety-filled environments and the experience of particular traumatic events. This is presently the best model of causation we possess.

Case study 2.3 is an illustration, involving both a child and adults, which sticks in my memory.

Case study 2.3

Mrs L was evacuated as a child (aged 5½) during the Second World War. She was sent to an isolated farm that she did not care for, although she was reasonably well treated. Little bombing occurred ('the phony war') and so she was brought home. There was then a large raid on a nearby armaments factory where her father worked. He was killed, but his body was never found, as was the case for many of his workmates. The place was quickly bulldozed, an event that she often thought about. She was later evacuated again, to a different but equally isolated farm, where she underwent experiences that were definitely not *Goodnight Mister Tom*. She was ridiculed for her accent, told that she was filthy and as 'rough as rats', was forcibly bathed in cold water and routinely beaten for small misdemeanours. One day, after stealing some food because she was hungry, she was locked in a chicken coop for a day as a

punishment. She emerged covered in fleas. 'I've never really felt clean since,' she recalled.

Mrs L sought help in middle age from a child and family guidance clinic, having tried medication from her GP and found that it just made her sleepy. Interestingly, the referral was ostensibly not for *herself*, but for her then 13-year-old daughter to whom she thought she had 'passed on the curse'. Her daughter did, indeed, have a number of cleaning and hygiene rituals similar to hers (she had no finger ends left as a result of dipping them into neat bleach twice a day). Her daughter would come into the house after school, holding her hands aloft like a surgeon until they were wiped with neat disinfectant. She was not allowed to touch her mother until this was done. The curtains in the house all had to be aligned to within a millimetre of their 'correct position'. Doors had to be positioned at precise angles.

Mrs L's husband constantly threatened to leave her and take the child with him. Occasionally he would wreck one of her rituals or her careful placements, and would be ostracised by both mother and daughter. The atmosphere in the family was one of palpable pity and genuine love, but the husband volunteered that he felt that he was living with 'a black cloud inside my head'.

A behavioural scheme with a strong element of exposure therapy and response prevention was used in this case (see Sheldon, 2011; Archer et al., 2012) and produced good results in seven sessions. At follow-up three months later, Mrs L described herself as 'still itching, but coping'; interestingly, the daughter, who was involved in the programme, gave up her (second-hand) obsessions very quickly when she saw her mother trying to confront hers. When asked about this, she said that she had engaged in these mainly to please her mother and to 'keep the peace', but that 'they were real'. The pattern of causation in her case was thus largely environmental. One of the saddest aspects of this case, since it responded well to treatment, was the years that this suffering had continued for without anything effective being done.

Eating disorders in childhood and adolescence

Patients/clients diagnosed with either anorexia nervosa or bulimia nervosa tend to be somewhat co-morbid with OCD (18% and 33% respectively). Eating disorders rarely occur before puberty (14–18 years is

typical) and around 90% of sufferers are female. The diagnosis requires weight loss and refusal/inability to maintain weight at 85% of normal body mass/height norms. Sufferers usually admit to a fear of becoming fat despite obvious evidence to the contrary.

In severe cases there are body-dismorphic effects, where the patient grossly overestimates her/his weight and bodily shape. At this stage family dynamics tend to intrude, and parents and friends try to feed by stealth, surreptitiousness that is hyper- vigilantly resisted by the patient. As in the past, and as in schizophrenia (see p. 105), well-intentioned parents are often seen as the *cause* of the condition. A little psychological education about basic treatability figures goes a long way in harnessing parental support, as long as they do not feel that they are being implicitly blamed for a condition of which they (rightly) feel that they are the co-victims.

There are standardised scales to estimate the likelihood, course and tractability of eating disorders (e.g. the Eating Attitudes Test or EAT-26 and the Eating Disorder Inventory or EDI-3). The prevalence rate for this condition is 0.5% of the population, but it is much more common in industrialised countries where food is plentiful. Hence it is often seen as a reaction to pictures of svelte models in magazines, based on stereotypes of what women *should* look like. However, the condition is strongly inherited. Incidences are rising in developing countries like India. (The 'Bollywood' film industry used to prefer actors who were a little chubby and looked well fed, once a mark of status, but the trend is now, as the economy grows, towards the lean and sylph-like.) The condition has also become unhelpfully politicised, with feminist writers seeing it as a form of 'hunger strike against patriarchy'.

Nevertheless, all the evidence is that, contrary to popular opinion, there is not a strong modelling effect; these disorders have a strong additive genetic component of between 70% and 88% in twin studies, with the non-shared environment making up most of the balance (see Sullivan et al., 2000a). These findings make one scratch one's head as to why the reflex response in primary care when antidepressants have failed to work (why should they?) is to offer family counselling plus dietary advice. The implicit message here is that the family are the cause and not the co-victims of the illness and that the patient is uneducated in matters of nutrition. Therapeutic approaches that seek to harness family understanding and support are a different matter.

Research shows a heritability rate of between 42% and 50%. The fear of being overweight, a drive for thinness and high rates of dissatisfaction

with body shape regularly show up in the psychological tests used. The problem is that, given the relatively small samples in earlier research, the results of which endure as aggregated results in systematic reviews, we need to interpret the research with caution. More recent figures suggest an inheritance level of over 50% (see McGuffin et al., 2002b).

In bulimia nervosa (binge eating followed by self-induced vomiting and misuse of laxatives) the genetic contribution ranges from 28% to 83% in studies. This is obviously an unsatisfactory range (see Sullivan et al., 1998; Price et al., 2012). Surprisingly, this more dramatic condition is rather more treatable, both pharmacologically and via psycho-social interventions.

The neuro-psychological literature (see Cummins and Mega, 2003) is of limited use to those with practical goals in mind. It identifies reduced levels of the thyroid-stimulating hormones thyroptorin and thyroxin, plus some other hormonal imbalances such as the suppression of cortisol, but then, so what? Are these causal, contributory, or merely the effects of self-starvation?

Anorexia ('without appetite') is a poor term for the condition, because only in the latter stages of serious cases does appetite extinguish. In early cases, hunger is often seen as a cue for abstinence on a 'no pain, no loss' principle. Alexandr Solzhenitsyn's semi-autobiographical novel *One Day in the Life of Ivan Denisovich* offers an insight. Locked up in solitary confinement in the Gulag for some imaginary offence, Ivan is given a small bowl of thin gruel per day to live on. There is whispered advice not to eat this from the next cell – otherwise the ravages of hunger would dominate every minute of the day. With abstinence, a 'transcendental' feeling would take over, as in religiously inspired fasting (a finding confirmed by starvation experiments with conscientious objectors in the United States during the Second World War). It is a possibility that something similar happens in cases of anorexia and it may be that there is an additive endorphin reaction, as in extreme exercise.

CBT plus family support is the most effective treatment for eating disorders, provided that there is a weighing scale nearby; nothing works without one. This may seem an obvious point, but many psychotherapeutic approaches have been tried where success has been claimed according to positive changes in mood, while the patient continues to lose weight. Clients themselves often collude in this mistaken view of 'progress' (see Wilson & Fairburn, 1998; Tierney, 2004). There is some evidence for group approaches, as long as they do not end up supporting the anorexia rather than the patients' recovery.

Autistic spectrum disorders

Once regarded as an environmentally inspired problem due to 'refrigerator mothers' or a lack of maternal warmth – another example of 'blaming the victim', as in schizophrenia in the 1960s – Kanner (1943) always saw autism as 'constitutional'; that is, as a genetically inspired disorder – but as late as 2001 I was strongly opposed at a psychiatric conference for suggesting that the evidence was overwhelmingly in this direction. There was initially much confusion regarding diagnosis, with the pioneers of behavioural treatment such as Lovaas (1966) calling it 'childhood psychosis'. Age of onset is usually before 3 years. Prevalence is 3–4 per 100 000 of the child population; the disorder is 3.5 times more common in males. Contrary to the film *Rain Man*, very few are autistic savants: 75% of autistic children have some mental retardation in fact.

Neuro-scientific studies implicate elevated serotonin levels, but some research has discoverered structural differences in the brains of those with this condition, influding increased volume, reduced corpus collosum (the connections between the right and the left hemispheres) and abnormalities in the limbic system (which controls emotional expression; see Rapin & Katzman, 1998).

Diagnosis is now much more evidentially based (see the Autism Diagnostic Interview protocol and the Autism Diagnostic Observation Schedule). Better diagnosis is probably the reason why autistic spectrum disorders appear to be more common now. The condition can be characterised as follows:

☐ Disordered speech; abnormality of, or avoidance of, communication; reduced eye-to-eye gaze; lack of non-verbal communication and ordinary social gestures.
☐ Marked disorder in initiating communication plus an inability to read the feelings or desires of others, even close family.
☐ Repetitive, self-stimulating behaviours, e.g. rocking and hand flapping, plus strange whole-body movements.
☐ Lack of age-appropriate play, little or no make-believe play.
☐ Attention to fine detail but not to the context or social meaning of stimuli (see DSM-V).

There is a powerful genetic effect at work here. Different studies place heritability at between 36% and 90%. As Thapar and Scourfield (2002) conclude in their systematic review, 'This provides convincing evidence that Autism is not only familial, but is one of the most heritable psychiatric disorders.'

Most of the cases coming the way of health and social care staff are at the milder end of the spectrum, what used to be called Asperger's syndrome, where children can just about cope in supported education. An example is in Case study 2.4.

Case study 2.4

I once interviewed a single mother with an 11-year-old autistic son who (with limited professional assistance) had worked out a rough-and-ready behavioural management scheme for him. It worked reasonably well when applied consistently, but left her feeling guilty. She felt guilty about 'regimentation', guilty about having to resort occasionally to medication, and guilty that she and her ex-husband might have failed to cooperate fully with a recent course of psychoanalytically flavoured family therapy, which they had found 'bizarre'. Focusing on the irrationality of such feelings and their deleterious effects, congratulating her on her skills as an amateur behaviour therapist and putting her in touch with a regional support group produced considerable relief. There was little else apart from greater consistency that could have been improved on. She held strong irrational feelings over the limits of her influence on a substantially biological, developmental condition: 'not your fault, but where do we go from here?' was the central message.

   The main therapeutic inputs in this case were to explain the nature of the disorder to the family, and to use a behavioural approach to limit the son's daily anti-contamination rituals (response prevention; see Chapter 3).

Childhood schizophrenia

This condition normally expresses itself in adolescence and there is still much wrangling over the relatively few cases of pre-adolescent schizophrenia – for instance, is it a separate illness or just an early expression of the full-blown adult version? Nevertheless, DSM-III and ICD-9 were the first catalogues to separate the condition in order to distinguish it from childhood autism, and to suggest that there might be therapeutic value in recognising this as an early expression of a single disorder capable of being treated in something like the same way as adult manifestations.

Much of the evidence suggests that children so affected actually carry a much greater genetic burden. Studies of consanguinity effects in pre-17-year-old manifestations show a much greater prevalence among first-degree relatives than is the case in later manifestations (see Sham et al., 1994; Nicholson et al., 2000; Rutter, 2006; Rutter & Hersov, 1985; Gelder et al., 2012).

The condition is more common in males, but there is an increase in prevalence for females later. In childhood expressions, more defensive/paranoid symptoms are evident, as is greater disruption to language. The diagnostic criteria for schizophrenia outlined on p. 106 are the same in childhood, but with somewhat different expressions influenced by developmental stage, such as social disconnection at school or withdrawal from classroom participation. These negative symptoms tend to dominate in childhood rather than the positive ones of delusional thinking, paranoia and auditory hallucinations seen in later stages.

There are surprisingly few recent twin studies of child schizophrenia. The earlier literature suggested that genetic loading was about the same as in the adult versions. There are pairwise concordance rates of 70% for monozygotic twins versus 17% for dizygotic twins in the literature (see Dodge & Rutter, 2011).

The main problem with this diagnosis is probably artifactual. That is, if childhood only officially ends at 18, the average age of onset is at the end of this range and diagnosis is a little delayed (as it often can be), then the condition can be held to be rarer than it actually is (see McGuffin et al., 2002b; Yan et al., 2000).

Attention deficit hyperactivity disorder (ADHD)

The diagnosis for this disorder, which first manifests itself in childhood, is dependent on six or more factors from a long list (see DSM-V). The ICD-10 criteria are narrower and so prevalence figures relying on this protocol are reduced. The elements are:

☐ Failure to give close attention to detail, either in school work or in everyday communication.
☐ Reduced attention span/difficulties in remaining on task for more than a short period.
☐ Difficulty in listening carefully enough to detailed instructions; not seeming to listen when spoken to directly.
☐ Failure to carry out not-very-demanding instructions.
☐ Difficulties in organising tasks and activities.

☐ Avoidance of tasks that require sustained mental effort.
☐ Regularly losing things essential for task completion.
☐ Serial forgetfulness in daily activities, plus ready distractability.

These patterns have to be in place for at least six months and to be inconsistent with the developmental norms at a given age.

The hyperactivity dimension also requires six or more patterns of behaviour to be present for at least six months. The key elements are as follows:

☐ Hyperactivity, fidgeting, an inability to sit still even for short periods; a tendency to breach social norms (e.g. in the classroom), an inability to conform to even modest expectations; an inability to play quietly, excessive talking.
☐ Difficulty in attaining the skill of 'taking turns' in early childhood; butting in to the conversations of others.
☐ Some of the above behaviours/deficits should have been present before age 7 and in two or more settings (this to rule out particular reactions to peculiarly demanding environments).

This condition, which has a severe impact on the home and school environment, affects academic attainment and is often associated later with delinquency, expulsion from school, conduct disorders and oppositional/defiant syndromes (see DSM-V; see also Case 1.1 and p. XX).

ADHD runs in families, with risk increases of circa 5% if first-degree relatives are so affected. A stronger effect (17%) is found in first-degree relatives where the subject's ADHD symptoms persist into adolescence or adulthood.

There are 15 published twin studies that place heritability between 60% and 88% (see Thapar & Scourfield, 2002), as also in adoption studies (see Faraone et al., 2001).

There is a continuum of adverse behaviours from mild to severe in their effects, so we are dealing with the effects of a range of deficits here (see Levy et al., 1997). Of children diagnosed with ADHD, 75% have parents who also manifested symptoms of the disorder themselves. Therefore, it is strongly heritable, and made worse by adverse, overdemanding environments. ADHD is more common in boys than girls, with a ratio of 2.3:1 (see Cummins & Mega, 2003: 378). Prevalence rates are at or about 1 in 200 children, but the later the study the higher the level – probably due to improved diagnosis, but also resulting from an overlap with disaffected behaviour due to environmental causes.

Case study 2.5 – Case study 1.1 revisited (see p. 5)

The young man, now 18 years old, has recently visited his birth family for the first time in the Mid West of America, and greatly enjoyed the experience. His reports of the trip do, however, contain a few hair-raising accounts:

☐ He got lost three times on the way there and twice on the way back, despite having written instructions and a mobile.

☐ The family reunion was first celebrated at a local diner ten minutes from the airport with a 'food fight', which involved everyone throwing food and drinks at the walls and at each other. They were invited to leave, but 'so politely', he added, 'very relaxed compared to England.'

☐ When he met his two sisters and a brother for the first time they discovered that they have a lot in common, e.g. two of them had been expelled a number of times from different schools for disruptive behaviour (the family has moved around a great deal).

☐ The family went shopping the next day to WalMart, where he managed to buy a pump-action shotgun plus ammo using his British, provisional moped licence as ID. There he treated his new-found siblings to 'their first knives' (think large) with the mother's agreement, but with a stern accompanying message from him as the older brother that they should 'only be used for self-defence'. However, the next day the power to the house was turned off since there was a 'backlog of bills' and so 'at a family meeting' it was agreed to pawn the new shotgun plus Mom's revolver, plus the Iraq war vet lodger's .45 automatic pistol ('I don't think he should have one really, because he has flashbacks at night, and has to see an Army shrink every week, *and* he's on crystal meth'). And so the power was restored for a while.

☐ A crisis occurred when the kids could not get to school because they were on a school bus ban for bad behaviour, and the mother had to go to work. The school was eight miles away, so they were not able to walk and there were no neighbours willing to help (because of 'previous'), so the adopted-away son jumped into the breach and, with Mom's 'permission', drove them to and from school every day in an old 3.5-litre

> pick-up. He had no licence, no insurance and no experience of driving a car on even the *left* side of the road. No one died, but there were some close calls with the police: 'You just have to look relaxed and confident and be prepared to make a run for it if they do pull you over.' A couple of dents were also caused by street furniture being 'in the wrong place'.
> □ On departure day the young man, £2500 lighter of pocket now, had his sister's names and a large American flag tattooed on his body. His birth mother has tattoos and so does his sister, and he sees it as a sign of solidarity with them.

In case you think this an exaggerated or judgmental account, I can only say that as the only would-be helper, or in this case befriender, that has *ever* stayed with him (I see him two or three times a week), I have rather toned it down for confidentiality's sake. I do not fail to recognise the elements of love in this life story. Nor am I submitting it as *evidence* of the ideas contained in this book about the currently underestimated impact of genetic, epigenetic and inter-uterine experiences on later human behaviour – or indeed, in the former case, on human nature itself (see Pinker, 2002) – but (rather reluctantly) as a puzzle. That is, how can a child brought up in a privileged way, in a listed house on the south coast of England and with the alleged benefits of being given a private education, who has been taken deer stalking and grouse shooting, and been given private tutors and music lessons by his upper middle-class parents, be so *much* more like his biological mother and her subsequent children in so many, sometimes adverse, details (including ADHD diagnoses) and feel so quickly at home 4000 miles away in their (rather impoverished) environment, having had no contact with her after day three of his life? He does speak well though: 'good evening officer, may I be of help?'

A bio-psycho-social perspective on adult mental disorders

Depression

We have already seen that depression in childhood often continues into adulthood: the earlier the onset, the greater the genetic burden, and the more serious the later manifestation of major depressive disorder (see DSM-V). Clinical depression is the commonest mental disorder, and is responsible for the loss of 110 million working days and circa £9 billions worth of economic output per annum in the UK.

Major depressive disorder in adulthood is diagnosed according to the following criteria:

☐ A period of at least two weeks where there is seriously depressed mood or loss of pleasure or interest in nearly all activities.
☐ At least four symptoms from the following list:

   ☐ lack of interest in social interaction;
   ☐ sitting slumped for much of the day;
   ☐ thinking of nothing pleasurable to look forward to (anhedonia);
   ☐ weight loss (more than 5% in one month);
   ☐ disturbed sleep patterns, particularly early-morning waking;
   ☐ fatigue and loss of energy nearly every day;
   ☐ feelings of worthlessness or shame that reassurances from significant others do little to dispel;
   ☐ reduced ability to concentrate;
   ☐ suicidal ideation, sometimes with plans in place (a significant risk factor), sometimes just general contemplation of the idea.

These manifestations must be present each day, or nearly every day of the week, for at least 14 days.

There is a halo around serious depression, including such factors as abandonment of routine domestic tasks; abandonment of work tasks; loss of contact with friends or relatives; abandonment of previously pleasureable recreational activities.

Differential diagnoses are substance misuse, severe reactions to bereavement, and physical illness with accompanying problems of serious self-neglect – a particular problem in older people. The lifetime prevalence of major depressive disorder is between 10% and 25% for women, and circa 12% for men. It should be remembered that women tend to seek medical or psychological help earlier and more readily than men, which, when added to the effects of childbirth and childrearing, may well account for the higher prevalence rate. The average age of onset is in the mid-20s. This disorder tends to be persistent, with 60% showing further relapse after one episode. The associated figures for suicide are between 15% and 18%, so mental illness can kill, and should be taken more seriously than it is.

The genetic contribution to major depressive episodes is more secure than for any other mental health condition. The current figure is 37%; that is, 37% of the variance from twin studies and twin-registry comparisons. Shared-environment effects are relatively small, except in one particular area: serious depression in a parent, particularly a mother,

has enduring psychological effects on children, and may even act as a predisposing factor for them (Sullivan et al., 2000b).

One problem is that the word 'depression' has morphed in connotation in popular culture, so that 'I'm feeling *so* depressed at the moment' often means little more than 'I'm a little unhappy/frustrated at present'. As a corrective to this, here are the words of a famous biologist, Louis Wolpert, on what it is like to have the full clinical version:

> It was the worst experience of my life. More terrible even than watching my wife die of cancer. I am ashamed to admit that of my depression but it is true. I was in a state that bears no resemblance to anything I had experienced before. (Wolpert, 1999: viii)

Neuro-scientific studies implicate reduced levels of the neurotransmitter serotonin (hydroxytriptamine) in clinical cases, and other, hormonal disturbances involving cortisol. MRI scans regularly show decreased cerebral blood flow in diagnosed patients, but the degree to which these factors are causal or concomitant is not yet clear. One thing that is evident, however, is that major depression runs in families and is triggered by social factors, most particularly by situations in which the individual is powerless to take avoidant action – as in 'shell-shock' cases historically, or in post-traumatic stress disorder cases in modern conflicts, or in cases of domestic violence or bereavement today. All such factors can tip the scales in the absence of counter-action by other resilience factors. Depression in older people, for example, often accompanies bereavement or physical illness, and can lead to a spiral of social withdrawal and self-neglect. It is underdiagnosed in primary care about 50% of the time, although the treatment results are as good for this age group as for any other. Nevertheless, often the 'good innings' view of old age that we have in our culture reduces our level of concern.

In terms of interventions, the first generation of effective antidepressive medications were the tricyclics. The dosage safety margins and the side-effect complications were, however, rather challenging for prescribers. These medications have now been largely replaced by a new generation of treatments (the SSRIs), although both tricyclics and even the earlier monoamine oxidase inhibitor drugs can still have something of a role in patients who simply do not respond to the (usually safer), less side-effect-burdensome medications. SSRIs act on mood centres in the brain by reducing the rate of neurotransmitter 'recycling'. They are an effective treatment, although some dependency effects are now beginning to emerge. However, they are better tolerated than earlier

medications and have fewer side effects such as lethargy or agitation, but are slower acting, which can be a problem in urgent cases. In addition to appropriate medication, a combination of psychotherapy, counselling and support appears to be particularly effective in complex cases (see Craighead et al., 1998; Nemeroff & Schatzberg, 1998; NICE, 2006; Rutter et al., 2009; Sheldon, 2011).

It may be thought that pharmacological interventions are not strictly the business of those in social care – except that when social work and nursing staff encourage compliance with the medication prescribed, noting and passing on to medical colleagues information about side effects (the main reason for relapse) and prompting regular medication reviews, then something better than 'prescribe and forget' approaches can result. Research tells us that it makes no sense for GPs and psychiatric nurses to concern themselves exclusively with medication (although work pressures encourage just this) or for social workers to concern themselves only with psycho-social influences. Integrated services work best (see Archer et al., 2012; Reilly et al., 2013).

Psycho-social approaches, such as group therapy, achieve mixed results, depending on what goes on in the groups. Client- or patient-led support groups demonstrate scattered gains against rather forgiving evaluation protocols. CBT does best of all and has longer-lasting effects (see Sheldon, 2011; Lambert, 2004).

Bipolar disorder

Bipolar disorder is another mood disorder, also known as manic-depressive illness. This is a devil's bargain of a condition: the uplifted mood, energy and false or real sense of creativity that it brings can make it addictive; before, that is, the collapse into despair and self-loathing occurs. Lord Byron, Vincent Van Gogh, Virginia Woolf, Pablo Picasso, Sylvia Plath and Winston Churchill are among a long list of historical figures who suffered from this condition and ascribed many of their achievements to its (transient) blessings. Churchill described the downside as 'the black dog'.

Kay Redfield Jamison's compelling book *An Unquiet Mind* (1997) gives frank and deep insights into what it is like to live with extreme mood swings. She is herself a sufferer/beneficiary, but she is also a professor of psychology in a department of psychiatry and co-author of the standard textbook on the illness (see Goodwin and Redfield-Jamison, 2004):

> The war that I waged against myself is not an uncommon one. The major clinical problem in treating manic-depressive illness is not that

there are not effective medications – there are – but that patients so often refuse to take them. Worse yet, because of a lack of information, poor medical advice, stigma or fear of personal and professional reprisals, they do not seek treatment at all. Manic-depression distorts moods and thoughts and incites dreadful behaviours, destroys the basis of rational thought, and too often destroys the desire and the will to live. It is an illness that is biological in its origins, yet one feels psychological in the experience of it; an illness that is unique in conferring advantage and pleasure, yet one that brings in its wake almost unendurable suffering and, not infrequently, suicide. (Redfield-Jamison, 1997: 6)

The prevalence rate of bipolar disorder is around 1%. About 15% of people who suffer from it kill themselves, but this is, statistically, the iceberg tip of the misery it brings; it can also lead to aggression towards loved ones, financial ruin and occupational disasters. Twin studies show a strong familial inheritance pattern through the female line, with risk figures of around 70%; higher, note, than for schizophrenia (see McGuffin et al., 2002b).

The symptoms (especially for full-blown bipolar disorder; there are other, less extreme 'mixed' manifestations) are straightforward, although there are also studies showing confusion with florid schizophrenic episodes, particularly where young people and ethnic minority patients are concerned. The essentials for an accurate diagnosis are:

☐ One or more manic episodes – characterised by highly elevated mood, alongside a major depressive episode.
☐ Erratic and untypical behaviour.
☐ Risk-taking well outside the norms of previous behaviour.
☐ Racing thoughts and irritation at the 'slowness' of other people.

During such near-manic episodes, sufferers feel highly creative and full of energy (read actor Stephen Fry's (1997) autobiographical account) until mental exhaustion sets in (see Muller-Oerlinghansen et al., 2002). The depressive episodes that follow (one or more is necessary for the DSM-V criteria to be met) are a cruel anti-climax to this and patients sometimes anticipate them. Therefore, in this illness there is, on the way down or on the way up, a window of insight, and it is at these transition points that suicide risks increase.

As to causes, anyone who has personally encountered this condition will, if rational, abandon notions that these problems are anything other

than brain disorders, the effects being so severe and so independent of social circumstances.

Neuroscientists are making steady inroads into an understanding of mood disorders in general (see http://www.brainexplorer.org/global/ brain-disorders/bipolar-disorder/introduction). A range of neurotransmitter chemicals such as noradrenalin ($C_8H_{11}NO_3$), serotonin (SHT) and dopamine ($C_8H_1NO_2$) have been the subject of research studies. The basal ganglion and the limbic system (the mood control 'thermostat' sites at the base of the brain) have been implicated, but then the cortical areas are the location for the negative thoughts that compound depressed or elevated mood, so a malign feedback loop is in operation.

Pharmacological treatments (an attempt to control imbalances in this very biologically driven illness) and cooperation with such medical regimes are probably the best hope for recovery – provided, that is, that there is sufficient psycho-social support to make compliance tolerable. Keck and McElroy (1998), in their authoritative review of intervention research, picked out lithium salts as 'the pharmacologic cornerstone of treatment for patients with bipolar disorder'. This is a chemical element, not a high-tech pharmacological formulation, and has been in use since the 1970s to good effect. However, this optimistic statement, based on (to date) ten controlled trials and one systematic review, requires three riders:

☐ Lithium does not suit all patients, the effective dose being uncomfortably close to the toxic dose, and there is a new generation of atypical anti-psychotics with fewer side effects – except for high weight gain, which is itself not without physical and psychological consequences.

☐ The problem with these treatments is that many patients fail to take them. In other words, in the manic phase they dislike the idea of being less 'alive' (even though friends and relatives usually regard such feelings as illusory, self-damaging and unsustainable). Therefore the regular matching of dosage to psychological and social circumstances is time consuming, but crucial. My proposal is that all staff, from consultants to GPs to psychiatric nurses to social workers, need to involve themselves in such treatment programmes with the aim of securing the best trade-off between mood stability and toleration of side effects.

☐ Psychosocial problems, e.g. rows, discord, abandonment and occupational losses, have strong triggering effects, and so work to help maintain family stability is worthwhile both to the patient and to the family, on whom the prognosis substantially depends.

Here is an account of what this process of accurate dosage – with an eye to coping with current environmental stresses – feels like from the inside:

> The too rigid structuring of my moods and temperaments which had resulted from a higher dose of Lithium made me less resilient to stress that a lower dose, which, like the building codes in California that are designed to prevent damage from earthquakes, allowed my mind and emotions to sway a bit. (Redfield Jamison 1996: 67)

From follow-up research, between 30% and 40% of precipitation and relapse in bipolar disorder occurs as a result of environmental factors. Therefore, since medically we can do little at present other than to counter biological factors through pharmacology, what useful alterations can we make to additive psycho-social pressures?

The research literature currently contains ten randomised controlled trials (RCTs) testifying to the additional usefulness of psycho-social interventions in mood disorders, enough evidence to be going on with, particularly if considered alongside promising but less robust trials and together with insights from qualitative, client/patient opinion research (see Miklowitz et al., 1996; Craighead et al., 1998). Our best bets regarding such approaches may therefore be summed up as follows:

☐ There is some evidence regarding the efficacy of psycho-education; that is, simply holding sympathetic dialogues with clients and their families to explore the nature of the disorder and alerting them to early signs of relapse.

☐ Most studies on relapse prevention in this field feature variants or cognitive-behavioural therapy and family therapy (see Lambert, 2004).

☐ Health and social care staff have a role to play in limiting the harm, both to clients and to their families. In the manic phase sufferers are prone to, for example, give away their money and ruin their employment prospects or their businesses. Although families usually understand that something is wrong, nevertheless they often attribute such behaviour to malign intent. Therefore, in the early stages, probably the most beneficial interventions that health and social care staff can make is via a family conference, where early signs of mood disturbance, approaches to damage limitation and family support and problem solving are at the top of the agenda. The joint identification of potential sources of stress, and their avoidance or

deflection, is a promising method (see Sham et al., 1994; Falloon, 2010).

☐ Health and social care staff especially have a role in preventing and containing potential financial ruin. There is a Court of Protection, purpose built for such problems, although experience suggests that social workers and families often apply to it too late, when much of the damage has been done.

☐ Bipolar disorder can do terrible damage to marriages and partnerships. Not only is this condition very hard to live with, but, understandably, high levels of criticism and emotionally charged interchanges are also linked to relapse (see Miklowitz et al., 1996). Therefore, counselling and psycho-education approaches for partners may have an immunizing effect against relapse and help to retain the support of the family.

Schizophrenia

Schizophrenia is an awkward term, but we have been stuck with it since Bleuler coined it in 1908. It means literally 'split mind', and refers to a disconnection between thinking, emotion and environmental experience. Schizophrenia is a major, debilitating mental illness. It is a set of psychotic conditions, in that the client's insight into it, the false perceptions that accompany it and the irrational attribution of symptoms and their original causes are, to some extent, impermeable to rational discussion. I say 'to an extent', because one regularly meets patients who, if one accepted the first premise – 'my body is being interfered with by outside forces; people whom I have never met mean to destroy me' – then their odd-seeming, precautionary measures can look like rational defensiveness.

Epidemiological studies show a worldwide prevalence of just below 1%. However, such cases amount typically to 40% of the case loads of mental health staff. Social anthropological research shows that all cultures have a name for it, whether with the benefit of psychiatry or not, and these definitions place emphasis on delusions, social disconnection and unwanted feelings of external control, which are seen not to be the fault of the sufferer. Michael MacDonald, in his history of the Bethlem Royal Hospital or Bedlam, refers to madness generally as 'the most solitary of afflictions' (quoted in Scull, 1993).

In terms of diagnostic criteria, the first thing to note is that we are not dealing here with a single illness, but with overlapping syndromes. However, there are core characteristics.

The condition comes with positive and negative symptoms. The former reflect overt distortion of normal functions (e.g. bizarre and grossly inappropriate behaviour, disturbed speech that is tangential and illogical, false beliefs, and in the most serious cases, a tendency to act on these beliefs). The term 'negative symptoms' refers to an absence of, or a severe diminution of, normal behaviour (e.g. social withdrawal, a flattening of affect and a lack of volition), so that there is little to sustain ordinary social interactions. Within the general picture several aetiologically and epidemiologically distinct subtypes of the condition may be perceived: paranoid type, disorganised type, catatonic type, 'undetected type' and residual type.

The more specific DSM-V criteria regarding positive symptoms for this illness should guide our understanding:

☐ *Hallucinations*: seeing things that are not objectively there; smelling odours that no one else can smell; feeling bodily intrusions that no one can find any cause for; or, most commonly, hearing voices that seem external to the patient, but no one is there.

☐ *Delusions*: thoughts that sometimes carry imperatives for behaviour. These are often bizarre, erroneous beliefs, which are often strongly held and resistant to reason. They may be persecutory ('people follow me wherever I go') or they may take the form of 'ideas of reference', wherein commonplace objects and events acquire special significance. In a case known to me, the sight of a salt cellar on the breakfast table meant 'I have been "assaulted" in the night'.

☐ *Thought insertion*: ideas that are felt to be put inside the head from the outside, or thought withdrawal, the idea that private thoughts are being removed and broadcast to others.

☐ *Incoherent speech*: sometimes a manifestation of thought disorders (delirium being another possibility). Typically, patients lose control of the structure of any particular narrative, going off track, failing to complete points or exhibiting loose associations that have considerable meaning for them but not for listeners: 'word salad'.

☐ Schizophrenia can also manifest itself in *grossly disturbed behaviour*, from childlike silliness (hebephrenia) to extreme agitation without apparent external provocation.

The differences between our own everyday tendencies in misinterpreting stimuli and those in schizophrenia are the degree of bizarreness; its imperviousness to later reflection; its persistence in the face of contrary evidence; and a sense of loss of control over the processes of mind due

to external, manipulative forces. However, if you glance back over this list of pathological factors, you will see that they are a perfect characterisation of the internet conspiracy theories that are now part of everyday life. People who are not ill live by these, they are extremely resistant to counter-argument and they are functional. Nor can we simply say that these beliefs are not widely shared in the host culture or that they defy common sense, because they are, and just because they are held by a minority does not help either – historically, many truths have been such. Once it was 'common sense' that Jews were inferior and black people were innately less clever and industrious. The point is that the symptoms of schizophrenia were never supposed to be merely quantitative extensions of common cognitive processes or behaviour patterns as in the neuroses, they were supposed to be *qualitatively* orthogonal. The basis of the old diagnostic criteria is thus breaking down, leaving only the question of how far apparently faulty, irrational thinking is harmful to one, or prevents someone one from leading a normal life – NSA whistleblower Edward Snowden would probably be able to advise. More cultural and subcultural competence will be required from mental health staff, as it once was when some of us were learning to work with ethnic minority clients/patients who sometimes held somewhat different truths to be self-evident.

As to negative symptoms (i.e. the *absence* of usual and appropriate behaviours), the following patterns are regularly seen:

☐ Affective (emotional) flattening: blunting of the usual forms of emotional expression. Often there is a lack of facial expression (but note that this may also occur in cases of clinical depression), reduced body language and general social disconnection.
☐ Apathy, and an avoidance of stimulating circumstances, particularly an avoidance of emotionally demanding social circumstances.
☐ Withdrawal from close contact with family and friends, however helpful and supportive they have intended to be.

A problem with diagnoses based substantially on negative symptoms relates to the effects of pharmacological treatment itself. First-generation, neuroleptic medications were notorious for producing side effects that many patients regarded as worse than the disease; namely, weight gain, heart problems, salivary dribbling, tardive dyskinesia (strange, high-stepping gait), extreme drowsiness and neck rigidity. Second-generation medications have fewer side effects, but they remain a serious disincentive for some. Relapse rates within such treatments

are 20% per year, but 80% per year off them, so dosages and toler-ance levels need to be regularly reviewed alongside changes in social circumstances.

When it comes to causes of schizophrenia, the first point to acknowl-edge is that there is much that we do not know. Of all the mental illnesses, this one has been the most controversial. There were (not very convincing to me even at the time) social-anthropological and sociological studies that sought to depict schizophrenia as a form of social-cultural rebellion and a better manifestation of true sanity than most of the bourgeoisie (anyone else) can rise to (Laing, 1966). Philosophers such as Michel Foucault and Jean-Paul Sartre depicted the condition as a psychological *cri de coeur* against the alienating pressures of what they called 'late capitalism'. Psychoanalysts vaguely saw the condition as rooted in childhood psycho-sexual conflicts (what is not, for them?), but now steer well clear of these patients since the symptoms are, clinically, too extreme to justify even their less fanciful notions as to aetiology.

As elsewhere, the problem facing attempts to disentangle the strands of biological and environmental inheritance is that usually the parents who confer the genes also provide the upbringing. Thus, even though studies have concluded for decades that mental illness runs in families, and that the greater the consanguinity (blood relatedness) the greater the risk, we could never be sure what the transmission routes were. More secure data comes from three sources of difference: monozygotic versus dizygotic twin studies, comparisons between identical and frater-nal twins; adoption studies, wherein identical twins have been placed in different family environments from birth; and cross-fostering stud-ies, wherein (approaching the question of genetic versus environmental influences from the other direction) children with no known genetic vulnerability have been adopted into families where a surrogate parent acquires a diagnosis of schizophrenia (see Gottesman, 1991; Sheldon, 2011).

The other possibility is that this is an in-utero disorder; in other words, something happens to the embryo – which *could* be an environmental cause – that delays and disrupts certain patterns of brain development. We just do not know. However, it appears from the later data that you cannot 'catch it' as in depression – although one could well have one's life chances severely influenced by the social, psychological and eco-nomic consequences of it, as is the case with any serious disability. Furthermore, children seem to recognise symptoms of schizophrenia in parents as something completely different, troubling but non-rational, and so not always a cause for self-blame.

To get some idea of the physical versus environmental patterns with which we are dealing, think back to the now familiar media images of the twin firemen that circulated a few years ago. These identical twins, separated at birth, met by accident at a volunteer fire officers' convention when someone who knew one of them asked the other how he had managed to get into the bar, since he had just passed him going in the opposite direction. Both are volunteer firefighters
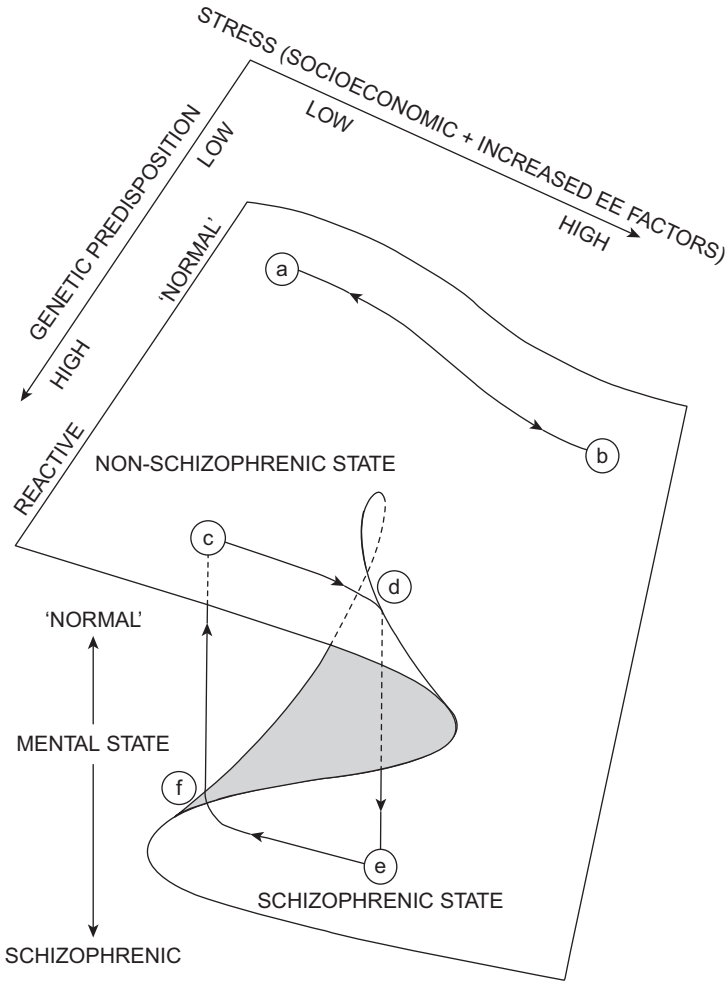
Figure 2.5 The interaction of biological and social factors in schizophrenia (adapted from Woodcock & Davis, 1978)

(at different brigades), both are married to school teachers, both wives (coincidentally, one somehow hopes) are called Doris, the men's hobbies are identical, the books they own are amazingly similar, and they are both halfway through building the same kit canoe for the hunting trips that they both enjoy. The question is: Supposing that one of these twins had a secure diagnosis of schizophrenia, what would be the chances of the other acquiring one? The answer is around 60% for inheritance, but with known provocative agents in the environment such as high levels of interpersonal conflict, poverty and all that comes with it.

Stress reduction approaches targeting high levels of expressed emotion in carers and families have produced mixed results – some statistics showing a halving of relapse rates, others close to no significant gains. More recent attempts to use this kind of approach on chronic patients show very worthwhile improvements in relapse prevention, not only for schizophrenia but also for mood disorders and anorexia (see Pharoah et al., 2010). For instance, expressed emotion–lowering work with the family of the young man with ADHD in Case 1.1 produced very worthwhile benefits.

There is thus an interaction of genetic and environmental factors operating in schizophrenia. The best model I know for how this might work is illustrated in Figure 2.5. Think of this figure as a piece of paper with a fold in it, allowing for three axes: genetic predisposition levels, environmental stress factors, and likelihood of manifestation of the condition. The model encompasses the finding that a high level of genetic predisposition requires only a middling level of psycho-social stress to manifest the disorder (c–d–e).

Conclusion

The discussion in this chapter indicates that we need to revise our established notions of genes *versus* environment – nature *versus* nurture – when looking for causes in either developmental or psychological disorders in childhood or in cases of serious adult mental illness. Genes *via* environment might be a better approach to pursue (see Leigh, 2011; Kendler & Prescott, 2008).

Furthermore, if disorders carry, say, 30–40% heritability rates from twin research, then we should not forget that 60–70% of precipitational or resilience effects are due to environmental factors. We need to look much more scientifically at *these* in particular (see Falloon et al., 1984; Ridley, 2003; Poole et al., 2014).

3
The Influence of Learning on Development

Behavior is a function of its consequences.

—B.F. Skinner (1953)

What Skinner says in this quote is *somewhat* true and, to say the least, was a useful corrective in its time to the then dominant brands of mentalistic psychology, which saw (somewhat magically) individuals largely as the instigators of behavioural reactions to the environment that had shaped them. Where else do thoughts, the supposed causes of behaviour, come from? The mind? What shapes that? Where is it to be found but in the brain? Is it a product or a cause? How *could* the mind be a cause if it is a non-material, non-weighable, non-dissectible 'something' with ghostly properties? You may be puzzled, but what are you puzzled with? Your *brain* has to be the logical answer (see Swaab, 2014; Ryle, 1949). But then, brains develop, they do not arrive with us fully formed. Therefore, how much of the development is inside-out and how much outside-in?

Modern developmental psychology suggests the following:

☐ Human development largely unfolds from within. It unfolds easily if the environment supports the genetic 'plan', or slowly and falteringly if it does not (see Ridley, 2003).
☐ Yesterday's environments are still inside us through conditioning and so are strong influencers of today's behaviour, not only through memory (the most amazing of all psychological abilities, nothing less than an evolutionary adaptation to time) but via the stimuli to which we have been sensitized, the skills that we have (or have not) learned and their emotional/motivational accompaniments.

Much of what makes us truly human, most of what makes us individuals rather than 'clones', much of what gives us a discernable personality – made up of semi-predictable patterns of behaviour, emotional reactions and thinking styles – is the product of learning. As we have seen, we get some help or hindrance from genetic endowment and are *far* from being *tabulae rasae*.

Natural selection has, to a unique degree, favoured *Homo sapiens* with immense adaptability, behavioural flexibility, memory and foresight. The advantages of these gifts for an otherwise physically unpromising primate are that we are less caught out by environmental change – either over time or through forced change of location – and that we can multiply our influence many times over through advanced forms of social cooperation. Archilocus observed in his parable of 650 BCE that 'The fox knows many little things – the hedgehog one big one'. Things were fine for *Erinaceous europaeus* over several millennia until in the late nineteenth century Herr Benz decided to pursue the production of horseless carriages.

Thus there is an interplay of biological, developmental and environmental factors that influences what we learn and how easy or difficult it is. However, outside these predispositions and our possession of a few 'hard-wired' drives towards what Dennett (1991) has called 'the four Fs' (flight, fight, food and procreation), our actions and their internal concomitants are shaped by experience.

Next I want to discuss some basic theoretical, research-derived assumptions in this regard. First, a great proportion of the behavioural repertoire with which individuals are equipped is the product of learning. This vast range of possible responses is acquired through lengthy interaction with, and adaptation to, an ambivalent physical and social environment. Genetic and other physiological factors also influence behaviour in a more general sense, and there is an interaction between these and environment through inborn influences on intelligence, temperament and personality and through adverse predispositions to mental disorder (see Chapter 2).

Two broad overlapping processes of associative learning account for the acquisition and maintenance of motor, verbal, cognitive and emotional responses. These are *classical or respondent* conditioning, based on the work of the great Russian physiologist I.P. Pavlov (1927), and *operant or* instrumental conditioning, based on the work of American psychologists E.L. Thorndike (1898) and B.F. Skinner (1953). To these influences must be added vicarious learning, or modelling, a process that contains elements of both (see Bandura, 1969).

It has long been known that the basis of learning lies at the level of neural networks in the brain, where clusters of massively inter-connected neurones either trigger a likely adaptation (expectancy) or prompt watchfulness regarding what goes with which kind of conse-quence. This process also involves habituation: no particular need to respond to familiar pairings of stimuli which rarely lead to significant consequences. One of the main roles of the frontal cortex is inhibi-tion, and both internal (emotional) reactions and external (anticipatory) stimulation sets can be dampened by calculations about contextual circumstances.

Consciousness, and the ways in which we process information about past, present and predicted environments – bundles of stimuli, contin-gencies and imaginings that include self-observation and appraisal of our own behaviour – are a deeply mysterious, but not mystical, set of phenomena. Thinking follows patterns too and is rarely far removed from the effects of external influences. In other words, above the level of simple reflexes, we do not simply *respond* to stimuli, we *interpret* them first, although not haphazardly. Language, with all its subtleties, aids in this process of detailed consideration.

Undertake a small thought experiment with me. Consider first the meaning and implications of the following sentence in its entirety:

We are still married.

Now go through it another four times and on each occasion mentally italicise in turn each word in the sequence and see how the meaning and the possible implications change markedly on each occasion.

There is nothing either good or bad, but thinking makes it so. (Hamlet, Act II, Scene 2)

Shakespeare's observation is generally true, particularly in the social world, but I am not convinced that it covers a strong smell of aviation fuel in the cabin at 30 000 feet; my money is on Pavlov there.

Nevertheless, behaviours that we judge to be maladaptive, abnormal or self-defeating are learned in exactly the same way as those that we are disposed to call adaptive or normal. Any apparent differences between the two are a property of the attributive and evaluative judgements that we make about behaviour, rather than of the properties of the behaviour itself or its origins.

The behavioural and cognitive-behavioural therapies owe their exis-tence to learning theory, a vast body of experimental evidence on how

humans (and other animals) adapt themselves to their environments by a process akin to 'psychological natural selection', through which strains of action, patterns of thoughts and feelings thrive, perish or lie dormant according to the *effects* that they have. Each dimension of learning has given rise to therapeutic approaches that are logically consistent with the basic research (see Westbrook et al., 2007; Sheldon, 2011).

Properly applied, these therapeutic derivatives have a direct and beneficial effect on a wide range of problems and are not threatened by a re-emergence of 'symptoms' in some different form (see Craighead et al., 1994; Kazdin, 2004).

The next point of which the reader needs to be aware is that there is not one master learning theory from which all these principles are derived, but different, overlapping theories, some of which have led to broad theoretical consensus and others to continuing disputes. However, before we can proceed to examine these differences, we need a general definition of learning. There are many available, but the common ground between them is that the concept of learning applies to the *associative processes* whereby new and relatively durable responses are added to the individual's repertoire. I give a simple outline here to meet our immediate requirements, but those with an appetite for extended technical definitions should consult Hillner (1979) and/or Gray (1975).

A definition to begin with: 'Learning may be defined as a relatively permanent change in behaviour that occurs as the result of prior experience' (Hilgard, 1948: 21). Three qualifications are immediately necessary, however: first, and contrary to the everyday meaning of the term, there need be no formal intention on anyone's part to *impart* learning for it to take place. Nor need there be any intention on the part of the learner to *acquire* new information or behaviour. Second, we must exclude effects due to fatigue, illness or the influence of drugs. Third, the effects of learning may not be immediately apparent. A newly acquired *potential* for behaviour can be stored in memory until circumstances are propitious for its performance.

The next question is: *How* do organisms learn? As I have indicated, arguments continue over the precise nature of the process, but five related influences are usually cited:

☐ *Classical conditioning*, whereby the temporal-spatial association of one stimulus with another – already capable of producing a certain response – leads eventually to responding to either stimulus alone.

☐ *Operant conditioning*, where the acquisition of new responses occurs as a result of our experience of the rewarding, punishing or relief-giving consequences of behaviour.

☐ *Vicarious learning*, where new responses are acquired by observing the behaviour of others and the outcomes that their actions appear to produce.

☐ *Cognitive influences* governing the interpretation of stimuli.

☐ *Genetic–environmental/epigenetic interactions*, whereby learning some things is easier or harder than learning others (see Chapter 2): 'gradients of learning'.

Next, let us turn to the processes by which, against an evolutionary/biological background, learning occurs.

Classical conditioning

Classical conditioning is a term first applied to the work of Pavlov by Hilgard (1948) to distinguish the former's principles from those of the developing *operant* model (see p. 129). An alternative term for this process of stimulus association is *respondent conditioning*. On encountering the name 'Pavlov', few readers will not conjure up an image of a bearded man in a lab coat accompanied by a bored-looking dog – which in itself is quite a good example of classical conditioning and might, as we can now say, 'ring a bell'. Pavlov's work dates from the beginning of the twentieth century and his real achievement stems from his painstaking methodology and his careful analysis of results; so from the detail and the accuracy of his findings rather than from their novelty. People throughout history have felt their mouths water at the thought of food, even though none is present. Animal owners over the centuries have banged food pails and watched their animals come running. But then, apples fell from trees for thousands of years before Newton had a thought about them.

This chapter will review the results of a series of seminal animal experiments. This is necessary to get the 'psychological grammar' of conditioning theories right before we move on to the more complex interactions that human beings have with their environments. Nothing discussed in this chapter has not been repeated in analogue form with humans and with the same results.

Pavlov's experiments were designed to settle an argument over the nature of certain 'psychical' secretions from the salivary glands of

animals. Psychical here refers to secretions of saliva present *before* the presentation of any food – a reaction presumed to originate spontaneously from the mind of the animal (Pavlov 1928 [1897]). Crossing into the psychological domain, Pavlov soon found himself lacking a satisfactory means of investigating this phenomenon:

> In our 'psychical' experiments on the salivary glands, at first we honestly endeavoured to explain our results by fancying the subjective condition of the animal. But nothing came of it except unsuccessful controversies and individual, personal, uncoordinated opinion. We had no alternative but to place the investigation on a purely objective basis. (Pavlov 1897: 183)

Pavlov's procedure was as follows. A dog underwent a small insertion to facilitate the collection of saliva directly from the cheek gland. The dog was then trained to stand quietly in a harness. The laboratory was soundproofed and the experimenters observed the proceedings through a one-way screen. Thus, there was no possibility of extraneous sounds or movements distracting the animal. The sequence of the experiment began with a bell being rung – the animal reacts only slightly to the new noise. No salivary flow is recorded. Next, a quantity of meat powder is delivered to a food tray in front of the dog. He salivates and eats it. After a few pairings of the bell (or light, or range of other originally neutral stimuli) with the food, the dog begins to salivate at the sound of the bell alone. He continues to do this over many trials, even though no food is guaranteed. The dog has learned a new response. This does not only happen in experiments, of course. My dog listens intently to *The Archers* on radio (I was born in Worcestershire where the serial is set, so I have a sentimental association or two myself). When he hears the playout music, he sits in front of me, salivating; the programme ends at 2.15, which is when he is fed. The Sunday morning repeat causes problems, though.

Figure 3.1 illustrates this process of associative learning schematically. The association between the unconditional stimulus and the unconditional response exists at the start of the Pavlov experiment and does not have to be learned. The association between the conditioned stimulus and the conditioned response is a learned one, however. It arises through the pairing of the conditioned stimulus (CS) and unconditioned stimuli (UCS) followed by an unconditional response (UCR, salivation to the proximity of food). The conditioned response (CR, salivation to the bell) resembles the unconditional one (although they
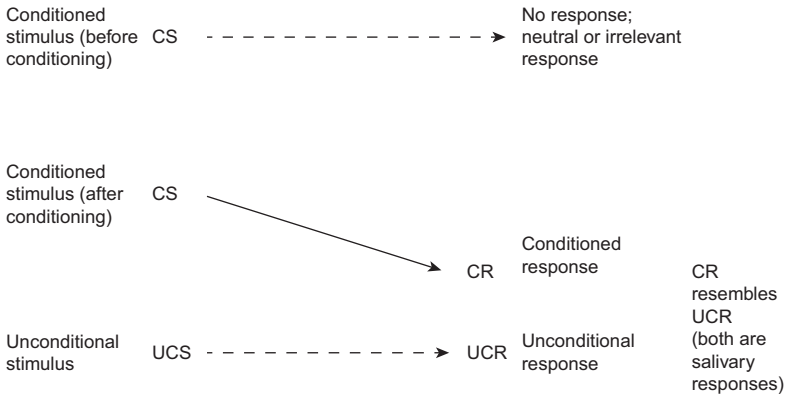
Figure 3.1   A diagram of classical conditioning
Source: Adapted from Hilgard et al., 1979).

need not be identical). The regular pairing of feeding and snuggling between babies and mothers, the security provided by warmth, proximity, smell, tactile simulation and the satisfaction of the basic drive for nourishment, is the environmental side of the attachment equation and is Pavlovian in essence.

An example of the progression from animal to human experiments is to be found in the celebrated study of fear acquisition through classical conditioning, carried out by Watson and Rayner (1920). The subject of this study was a toddler known to history as Little Albert. Freud's theories of phobia acquisition held sway at the time, and the name was a parody of his celebrated analysis – via the father and by post! – of a boy with a phobia of horses, who was called Little Hans. Freud identified repressed castration anxieties as the likely cause, the horse acting as a symbol of powerful masculinity; less florid explanations emerge from the fact that Little Hans had once stood next to a dray horse that had dramatically collapsed and died in its shafts. Watson and Rayner wished to challenge the received wisdom by seeing whether a phobia could be created in the laboratory. Their procedure was as follows.

A tame rat (CS) was introduced into a play pen containing Little Albert, who began to play with it without apparent fear; fear of small animals is not innate in humans. However, during subsequent trials, whenever the rat was introduced a fire gong suspended over the pen was struck vigorously to produce a loud noise (UCS). A fear reaction

to sudden loud noises *is* innate in humans, and so this produced an unconditional fear response (UCR). Soon Little Albert became distressed just at the sight of the small animal, even when its presentation was not accompanied by a loud noise (CR). A new, conditioned response (fear and avoidance of small furry animals) had been acquired. Classical conditioning is particularly important in the acquisition of new emotional responses (see Case study 3.2).

While in the field of conditioning there is plenty of evidence that new fear responses can be generated by simple contiguous association, it is erroneous to assume that all fearful responses develop in this way. Later work (see Seligman, 1975; Bandura, 1977) suggests that conditioning is a less 'mechanical' phenomenon than Pavlov envisaged. In this research there are some important trends to note.

First, if Pavlovian concepts were universally applicable, then it should be possible to condition a fear reaction to *anything.* The fact that certain kinds of objects (CSs) can set up conditioned reactions much more easily than others, and that some pose formidable difficulties, raises questions about the simple paired-association model. It appears that probably as a result of natural selection, there are certain stimuli, for example heights, enclosed spaces, animals and insects or other mobile, intelligent, scurrying organisms with an adaptive, potentially predatory capacity, of which we are especially prone to learn to be afraid. Further, there are other objects and events where associations will not easily stick. The idea of a continuum of preparedness and counter-preparedness is increasingly important in research on this topic.

Secondly, since it is possible for human subjects to have powerful fears of circumstances and animals that they have never encountered and are unlikely to come across (e.g. snakes in Britain), it is clear that cognitive variables are involved in fear conditioning. Thus, in the absence of any real snakes (they kill more people than any other kind of animal abroad, but are scarce in the UK, although there are plenty of reptile phobics) we acquire a fear of an *image*, presented to the accompaniment of distaste or anxiety. Here perceived parental distress may be the original UCS, the child's anxiety in the face of this the UCR, the snake image the CS, and the eventual fear reaction to the *idea* of snakes, the CR.

The strangest phobic reaction that I have ever encountered was in a pair of identical twin students, both with a fear of (wait for it) *buttons* and a curiosity about that fact. Both were revolted by the idea of wearing any garment with buttons on it, and they wore only clothes that had zips or velcro. The GSR rates of both went through the roof when they were asked to touch a button. Neither had any idea where

this phobic reaction came from, but they said it had started in early childhood. You will not see many clients like this in your clinics or departments; the remit here is that they are *technically* interesting. One *could* advance a theory that buttons act as a CS, for being dressed when one does not want to in early childhood; of being, as it were, 'swaddled' through the agency of buttons (but then the Hopi Indians in anthropological studies were thus confined until they were six months old, and quickly regained any developmental losses; see ch. 4). The problem cannot simply be a genetic/evolutionary one because buttons, as opposed to fasteners, have not been around for long enough. Was it a simple attention-seeking device against getting dressed? Dressing means abandoning close contact and suckling, a conditional negative reinforcer. Leaving the centre of your universe as a small child (mother) and going somewhere else where frightening things can happen begins with being buttoned into your outdoor uniform. I can just about entertain this. However, at least the treatment (controlled exposure) was easier than the explanation.

Case study 3.1

I had little fear of thunder and lightning as a child until I went to stay with my grandmother and observed her storm preparations. At the first sniff of ozone she would open the front and back doors to facilitate the easy entry and exit of thunderbolts; turn off the electricity ('because it attracts lightning'); turn all the mirrors to the wall for similar reasons; then retire to a cubby hole under the stairs, just as she had done during air raids in the Second World War. I thought that if this strong, competent, 17-stone lady on whom my well-being usually depends is running for cover, I had better join her fast. Diagrams in the *Boys' Book of Science* and a little natural exposure put paid to this nonsense later.

Stimulus generalisation

Let us return to Watson and Rayner's work. The next stage in the experiment illustrates a clinically important phenomenon called *stimulus generalisation*. Once the conditioned response was established, similar responses could be obtained to a variety of like stimuli, for example other small animals, parcels of furry material or, allegedly (although this is disputed), Rayner's fur coat. This effect was noted also by Pavlov, who

found that once dogs had been conditioned to salivate to the sound of a bell, the same kind of response could then be quickly induced by other, similar stimuli.

This phenomenon of generalisation gives us a clue to the biological purpose of stimulus association. It has great survival value for the organism, and anything that confers a survival or procreative advantage is likely to be selected in the evolutionary process. Clearly, the conditioned reflex is a winner in this respect, for nature cannot foresee all eventualities and therefore it can work only to a limited extent through specific genetic endowment. Faced with the problem of changing, highly variable, dangerous and satisfaction-infused environments, nature instead confers *conditionability* or, if you like, *programmability* – the ability to learn about the functional relations between objects and events, signals and outcomes. Thus, well before the food enters the dog's mouth (or our own), its upper digestive tract is prepared for it and is ready to break down large glucose molecules via the enzyme ptyalin for its energy value. The earlier this process begins, the shorter what would once have been a highly vulnerable feeding episode (the best time to invade Britain is still 1.30 p.m. on a Sunday), and so the better from the point of view of survival. If an animal can learn to respond to stimuli that reliably precede the opportunity to feed and have the digestive process underway, so much the better. Try it yourself:

> It is a crisp autumn morning. You are standing in the garden and you smell Sunday lunch cooking – roast lamb and mint sauce. (Vegetarians can substitute mushroom flan or, if all else fails, imagine licking half a lemon.)

If the conditions are right, the response that will have taken place (saliva filling the mouth) is another example of classical conditioning. This particular response is established through the past pairing of actual food with images of food, the smell and sounds of food preparation, and words that eventually come to signal the likely presence of food.

Because stimuli naturally impinge in groups, it is biologically advantageous for those reliably associated with each other to have the same general effect. Imagine a member of a primitive species of *Homo erectus* not endowed with this facility thinking to him or herself 'Now, I've seen those large stripy beasts before and I know they can be quite nasty, but I wonder what these smaller spotted ones do?' and the long-term value of stimulus generalisation should become clear. Once an association has

been formed, it can itself be the basis of new learning. Thus, the process of classical conditioning strings together stimulus connections, and so an absence of birdsong in a clump of trees could have eventually come to evoke a fear reaction. If all this seems arcane, in terms of today's sophisticated living conditions, imagine this:

> You come back from holiday and encounter a near-silent room of previously sociable colleagues avoiding eye contact. You move to your desk, which is clear except for an envelope marked 'Personal and Confidential'. What is your heart rate? How much hyper-vigilance and clamminess can you feel?

We have seen that throughout development conditioned reflexes provide different forms of reliable early warning for an organism. They allow the body to gear itself up to cope with potentially advantageous or potentially threatening situations. Our state of constant readiness in this respect is governed by the autonomic nervous system, which acts through the glands and the smooth muscles to help us to gain an edge over our potentially hostile environment. Thus, we do not have to wait until the burglar we suspect we have heard downstairs actually hits us over the head before we begin to react to sounds that are out of the normal context. Our pulse is set racing, our muscles stiffen ready for action, our pores open, sweating will begin so that we can cool our body efficiently if strenuous activity follows, our pupils will dilate so that we can make best use of what light there is, the blood-clotting mechanism goes to DEFCON 3 in case we are injured, and so forth. Similarly, we do not have to wait to be told that because we have failed to prepare adequately for an unexpectedly important meeting, we have entered a sequence of events where with the aid of catastrophic thinking, we stand at risk of losing the esteem of our colleagues and our employers, possibly of losing our livelihood, of being discredited socially, ending up with a dog on a blanket in the high street, and so on. As far as our bodies are concerned, we might be getting ready to take on a medium-sized bear. The fact that under modern social conditions, running away from a threat, or punching it in the snout, is seldom an adaptive response (although some meetings do give rise to satisfying thoughts in this direction) is neither here nor there. Evolution has not yet caught up with this fact, so conditionability has its side effects. The clinical illustration in Case study 3.2 demonstrates this point.

Case study 3.2

Mrs Wood, aged 40, was referred to the social services department for 'support' by her somewhat exasperated family doctor. In his view she suffered from agoraphobia (fear of going out of doors), a 'dependent personality' and a number of (unspecified) 'psychiatric difficulties'. Knowing how to motivate social workers and health visitors, the doctor also said that he had some worries about Mrs Wood's infant son, because not only had she not left the house in the previous three years, but very little had been seen of the child – a stimulus that is reliably associated with being grilled before a child abuse inquiry and having your photo on the front of the *Daily Mail* (close to a UCS).

During the first interview Mrs Wood was wary of discussing her problems and was still reacting to her doctor 'washing his hands' – an interesting phrase, because she did lots of that too – of her case and passing her on to social services and the outpatient clinic of a hospital 10 miles away, which, of course, she could not possibly get to. During the second home visit she was more forthcoming, and the following patterns in her problems emerged:

☐ She described herself as 'always having been a nervous person from childhood onwards'. She recounted stories about dismounting from her bicycle as a child whenever a car came up behind her; going some distance out of her way to avoid a barking dog in a garden near her home; feeling *very* shy and conspicuous as a teenager, and so on – a range of normal enough fears, but noteworthy in their pervasiveness.

☐ She reported a strong and persistent fear of hospitals and of most medical encounters, stemming from her mother's bloodcurdling accounts of the birth of her younger sister. Her mother had apparently nearly died in childbirth, and had filled the early years of her children's lives with graphic stories of medical mismanagement.

☐ Mrs Wood became pregnant 'by accident' comparatively late in life. In order to persuade her to have the baby in hospital, the doctor had played up the dangers of a home confinement, raising her already high level of anxiety.

☐ One hot summer's day, when she was seven months pregnant, Mrs Wood had fainted while crossing a footbridge spanning a small river near her home. 'I was sure I was going to fall in, and when I came round, people said an ambulance was on the way and I panicked. People were trying to hold me down, covering me with clothing.' She fought to get free: 'I knew I had to get away, I got very upset, and eventually I persuaded someone to take me home. When I got in I was shaking all over. I shut and bolted the doors, back and front . . . I was sure that the ambulance was going to call at the house and take me away so I hid out of sight of the windows . . . and eventually [it took about an hour] I calmed down, and sat waiting for my husband to come home from work.' 'Catastrophic' or even 'paranoid' thoughts of this type are an important feature of panic reactions. Mrs Wood knew that there was a compulsory dimension to the psychiatric help she had been advised to seek.

☐ Mrs Wood had her baby at home against medical advice, painfully, but without major complications. She tried to go out several times after that but never got further than the front garden, or, if at night, as far as the back gate. She reported the following feelings at each attempt: 'Shivering; awful feelings in the pit of my stomach; pounding heart; light-headedness.' In the daytime everywhere seemed 'very bright'. She felt conspicuous, out in the open, 'almost as if I might be struck down'. Her breathing felt loud in her ears and her biggest fear was that she would collapse again or 'go mad'.

☐ Mrs Wood eventually gave up these attempts and remained largely indoors for four years. For the first two she reported that she did not really miss going out: 'the family and the next door neighbour were very good, they take the baby out, get the shopping, they are marvellous.' Later, however, Mrs Wood began to experience feelings of frustration with her confined existence and felt shame when she was unable to attend her mother's funeral.

☐ When Mrs Wood felt she *had* to go out, for example to peg out washing, she reported making a quick dash, hoping no one would see her or try to talk to her, and 'great relief' when she got back inside. 'I think there must be something seriously wrong with me . . . in my mind' was initially her best idea as to the causes of all this.

If we examine this case in the light of classical conditioning theory, the following pattern is evident:

☐ Mrs Wood may well have possessed a predisposing personality for strong fear reactions (see Chapter 1 and McGuffin et al., 2002b). Certainly, her accounts of her previous life showed her to be eminently conditionable to a range of not objectively threatening circumstances.

☐ Against a background of heightened anxiety about pregnancy, dreading the possibility of having to go into hospital, Mrs Wood experienced a traumatic incident (UCS), which aroused in her a powerful fear reaction or panic attack (UCR).

☐ This incident, when paired with the previously neutral stimulus of the footbridge and other stimuli associated with being out of doors (CS), produced a conditioned response to these stimuli. Even after the incident itself had passed, the pregnancy was over, she was perfectly well and the crowd was no longer in sight, she still experienced fears associated with this context.

☐ Mrs Wood reported that her emotional state was made worse by the attempts of would-be helpers to restrain her until the ambulance came. Natural escape behaviour was prevented, thus intensifying her fear, as it always does.

☐ This conditioned fear response quickly generalised to virtually all outdoor circumstances, even though objectively they barely resembled the circumstances of her collapse. Furthermore, every time Mrs Wood tried to go out of doors she was punished for the attempt by her powerful emotions (setting up a 'fear of fear' reaction) – even though, on reflection, she saw such feelings as irrational.

☐ Every time Mrs Wood managed to escape from the outdoor circumstances that elicited the conditioned fear response, her strongly aversive feelings were reduced via negative reinforcement. This strengthened avoidance behaviour and made future experiments less likely.

☐ Mrs Wood's sister and friends unwittingly reinforced her long-term maladaption to her phobia by relieving her of many of her routine responsibilities regarding her child, and by reassuring her that they did not mind her staying behind. The impression grew, strengthened by early non-cooperation

with the treatment scheme, that Mr Wood rather liked having his wife at home and dependent on him. Mrs Wood was effectively treated over two months by systematic desensitisation (graded exposure plus relaxation; see Sheldon, 2011 and Figure 3.2, which should be read from the base up).

High anxiety/avoidance

17   Stand alone on the footbridge and walk up and
      down for at least 10 minutes.
16   Stand alone on the footbridge for first 3, then 5
      minutes.
15   Stand near the footbridge for 10 minutes.
14   Stand near the footbridge for three minutes.
13   Stand looking at the footbridge from 100 metres
      for 3–5 minutes.
12   Walk to town (unaccompanied) and buy
      something.
11   Walk to town (accompanied).
10   Walk to local shops (800 metres) and buy
      something (accompanied, then alone).
9   Walk out of the front of the house (first
      accompanied, then alone) and cross the road.
8   Walk 20 metres down the pavement, pause, and
      walk slowly back.
7   Walk out of the front door and stand on the
      pavement for 3–5 minutes.
6   Stand at the front gate alone for 3–5 minutes.
5   Clean lower front windows.
4   Put out washing in the back garden in the daytime.
3   Stand outside, first in the back garden for 5–10
      minutes, then at the front for 3–5 minutes.
2   Stand on the front step for 3–5 minutes, and
      practise relaxation exercises there.
1   Stand inside the porch, looking out, and practise
      breathing exercises for 5 minutes.

Low anxiety/avoidance

Figure 3.2   A desensitisation hierarchy
Source: Sheldon (2011).

It will not have escaped your attention that as we move from the laboratory to examples of conditioning in the natural environment, it has become more difficult to specify the key stimulus combinations with the same precision. Was it Mrs Wood's already-learned fear of hospitals that became connected with particular outdoor circumstances? Or was it, perhaps, loss of consciousness, embarrassment at this, or fear of loss of control? Or, was it, perhaps, a fear of falling helplessly into the water?

All of these were mentioned during interviews. To what extent did fears for the unborn baby play a part? To what extent did the unsympathetic words of the family doctor and the unwise hospital referral predispose Mrs Wood to what happened? It is likely that all these factors were influential in triggering the panic response.

In the natural environment, stimuli tend to come in untidy bundles, as do responses, and it is often difficult to tease out their different origins and effects. Mrs Wood remembers particularly the idea of being 'a prisoner of the crowd', the fear of hospitals and the narrowness of the footbridge (although it was made of iron and quite sound). She also had a vivid recollection of the brightness of the day (pupil dilation effect?), of being 'helpless' out in the open, of wearing an overcoat on a hot day. She did not like the idea that passers-by could see she was pregnant. The therapist asked her: 'What was wrong about signs of pregnancy – which is where we all come from?' She replied: 'I hated the idea of people being able to see [laughter] what I'd been up to' (she had strong associations between sin and sex, put into her head via her mother and through her membership of a Christian sect that was strong on sin, and not very forthcoming on love and redemption). This case of religious 'Stockholm syndrome' was immune to rational discussion – hence the subsequent largely behavioural emphasis picking up on cognitive factors when the opportunity arose (sometimes this happens in reverse order). Her memories cover the key stimuli, but we have only a limited idea of their relative importance. This analysis is not as neat as the one provided by Pavlov in his controlled experiments, but it is one made within the framework he constructed, and is dependent on exactly the same general principles.

Now we must turn to some other dimensions of the classical conditioning process.

Classical extinction

In Pavlov's experiments, if the bell was rung repeatedly without any food ever appearing, the conditioned salivary response eventually disappeared. This too is biologically advantageous, since there is no survival value in responding for ever to only temporarily reliable associations. The process is called *extinction*, and it is an important feature of operant conditioning as well (see p. 129). However, well-conditioned responses such as the phobia discussed in Case study 3.2 are very resistant to extinction; they take time to 'unlearn'. This may be because of a repeated pairing of key stimuli; because, as in that case, of one very dramatic conjugation (as in cases of post-traumatic stress disorder); because the new behaviour can acquire 'positive' secondary consequences not

readily apparent to outside observers; or because the fear association is kept alive by mental rehearsal or by avoidance behaviour, conditioned by worry and negative reinforcement (see p. 132).

Here are some vignettes of how aspects of respondent conditioning have operated in cases known to me:

☐ An 8-year-old child physically abused at the hands of her alcoholic father, who, once in care, responded to virtually *any* situation of routine dependence on an adult (particularly a male adult) with fear and aggression, thereby disrupting her placement.

☐ A young man who had been trapped in an overcrowded high-rise office lift for 20 minutes, who panicked and had to be restrained, and then regarded *all* confined spaces as threatening. He walked up and down the fire-exit stairs of his tower block (and so was slow at his job, but could not explain the reason for this since he felt ashamed), could not use the underground, and often hopped off buses before his stop due to shortness of breath, sweating, palpitations etc.

☐ A man who frequently exposed himself in public places (mainly underpasses) who learned to associate expressions of disgust from women with power and greater sexual arousal.

☐ A young man who, as a child, had been ridiculed in front of class-mates by a teacher for feeling queasy after a routine immunisation procedure for polio, probably induced by seeing pictures of children encased in 'iron lungs' and scare stories about vaccination in the press. For a time he developed a somewhat self-fulfilling fear of faint-ing in formal situations where a plausible exit would be difficult, e.g. concert halls, lectures etc.

☐ A learning-disabled young man, whose mother was physically dis-abled and whose school bus was involved in an accident. He was shaken up but not physically hurt. However, he subsequently refused to travel in *any* form of transport.

☐ A troubled, borderline anorectic young woman who, after an oppres-sive childhood, began to associate ritual self-injury (cutting and burning) with (negatively reinforced) feelings of relief and expiation for (almost wholly imagined) sins and failures, and, subsequently, with sexual arousal.

All of these cases were treated by a mixture of psycho-education, cognitive therapy (particularly focused on the feedback loop between catastrophic thinking and arousal), exposure therapy (most tellingly, and obviously not the third case) and counter-conditioning. The fourth

case is me (do count carefully), but I did then go on to train as a nurse – which was a version of ungraded exposure therapy (flooding).

Experimental neurosis and learned helplessness

Following his work on classical conditioning, Pavlov and his co-workers conducted a series of experiments to investigate how animals cope with being conditioned to contradictory or ambiguous stimuli. Such situations are prevalent in nature and especially in the complex social environments of human beings.

The experimenters conditioned animals to anticipate food on the presentation of a particular visual cue. For example, one animal was taught to salivate to a circle of light but not to an ellipse (Shenger-Krestovnikova, 1921). It was then made increasingly difficult for the animal to distinguish between these stimuli by arranging for the circle to become narrowed at the sides, and for the ellipse to flatten out. Another, later variation in such (rather cruel) experiments involved the random substitution of consequences, so that the animal was unable accurately to predict whether food or electric shock would follow a given stimulus (see Masserman, 1943). The effects of these rather cruel studies were that the animals' behaviour became agitated and very uncharacteristic – hence the term 'experimental neurosis'. Later – and this is the important point – when the original stimulus conditions were reinstated, animals lost their ability to make even crude discriminations, and the experimenters began to use words such as 'depression' and 'catatonia' to describe their immobile state. In other experiments animals merely accepted shocks rather than take an easy and obvious escape route, because they had been unpredictably shocked in the past for doing the latter.

This work has given rise to research aimed at the parallels between the artificial environments of these animals and the environments found in human society. Some of the most fruitful work was that of Seligman (1975), whose learned-helplessness theory is of enduring interest to therapists. Seligman's view, based on analogue studies with humans, is that when individuals learn through experience that there is little or no reliable connection between stimuli, and that their behaviour has little effect in modifying the environment of consequences (reducing painful effects and boosting pleasant ones), their behaviour first becomes erratic as they cast about trying to re-establish some control. If this fails, then, just as in animal experiments, they gradually withdraw, since the environment no longer supports attempts to adapt to it positively. Neither conditioned emotional reactions, nor the anticipation of pleasure, nor

the arousal states useful in combating threats serve any useful, predictive or strategic purpose, and so they die away, leaving the individual in a state of apathy. The historical material on 'shell shock' in the First World War (see Rivers, 1922; Sheldon & Macdonald, 2009: ch. 1 supports this model, as does the modern literature on post-traumatic stress disorder (PTSD; see Bisson et al., 2009 for a Cochrane review).

Learned-helplessness formulations will also have a ring of truth to anyone familiar with the case histories of some psychiatric patients under treatment for clinical depression, or to anyone aware of the backgrounds of clients labelled as 'inadequate personalities', or of those said to belong to 'problem families' and so forth. Cognitive-behavioural approaches help to combat such states by attempting to re-establish some order and predictability in the circumstances of clients by helping them to understand their experiences and, in a sympathetic, step-by-step way, by teaching the skills necessary for the reassertion of *some* control over unpredictable environments, or those environments that are rarely positively reinforcing (see p. 142). A focus on the source and nature of the trauma itself seems to be an essential ingredient in helping (see Roberts et al., 2010; Sheldon, 2011).

Operant conditioning

The term *operant conditioning* (together with its synonym, *instrumental conditioning*) refers to the way in which organisms *operate* on their environment, which in turn selectively increases, strengthens or *reinforces* certain patterns of behaviour at the expense of others. This can happen either haphazardly, or because the environment has been specifically programmed to support certain behaviours and discourage others, as in the workings of families and organisations, or through the rules of the classroom. But if you are thinking about lab rats, do remember that this is a Pavlovian reaction.

The root principle of operant conditioning is that, from birth onwards and possibly a little before, *behaviour is a function of its consequences*. Parents who respond favourably, first to the random gurglings of their infant, then to specific noises, then to approximations of words (metalanguage) are making use of this principle and helping along the acquisition of spoken language, for which the biological facilities already exist (see Pinker, 1995). Similarly, the schoolchild who notices that an unplanned act of disruption produces a level of peer approval that was previously unknown will be more likely to repeat the behaviour in future.

An operant, then, is a sequence of behaviour, often exploratory in nature, not under the direct control of anyone else, that produces an environmental consequence. A useful analogy here is sonar or radar: individuals manoeuvre themselves through their physical and social environments according to the 'return signals' that they receive in the form of consequences and symbols of impending consequences. The more (or less) pleasurable the environmental feedback, the more (or less) likely they are to engage in the behaviour again in similar circumstances.

The groundwork for this deceptively simple theory of stimulus–response learning was carried out by E.L. Thorndike (1898). However, the extension and detailed investigation of the theory were the life work of B.F. Skinner (1953, 1974). Skinner's contribution was to investigate with great precision the large number of variables that influence the course of learning through experience of consequences; to formulate this into a comprehensive theory; and to apply the theory very successfully to human behaviour. A description of his basic animal experiments will be useful in clarifying the first principles.

A pigeon or a rat (never both) that, let us say, has missed its breakfast is placed in a glass-sided box (now called a 'Skinner box') equipped with a food dispenser that, once discovered, is capable of being operated from the inside by means of a disc or lever, or from outside by the experimenter. The advantage of this device (from the point of view of the experimenter) is that the ratio of the delivery of food to the animal's rate of correct responding (called the *schedule*; see p. 139) is, unlike in everyday life, readily controllable. Therefore, the experimenter has power over the main environmental contingencies that affect the behaviour of the animal. These can thus be systematically varied and any resultant shifts in the pattern of responding accurately recorded. The results of these experiments are recounted in the next section; we do not need to trouble animals with them any more since they are happily on video.

Types of reinforcement

There are two main types of reinforcement: *positive and negative. Both* processes *increase* the frequency, and/or magnitude and/or speed of a response. Another way of putting this is to say that positive and negative reinforcers increase the probability of a response, or that they accelerate certain sequences of behaviour. This is where understanding of this process often slips: negative reinforcement (see the discussion) is not a suppressant of behaviour, it increases activity in a given area because of what it stops or reduces.

Positive reinforcement

In Skinner's famous experiments, as already described, a rat was placed in a special box and left to its own devices. Eventually, through random exploratory activity (operant behaviour), the rat nudges the food-release lever and a food pellet drops. The release-operating behaviour then occurs more frequently, and is said to be positively reinforced by the food consequence. The term 'reinforced' simply means strengthened, and refers to the fact that, as a result of a certain consequence, the particular sequence of behaviour leading up to it is demonstrably more likely to occur under similar circumstances in future. Therefore, a positive reinforcer is a stimulus that increases the frequency of the response that it follows.

Reinforcers are defined exclusively in terms of their *effects*. Corn is unlikely to strengthen the disc-pecking behaviour of a bloated pigeon, and so it is not a positive reinforcer in that instance. The everyday term 'reward' is too vague to describe this process, since it is derived mainly from the apparent intentions of the would-be rewarder, or it is used because the stimulus belongs to some general class of things or happenings *usually* experienced as pleasant by *most* people, or usually responded to predictably by an animal. In fact, there is hardly such a thing as a universal reward, hence the old adage: 'One man's meat is another man's poison.' Appetites also change markedly over time and from setting to setting. Praise given by a schoolteacher with limited corridor cred for a certain style of dress, although intended to reward conformity, may have the opposite effect. The police officer who ticks off an unruly youth in front of co-disrupters is intending to inhibit rowdy behaviour, but may well positively reinforce it by conferring hero status on him (anti-social behaviour orders are a source of pride for some).

The following quotation from Richard Cobb, a historian of French culture, regarding his commanding officer in the Second World War (a nastier version of *Dad's Army*'s Captain Mainwaring) makes the point nicely:

> He displayed a watchful and petty hostility to all university graduates under his command, and a positive loathing for those who had been to Oxford or Cambridge, as if they had gone there on purpose, in some mysterious foreknowledge that they would be meeting him at some point later in life. From the start, I could not help feeling rather flattered that he should have taken such an active, vigilant dislike

to myself; I thought it did me credit, it was a sort of tribute. There is something very satisfying about being disliked by the *right* sort of people. (Cobb, 1997: 86)

Whatever the intended reinforcers, and however they come packaged, 'by their effects ye shall know them'.

Negative reinforcement

Negative reinforcement is a clumsy term and in my experience causes students more trouble than anything else. So let us start with a simple everyday example. Sometimes when I am writing, my dog (the *Archers*' fan) paces back and forth beside me, emitting panting and occasional coughing noises. He has been shaped into this behaviour by previous experience. Having tried all kinds of stimuli to get me to give him entry to 'the world of smells', he hit on this. Perhaps on some previous occasion of genuine throat-clearing, fearing for my rugs, I had jumped up and opened the door for him. But aetiology aside, the lesson has been well learned, and the deal is that he paces and pants until I let him out for a sniff around the garden. In *his* case such behaviour has been *positively* reinforced by me. He gets his way much of the time and so the behaviour is established in his repertoire. In *my* case, the behaviour of leaving my writing table, just in case he is not fooling this time and to get rid of the distracting noise, is *negatively reinforced.* Contingent on certain behaviour from me, an unpleasant set of stimuli (noise and anxiety) are terminated and I am also given a little avoidance break. So dogs condition people too.

Here is another example of the negative reinforcement of behaviour. A man with a drink problem wakes up feeling awful. He feels anxious, low, with a craving for more alcohol. His family eye him suspiciously and take him to task over the condition in which he came home the night before. He goes into the garage, pours himself a tumbler of vodka from his secret store, and starts to feel better. The craving subsides; the world is a brighter place and takes on a pleasantly out-of-focus aspect, which anaesthetises him to the pain of everyday living. He takes another swig to intensify this effect. This man's initial drinking behaviour was negatively reinforced. In the short term, alcohol had the effect of reducing aversive stimulation (withdrawal symptoms, sensitivity to disapproval); in the long term, its effects on others will probably lead to an intensification of aversive interaction, and so the vicious circle continues.

A useful way of clarifying the difference between positive and negative reinforcement is to imagine the usual Skinner box equipped with a loudspeaker or an electrified floor. To turn off an unpleasant sound or irritating electric shock for a while, the animal operates a lever. On this occasion the behaviour is negatively reinforced, since it *removes* a negative stimulus rather than *providing* a positive one. Any sequence of behaviour that reduces the effects of aversive stimuli will be readily repeated when the person/organism is faced with similar circumstances in the future. The learning that results is acquired through a kind of 'relief conditioning' process on which a surprising amount of our daily behaviour is predicated, particularly anything that reduces worry and anxiety.

To sum up: a negative reinforcer is a stimulus that, if *removed or lessened* contingent on a certain response, results in an *increase* in the probability of that response in similar circumstances in future. This is the case with obsessional behaviour where lining up the furniture, or repeatedly scrubbing one's hands, reduces high levels of anxiety, usually within the context of a 'superstitious' cognitive rationale (see pp. 88–9).

At a less threatening level, the influence of negative reinforcement patterns is visible in much of the *avoidance behaviour* that people exhibit when confronted by a challenging task, picking small, low-priority but easily completed tasks to tick off, rather than confronting the, challenging one. Go and mow the lawn, it needs doing, and you can always pick up this book again later, but before you do, put the vacuum cleaner away.

Conditioned reinforcers

Conditioned reinforcers provide an important point of connection between the classical and operant models. This term describes the process by which anything that is regularly associated with the reinforcement of an operant will eventually acquire an independent reinforcement value of its own. If we were to switch on a flashing light every time we positively reinforced the disc-pecking behaviour of a pigeon, we would expect that the pigeon would eventually respond to the light alone. The light becomes a *conditioned reinforcer*, since eventually it itself reinforces the disc-pecking behaviour. The extent to which the pigeon's behaviour can be maintained in this way depends on a number of factors. The first is contiguity: the proximity of the light and the interval of time that elapses between delivery of the goods and the light. The second concerns the number of times the light and the food are paired – the more often this happens (up to a point), the more reinforcing the

light becomes. However, this power of 'reinforcement by proxy' is lost relatively quickly when all food is withheld (extinction).

One further animal example will help get this clear. Animal trainers have a problem in trying to reinforce items of clever-looking behaviour at a distance. They cannot constantly be popping eatables into the mouths of their charges after every sequence, and there is a limit to the extent to which behaviours can be chained together so that reinforcement need only occur at the end. In the training of dolphins for public performance (the really interesting question here being why performing animals reinforce the zoo-attending interest of humans), the trainer needs something to stand in lieu of fish when the dolphin is doing tricks in the middle of the pool. He/she uses the sound of a whistle that has been repeatedly paired with feeding. This sound eventually becomes a reinforcer in its own right. In turn, certain attending, emotional and motor responses in the crowd are reinforced by the relative absence of controls. Skinner (1974) has proposed that the less conspicuous the controlling features of complex behaviour, the more interesting and credit-worthy it becomes; hence the attraction of apparently nondirective dolphin training. It represents a high degree of control over a usually hard-to-manipulate part of the environment (a basic human drive) and we find this vicariously pleasurable: 'look no hands; look no fish!'

These highly controlled examples give us a clue to the much underestimated function of conditioned reinforcers in everyday life. Stimuli, in the form of attention, praise, grades and so forth, maintain responding when larger-scale positive consequences are long delayed, as when someone is studying for a diploma or working with a difficult case, where outcomes lie well in the future. These symbols or tokens are secondary events associated through learning with a more basic pay-off, such as greater prestige (itself a conditioned reinforcer) or more money. However, the reader might like to consider just how close to being primary these reinforcers are. There is nothing *intrinsically* satisfying in any of the above examples. Each is a link in a chain leading back to genuinely primary, biologically based reinforcers: warmth, shelter, food, sex and so on. But then, men and women sometimes forgo these basic needs and drives to obtain dignity, justice, prestige, or even diplomas. It was not always thus.

There is, however, another aspect to this process. A situation in which particular conditioned reinforcers were linked only to particular primary deprivation states, or primary needs, would limit responsiveness drastically, and produce stereotyped and ultimately not very adaptive behaviour. Where this happens the result can appear bizarre, and not

particularly creditworthy: 'Everything Bill does is with an eye to the main chance', 'Fred thinks of nothing but his stomach', and so on. However, in the natural environment, in most cases, conditioned reinforcers *generalise*. That is, they become associated with more than one primary reinforcer. A wide range of responsiveness is maintained thereby because of the increased likelihood that one or other of the primary deprivation states, or something close to it, is likely to be present at any given time. Money is a good example of a generalised reinforcer. We associate it with, and can procure with it, a wide range of goods and benefits, and therefore whatever deprivation state we happen to be in, or whatever sources of stimulation happen to be near us at the time, there is a chance that money will enhance the possibilities of satisfaction. For this reason tokens were once used in certain behaviour-modification programmes, for example those aimed at shaping the pro-social behaviour of institutionalised psychiatric patients. The tokens could then be exchanged for a wide range of goods and services. A better approach, which we eventually got round to and which, in my view, has been a major policy success, was to remove clients from the institutionalising contingencies (see Sheldon & Macdonald, 2009: ch. 13). If you think all this rather artificial and mechanistic, feel in your purse or pocket and consider the purpose of the tokens you will find there.

Skinner also cites sensory feedback and the successful manipulation of the environment as examples of generalised reinforcers. In cases of disruptive children referred to me, inappropriate attention is undoubtedly the commonest source of unwitting generalised reinforcement of anti-social behaviour and inattention to useful behaviour. Attention usually precedes, and is concurrent with, primary reinforcement in a social setting, and because of this it acquires its own behaviour-strengthening effects. It becomes worth having even when mixed in with irregular amounts of other stimuli intended to deter. Because these contingencies operate only in a *vaguely* reliable way, the behavioural connection of attention with pleasure is eventually quite difficult to remove (see p. 142).

To sum up: a generalised reinforcer is a conditioned reinforcer that strengthens several types of behaviour in several situations. Some further general points about reinforcement can be summarised as follows:

☐ The reinforcement status of a stimulus is established by observing the *effect* that it has on behaviour through experiments, whether through the controlled experiments of researchers, or the less well-controlled assessment procedures employed by would-be helpers. The principles at least are the same.

☐ We are not surrounded by stimuli that it is possible to classify on an a priori basis as reinforcers. These potential properties are not of the stimuli so much as of the person on which they impinge and his or her previous learning experience.

☐ Behaviour is reinforced, not people. To say that Ms A is trying to reinforce Freda, is sloppy, except as a form of shorthand where all concerned know that it is Freda's low-level of assertive behaviour that is the target.

☐ Reinforced responses can be thought of as semi-automatic, in the sense that sometimes we behave in a very stereotyped way in response to contingencies, and think about our behaviour *afterwards*. Sometimes we consider the reasons for our behaviour *as* we behave. At other times stimuli give rise to memories, thoughts and feelings about potential actions which we perform later, and which are affected by these. In any case, the consequences produced play an important role in determining how often, and in what circumstances, we deploy these responses in future.

☐ Unconscious or pre-conscious learning can occur; that is, we may not always be able to specify the precise nature of the reinforcement contingencies that elicit certain responses from us – as when we find ourselves repeating patterns of behaviour that are against our longer-term interests without really understanding why.

The shaping of behaviour

By selectively reinforcing features of a behavioural performance, or by reinforcing only those responses that occur at a certain level, we can gradually alter the nature of responses. Skinner worked with pigeons in this way to produce unusual neck-stretching movements and eventually a repertoire that included playing ping pong with their beaks! Using the same basic principles, Isaacs et al. (1966) once shaped the behaviour of a chronically withdrawn schizophrenic patient whose typical behaviour consisted of sitting silently and staring into space. During a ward meeting the therapist pulled out a piece of gum, and noticed that the patient's eyes moved in his direction slightly. The patient was given the gum and once the response was established, performance levels were gradually increased. The stages in this were head turning; eye contact; holding out a hand; then responding with more complex speech. At each stage only slightly exceptional behaviour was reinforced, and this is the key feature of operant shaping. Keeping it going is the challenge. Lovaas (1966) performed wonders with largely silent,

self-injuring, socially disconnected children ('psychotic', he originally called them, but autistic is more likely). By the end of the project they were talking, telling stories from their imagination, and *not* head banging or otherwise hurting themselves. However, when they were sent home only those parents and carers who were able or willing to reinforce these gains every quarter of an hour, day by day, reported maintained results (see Lovaas, 1966). Referring to the shaping power of the natural environment, Skinner had this to say:

> Operant conditioning shapes behaviour as a sculptor shapes a lump of clay. Although at some point the sculptor seems to have produced an exclusively novel object, we can always follow the process back to the original undifferentiated lump, and we can make the successive stages by which we return to this condition as small as we wish. At no point does anything emerge which is very different from what preceded it. The final product seems to have a special unity and integrity of design but we cannot find the point at which this suddenly appears. In the same sense an operant is not something which appears full grown in the behaviour of the organism. It is the result of a continuous shaping process. (Skinner 1953: 91)

Shaping, when systematically applied, is a therapeutic technique with considerable impact (see p. 142), as when a health visitor selectively congratulates a parent for responding more matter-of-factly and calmly to an overdemanding child and then, over time, such reinforcement becomes conditional on longer and/or more complex sequences of behaviour: how we were all brought up.

Sometimes the shaping of *verbal behaviour* is important for therapeutic purposes. For example, in the case of an excessively shy and unassertive individual, speech containing personal references, expressions of opinion or statements of intention might be selectively strengthened by increased attention and small signs of approval. We all do this when we try to 'steer' a conversation towards or away from a particular topic. A little increased attention to a client considering something in his or her life less irrationally goes a long way in interviews.

Fading

Fading is the process whereby control of a sequence of behaviour is gradually shifted from one set of reinforcers to another. This process is central to socialisation, where, for example, parents (once) gradually faded out the regular positive reinforcement of sitting at the table for

meals, until the behaviour was maintained by purely non-verbal signs of approval and by conversation, plus the signalled threat of disapproval for breaking social rules. Similarly, a reinforcement programme that begins by encouraging adaptive behaviour in a child with the use of treats can hardly continue in that vein for ever. The aim of behavioural programmes is to bring adaptive behaviour under the control of naturally occurring – that is, culturally consonant – social influences. Fading in this type of programme can, if necessary, be accomplished by the use, alongside material reinforcers, of attention, praise, affection and so on, so that material rewards can be given less often or in smaller quantities as the behaviour comes to be maintained by CR.

Although fading is a common enough feature of daily life and of childhood experience, far too little attention is given to it in therapeutic settings. Perhaps this is the fault of the medical model, which tempts us to think in terms of cure rather than adaptation. Or perhaps it is the *setting up* of programmes to help that reinforces our own professional interest and behaviour because it is the most optimistic part? The relatively mundane business of ensuring that any useful, early effects can be maintained in natural settings smacks of 'after care' and is (mistakenly) seen as a less clinically important activity. 'Talk and hope' programmes, as they are called, have resulted in wastefully high levels of relapse in the past across all fields (see Sheldon, 2011: chs. 1 & 2; Lambert, 2004; Orlinsky et al., 2004).

Discriminative stimuli

Discriminative stimuli (Sds) are stimuli that (as a result of learning) signal to us that reinforcement (positive or negative) may be available for particular forms of behaviour. In the animal laboratory, a coloured light might readily come to signal that the food lever mechanism is live (a positive CS) or that the floor grid will soon be live unless some action is taken. S^D are especially important in complex social settings and much of the process of human socialisation is taken up with establishing finely tuned responses in relation to such cues.

These stimuli are important in our work with clients/patients in that, if we learn what signals tend to precede particular behaviours, we may be able to intervene at this early point to sensitise clients to their warning potential so that they can institute pre-rehearsed self-control procedures. Thus, if feelings of boredom reliably trigger excessive eating, or a particular sort of conversation within a peer group tends to predict aggression, then action can sometimes be taken to divert behaviour into another channel. Attention to these antecedent factors can allow us to

interrupt a sequence of problematic behaviour *before* it becomes fully developed.

Stimuli can also acquire a negative signalling value. These are called *delta stimuli* (S^Δ) and come to indicate by regular association that no pleasurable consequences are likely to occur, or that something unpleasant is.

In cases where a client's/patient's behaviour is 'overgeneralised' – where, for example, he or she fails to discriminate between those people who are out to punish for previous misdeeds and those who wish to help – an extra emphasis on identifying the differences in settings, behaviour, probable intentions, demeanour, function and so on may aid in future discrimination. Yet not all is benign here. S^Ds can also trigger patterns of negative cognition ('It's not safe in here, where's the nearest exit?' 'My chest feels tight, am I having a heart attack?' 'This person looks bored, I don't think he's just tired'). These thought sequences (which need not be *accurate* appraisals) then trigger emotional reactions, which in turn trigger more negative thoughts, more emotion and so on, until not always adaptive behaviour is triggered, which in its turn . . . and so on, and so on. Teaching clients/patients to recognise these sequences, to try out relaxation techniques in the face of them or to talk to themselves differently are useful therapeutic applications.

Schedules of reinforcement

This next set of considerations stems from the fact that stimuli impinge, or can be deliberately presented, in different *sequences*. This can have a marked effect on the rate and level of acquisition of responses; on the way in which responding is maintained; and on the resistance that the behaviour shows to extinction (see Ferster & Skinner, 1957). Therefore, such factors are of clinical importance.

The following factors are the most potent: the number and ratio of responses receiving reinforcement in a sequence; whether this pattern is regular or irregular; and the interval between responses (see Sheldon, 2011).

Punishment

It is important to distinguish punishment from negative reinforcement – the latter is not simply a fancy term for the former. Punishment is the effect of an (aversive) stimulus or set of stimuli happening contingent on a certain response, thus *decreasing* the probability that the response will be made in similar circumstances in future. Imagine a Skinner box where pressing a lever *always* resulted in a shock or a loud noise. This

would result in a *reduction* in the performance of this response, or, more likely, its complete suppression.

The aversive stimuli may also take the form of the contingent removal of positive reinforcement – as in the deprivation punishments of childhood. Two terms that the reader may encounter in the literature are 'positive punishment', for the *presentation* of an aversive stimulus; and 'negative punishment', for the *withdrawal* of a positive stimulus. The important points here are that in both cases the effect of the stimulus is to *weaken* the response that it follows; and that negative punishment (deprivation) is less likely to produce unwanted escape or avoidance behaviour.

Thus, the use of the word punishment in the psychology literature is somewhat different from our everyday understanding of the idea. First, it does not necessarily imply that anyone is *deliberately* setting out to inhibit certain behaviour. Second, there is no implication that the subject was necessarily doing anything 'wrong', nor that the aversive event was retributive in character. Through trial and error, or accident, certain environmental or internal physiological consequences occur that inhibit the behaviour with which they are associated. In other words, punishment is a naturally occurring phenomenon as well as something that people do to each other deliberately.

Many of our clients/patients live in extremely punishing environments, which is why so many of them withdraw from the constructive problem-solving attempts that often look to those not directly involved (e.g. tabloid journalists) like *obvious* solutions to their and our difficulties. An example of this kind of suppression of adaptive responses is the familiar situation of the 'multiproblem family', who, on balance, experience fewer aversive consequences by 'muddling through' than by attempting to get to grips with their difficulties (a syndrome also not unknown to social workers and health staff with unmanageably large case loads). When choice-making behaviour, or self-assertion in any direction, leads to trouble, then apathy or avoidance commonly results.

Punishment (in the technical sense) is a culturally popular idea, except in child care, where perfect parents are always expected to have done something *previously* to obviate the need for it (the famous *Punch* cartoon of someone asking the way to Dublin and being advised 'I wouldn't start from here if I was you' springs to mind). The reasons for this are as follows:

☐ It is easy to formulate punishment contingencies – much easier than trying to discover precise deficits in social skills that result in inadequate performance, and easier still than trying to find

reinforceable behaviour incompatible or competitive with maladaptive behaviour. Interestingly, and perhaps for this reason, when students in my psychology classes are presented with case material describing deviant behaviour, they usually spring immediately into discussions about ways of suppressing it, not deflecting it.

☐ Rewarding low-level adaptive behaviour in the context of a serious maladaptive performance calls for clear discriminations – not only on the client's part, but on the part of outside observers. Often the community and its representatives are unable, or unwilling, to make such fine distinctions; to do so would look too much like condoning the bad behaviour that happens to occur nearby. It is safer and more comfortable to attribute behaviour entirely to durable, internal predispositions that might be susceptible to 'short, sharp shock' approaches (they do not work). Therefore, however ineffective these results, nothing nice can be allowed to happen to juvenile delinquents; somehow they must be reformed through controlled suffering (or not) (see Petrosino et al., 2013).

☐ Another reason for the popularity of punishment is that it is believed to act as a source of vicarious suppression for similar behaviours in others, as in 'making an example' of offenders; so long as they think that they will ever be caught, that is.

Nevertheless, there are many problems associated with the use of aversive stimuli:

☐ Naturally enough, they induce escape behaviours in those on whom they are used. These can be at least as maladaptive as the original problematic behaviour, and the negative reinforcement of successful responses can give rise to a new generation of difficulties. For example, a child may learn that he can escape punishment by lying really convincingly.

☐ Punishment gives rise to revenge motives. A good way of avoiding its unpleasant effects is to remove, or act against, their source. If this is the professional, however benign his or her intentions, they may be left either with no one to work with or with clients/patients who have learned to regard every suggestion as a signal to do the opposite.

☐ Punishment alone, whether arranged or accidental, gives no guidance as to what alternative behaviours might be more effective than the response that is being discouraged.

☐ Punishment acts as a *general* suppressant. It tends to have a blanket effect, removing wanted as well as unwanted responses from the

repertoire, and sometimes leaving nothing much for the would-be helper to work with.

☐ Punishment has only short-term effects, and influence based on visible coercion is influence easily disregarded once the heat is off.

☐ Punishment effects can easily generalise to those seen to be instigating them. Someone who makes regular use of control backed by sanctions will find it hard to use positive reinforcement effectively with the same client/patient in the future. Think back to being smiled at by a teacher who has previously put you on report – it could go either way.

Staff cannot have their head in the clouds about punishment. It is not a very large feature of the repertoire of the behavioural element of cognitive-behavioural therapy, for instance, but as an *effect* it is all around us. Some clients may even see the very presence of a social worker, health visitor or nurse in their home as a kind of punishment for failure.

Case study 3.3 shows the effects of the manipulation of operant consequences on behaviour.

Case study 3.3

Mark, aged 9, was referred to social services via the education social work service (the department already held a supervision order on an elder brother following three instances of theft). His teachers were greatly concerned about Mark's disruptive behaviour in class and were beginning to use psychiatric terminology to account for this. Exclusion (potentially his third) was likely unless something could be done, and there was official concern regarding the amount and type of punishment used at home following these incidents.

Like his brother's, Mark's childhood had been somewhat troubled. A history of marital difficulties between parents, and two lengthy periods of separation from them while in the care of relatives, were the most distinctive features.

Family life seemed to have settled down of late and the case file contained optimistic reports about this. However, it was known that parents had often disagreed to the point of violence about disciplinary practices in the home – mother favouring the strict enforcement of rules, but father, when present, following a 'boys

will be boys' philosophy, perhaps to excuse some of his own wayward behaviour. He, a jobbing builder, drank quite heavily, and was always a person of interest to the Inland Revenue.

Mark was not a bright child and had reading difficulties requiring remedial teaching – with which he rarely cooperated.

With the hesitant assistance of the school authorities, an investigation of Mark's disruptive behaviour began in its natural setting. Student social workers took it in turns to observe lessons. They were introduced just as students and spent periods sitting unobtrusively at the rear of the classroom to observe and record his behaviour. The data they recorded revealed the following:

☐ 'Disruptive behaviour' usually meant Mark leaving his desk or group activity, but after that he would occasionally make loud noises, slamming down objects, teasing, pushing and pinching other pupils, and generally interfering with their work.
☐ Some teachers had more difficulty with Mark than others.
☐ The most common methods of dealing with Mark were reasoning with him or speaking sharply to him, both of which seemed to have only a marginal and temporary effect; trying to distract him, which only worked in the short term; placing him outside the door, to which he did not seem to object at all and which, again, had no effect on his subsequent behaviour. By and large teachers tried to ignore him, most operating what the head teacher ruefully referred to as a 'sleeping dogs' policy.

The working hypothesis developed in this case was that Mark's classroom behaviour was largely a product of the following contingencies:

☐ When he was at all well behaved (which records showed was a fair proportion of the time), he was ignored. Most teachers were wary of him and left him alone.
☐ Conversely, whenever Mark caused or threatened a disturbance, he received immediate attention from his teacher on virtually every occasion.
☐ Attempts to punish Mark were ineffective, not only because they were admirably half-hearted about this, but because of his immunising exposure to much more serious forms of it at home.

☐   Mark's reading difficulties sometimes made it hard for him to join in lessons, even with the help of a teaching assistant. He was bored and a little embarrassed by this and escaped from these conditions by amusing himself with other, more dubious pursuits.

The reinforcement patterns thought to be operating in this case are as follows:

☐   Mark was *positively reinforced* with attention for bad behaviour (a commodity in short supply at home, for *any* behaviour). A further contrast between consequences of good and bad behaviour was provided by the fact that teachers would stay away from him when he was not being difficult, and in any case saw all too little to reward in what they called 'his attitude to schoolwork'. Thus, teachers were only persuaded to reward *extended* runs of good behaviour, and these occurred rarely. We persuaded them to reinforce shorter bursts of effort.

☐   Mark's tendency to get out of his seat, and his disruptive or aggressive behaviour, were also *negatively reinforced*. The work was difficult for him to succeed at because he did not possess the skills required, and so he became bored. If called on to contribute to classwork, he usually tried but made a mess of things. Thus leaving his seat and disruptive behaviour had the effect of terminating or reducing boredom and embarrassment about failing. On one occasion, Mark automatically placed *himself* outside the door after a confrontation with a teacher. However, he made steady progress on a new remedial reading scheme with a teacher from a year below with whom he got on.

Developmental, cognitive and family problems also came into this case. Discussions with Mark himself showed a high level of impulsive, revenge-tinged interpretations, and that he often knew exactly where a classroom problem would eventually lead and so felt an urge to 'short circuit' it; he 'got his retaliation in first', in other words. Pausing and thinking things through were not really in his repertoire. The mother felt that having been 'shamed' previously – having to go to court regarding Mark's older brother, and seeing Mark 'inevitably' heading in the same direction – she

had better stamp out the behaviour as early as possible. She hated letters from the school, but really thought that it was all due to a failure of the teachers to control him, so wondered why she should be blamed. She thus supported the idea of school-based problems belonging *in the school*. She was less cooperative with discussions of home life. Mark's father agreed to attend family meetings, but always absented himself – once over the back fence – 'anyone with a briefcase and he's off', the mother explained.

Results from the attempt to reverse these reinforcement contingencies and to provide positive reinforcement for Mark remaining seated when required and concentrating on schoolwork, and none for disruptive behaviour, were typically good. This approach is called *differential reinforcement* and the family, including Mark, understood it as an attempt to fend off unwanted consequences (see Sheldon, 2011). This programme worked quickly (see Figure 3.3). Initially each of the two parties to the problem (school and family) saw the other as having the primary responsibility, and efforts to shift the relationship from negative exchanges to collaboration on a defined scheme involving both were dependent on the idea that classroom problems would be addressed in the classroom, with the mother reviewing progress cards at home and rewarding accordingly. The scheme lasted just over two months and Mark was able to remain in ordinary educational provision.

Modelling and vicarious learning

So far, we have examined the means by which new responses are generated through stimulus association, often in chain-like fashion (classical conditioning); and the way in which responses are established in the repertoire or lost from it as a result of the (intended and unintended) consequences that they produce (operant conditioning). We turn now to a third process, derived in part from the other two, and called variously *observational learning*, *vicarious learning*, *modelling* or *imitation*. These processes are the means by which new responses are acquired, reinforced or extinguished, *at a distance* (vicariously), through observation of the behaviour of others and by imputing to them patterns of cognitive appraisal and emotion. A large proportion of the behavioural repertoire of each of us is developed in this way, not through direct personal
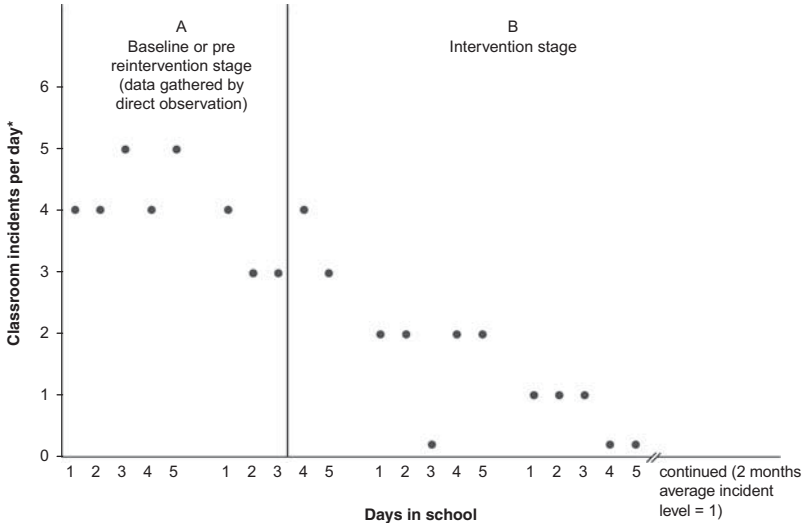
Figure 3.3   Evaluation of a school- and family-based differential reinforcement scheme

experience, but through watching what others do in particular circumstances and how they fare as a consequence. Its basis in simple imitation is visible in the biologically endowed, facial expression copying of young babies.

Modelling is the process through which we learn the speech patterns of our parents and the accents of our peers; learn to act a little like our favourite filmstar; pick up the rudiments of a dance style; learn how to behave in unfamiliar surroundings; discover how to approach strangers for amorous purposes; find out how to intimidate opponents; come to approach decision-making in as neurotic a way as our parents; learn how being aggressive gets people their way, or the opposite.

Modelling is a powerful influence in socialisation and its importance has been enhanced considerably by the arrival of the mass media. Through modelling we select, observe and learn to imitate in approximate form elements of the behavioural performances of others (inferring the cognitive and emotional concomitants) most days of our lives. When we are in promising or demanding circumstances, under threat or in strange surroundings, we become avid modellers, searching the behaviour of others for clues as to how best to behave. This often happens automatically (see Heyes, 2011).

Albert Bandura (the pioneer researcher in this field) makes the point that were operant conditioning the only means by which human beings

could acquire a behavioural repertoire, then the planet would be littered with the mangled corpses of those whose responses had been ineffective. He performed a classic experiment to demonstrate the role of reinforcement in modelling (Bandura, 1965). Children watched a film of an actor whacking blow-up dolls. The conditions under which this behaviour was performed were systematically varied. In one sequence the actor was reprimanded; in another, rewarded with praise and sweets; and in another, no particular consequences were seen to result from the battering behaviour. Immediate post-exposure observations of children from the audience in another setting showed high levels of aggression. The highest and most varied levels came from the groups who had seen the model's aggression reinforced or to attract no negative consequences. For them the surrogate violence was seen to pay off, so they imitated it at the next opportunity. This experiment has been repeated many times with the same results.

Post-performance reinforcement undoubtedly plays a part in the modelling process, as this experiment demonstrates, but as a complete explanation it is inadequate. Paying attention to what other people do in interesting or demanding situations is likely to be reinforcing in itself. (Bandura's argument that modelling can occur in the absence of external reinforcement seems somewhat thin, since it depends on an absence of CRs from previous live experience.) There is also a key role here for the *anticipated* reinforcement (Sds) of any imitation that will add new response options to the stock. Individuals have a wide range of possible responses according to the circumstances in which they might happen to find themselves in the future, and so are more likely to be able to obtain satisfaction and avoid adversity. In this sense, the knowledge that novel response options are being stored in the memory as behavioural 'capital' for later might itself reinforce attentional and response-matching behaviour.

The rest of the modelling process occurs in symbolic – that is, in cognitive – form. We *think* ourselves into the role of the performer, imagine and, to some extent, *experience* the emotional accompaniments that he or she might be experiencing (this is easy in the cinema and on television because of the cues provided by the accompanying music).

Next we anticipate how successful we would be in performing this particular behaviour (efficacy expectations) and what the probable outcome would be for us in any given circumstances (outcome expectations). A child who watches others breaking down a fence with consummate skill need not perform similar behaviour on the next fence that she comes across. A variety of different conditions (Sds), some of them social in origin, will determine when the behaviour 're-emerges'.

Another form of modelling where covert factors (feelings this time) play a large part in the acquisition process has been called *empathetic learning*. The fact that we tend to 'feel along' with the performances of a model (as a result of a lengthy process of classical conditioning and under the influence of miror neurones, which mainly programme us to *notice* such stimuli as potentially significant) tends to urge us to re-perform the behaviour to obtain internal, emotional reinforcement from the various states of arousal previously known or thought to accompany it (see LeDoux, 1998; Ramachandran, 2011). In other words, the cognitive/emotional problem-solving content of modelled performances might be sufficient to secure imitation.

Research in this field has had considerable impact on practice in the form of programmes to teach child-management skills to parents with children at risk (see Macdonald & Kakavelsis, 2003; Barlow et al., 2002) or to equip psychiatric patients with the social and other skills necessary for survival in the community (see Emmelkamp, 2004; Sheldon 2011).

Cognitive-mediational theories of learning

Theories of observational learning that emphasise the importance of the mental representation of the sequence to be re-performed are called *cognitive-mediational theories*. They concentrate on the hidden stages that occur between observation and performance. Two systems are said to be at work here to represent a performance in our head for later retrieval: a process of imagination, and a verbal process. Performances are encoded into particular image sequences and word symbols and stored in memory.

Let us look at an experiment that demonstrates the role of such symbolic representation in modelling (Bandura 1965). In this study children were asked to pay attention to filmed sequences of complex behaviour. One group of children were just instructed to watch carefully; one group were asked, as well as paying attention, to speak along with the models on the screen and describe and label the model's behaviour out loud; another group were instructed to watch attentively, but to count rapidly at the same time (this to prevent the encoding of information). When asked to re-create the sequences they had seen, the children in the 'verbal-labelling' group were much more effective in their performances than the next group (the watch-silently condition) and produced yet more accurate responses than the group that had had to engage in a competing activity. So training children to attend to current circumstances and thinking about responses to them is an important element in ADHD cases (see pp. 95–6). Samuel Johnson once

observed that 'The true art of memory is the art of attention' – what we are up against now is the distraction of *screens*.

Most of us will have had the experience of talking ourselves through a difficult or unfamiliar task, either out loud, as in childhood, or subliminally (under our breath): 'Right now, that's the support on, and now I put the *large* locating screws on the *left* so as not to mix them up with these *smaller* ones over *here*' (IKEA stress syndrome, not yet in DSM). The point here is that it is the encoding and organising of complex modelling stimuli by the brain that ensure accurate reproduction. Similarly, the more complex and unfamiliar the test, the more likely we are to open an extra channel of sensory input to guide our actions – 'right, we *can* do this, it's just a matter of . . . ' Many clients/patients are not equipped by experience with these self-encouraging patterns of inner speech, however, and need to be encouraged to develop them (see Sheldon, 2011: ch. 8).

So far we have seen that offshoots of both classical and operant conditioning procedures play a part in getting us to attend to, and reproduce for ourselves, the behaviour of others. However, neither of these processes fully accounts for this form of learning, which is made possible only through cognition and allows us to re-enact, in symbolic form, the little dramatic performances that we have selected from the behaviour of others and that we anticipate (sometimes wrongly) will be useful to us.

Clinical applications

Modelling procedures are useful in a wide range of circumstances, particularly to remedy behavioural deficits. Clients/patients often just do not have the behaviours or the thinking strategies necessary to solve the problems in their repertoire. They may simply *never* have learned them, or they may have lost them because of intervening experiences. In this case there may be little or nothing for therapists to shape or reinterpret. Some of the most heartrending problems ever to confront us are the result of a failure to learn basic human characteristics because no examples were available nearby. Have a look at W.H. Auden's unsettling poem 'The Shield of Achilles' some time: 'that girls were raped, or two boys knife a third, were axioms to him who'd never heard of any world where promises were kept/Or one could weep because another wept'.

Secondly, modelling helps to reduce interfering anxiety. When individuals are forced to cope despite considerable social and behavioural deficits, their actions usually become stereotyped and awkward. Knowing this, they tend to avoid any circumstances (S^Δ) where they are

unlikely to perform well, or will experience anxiety. Anxiety (anticipated punishment) can enhance performance up to a certain level, but beyond this optimum level progressively interferes with it (see p. 220), resulting in increasingly inadequate and poorly discriminated behaviour. This, in turn, sets up a vicious circle, leading to greater anxiety and more generalised avoidance. Modelling techniques can be used to demonstrate and teach better coping behaviours more likely to lead to reinforcement. The rehearsal of these new behaviours, to a point of reasonable competence, usually carries with it a 'desensitisation' component. Fears are lessened both by vicarious extinction and by operant extinction – that is, by watching someone else perform the target behaviour without apparent anxiety, feeling sympathetically relaxed thereby, then practising under relatively benign conditions and with increasing competence, as in parent-training schemes (see Barlow et al., 2012 for a systematic review of the effects of such programmes).

Thirdly, modelling and social skills training can also be used to re-establish behaviours that were once in the repertoire of the individual, but have been lost or suppressed because of a lack of available reinforcement or through adverse experiences. If these are present at a very low level, then shaping is likely to be a lengthy and labour-intensive process. Sometimes short-cuts can be attempted by modelling appropriate behaviour and showing that it obtains reinforcement – as in programmes to re-establish social skills after periods in psychiatric care, where fear of talking again to friends, neighbours or officials is usually high on the patient's list of worries.

Cognitive influences

There are various labels for this aspect of the learning process: *cognitive learning*, *insight learning*, *latent learning* and so forth. Each of these terms refers to an overlapping set of concepts that lays stress on the importance (particularly in complex learning tasks) of selective perception, understanding, prior knowledge, attribution, imagination, memory factors, concept formation and creative intelligence – the results of various forms of 'cognitive structures', including language, such as as when a child begins to speak in new combinations of words that he or she has never heard before (see Chapters 2 and 4; and Pinker, 1995).

The 'machinery' of thinking, when examined in cognitive experiments, is surprisingly dedicated to the usual output. We often think first in stereotypes, and then reconsider them later. Thus, ask a psychology class to consider the word 'Frenchman'; then ask what in the reflex

mental image this person is wearing (stripy jumper), headgear? (beret), whether there are any vegetables in the picture (onions!). Then try 'desert island' and ask how many trees there are in the picture (one) and how many figures (one). The audience know well that these images are cultural stereotypes and hardly exist in nature, but somehow they will do for routine information-processing purposes until reconsidered later. There are many everyday examples of this: the road sign for a level crossing shows a steam train (which has not been around for 50 years in the UK); for speed cameras it is of a 1920s bellows/plate camera. Thus we often think in iconographs to start with.

The main idea here is anticipated reinforcement, gauged through the setting up in systematic form of thought experiments: 'Now what would happen if I did *x* rather than *y*?' The answer is likely to be based on prior experience of similar situations. Cognitive postulates of this type have given rise to the notion of *coverant conditioning* (Homme, 1965), where 'operant thoughts' derived from prior experience are reinforced or extinguished according to whether they add constructively to a problem-solving formula (via CRs) that is likely to pay off for the individual when it is translated into behaviour. Thus, when we think of solving our financial problems by robbing a bank, the thoughts are usually extinguished quite quickly by other associations about the possible consequences, except where, 'just for the fun of it' (that is, for the emotional feedback), we deliberately control the mental drama to make sure that we get away undetected. I am now thinking of the final scene in *The Italian Job* and I think I know how ...

Analyses of this type of problem-solving behaviour in traditional stimulus–response terms are also available (Skinner 1974), but they are exceedingly complex and cumbersome.

The view that environmental influences do not simply enter the brain as stimuli and leave as responses in 'ping pong' fashion is hard to resist. Just what kind of cognitive pinball machine they do go through before they re-emerge over time as effects – and often pretty divergent and unusual effects at that – is a major growth area in psychological research and in neuroscience, which through imaging techniques can plot the interaction of brain sites. So much so that a new field of cognitive science is with us, and it is not at all as oxymoronic as it used to sound (see Dennett, 1991; Bickle, 2009; Cummins and Mega, 2003).

For practical purposes, the important question is whether we can successfully intervene through the medium of language to alter preferred but not necessarily accurate or useful cognitive patterns, beliefs, 'mental maps', attributions, ways of seeing and so on, so that more adaptive

behaviours are generated. Let us address the problem through an analogy. If we think of cognitive structures as forming a proposed plan for a building project (future behaviour), could we alter the shape of the eventual building by changing the plan, or does it all still depend largely on how the builder has done things in the past (learning history); whether he has the skills to do anything different (repertoire); whether he could be bothered to work on a building of a different shape (reinforcement contingencies); and whether such a building would work or whether it would collapse in the face of environmental stresses (longer-term reinforcement)? These questions need to be approached with caution. The automatic assumption that changing thinking readily changes behaviour has often led to ineffective methods being used. In fact, we know rather more about the power of non-coercively induced behavioural change to alter thinking.

What, then, is the form of a 'cognitive structure' and what effects can it be seen to have on behaviour? It could be argued that once again we are in danger of reifying an activity, making it into a 'thing'. Certainly we have combinations of neurones programmed to fire in certain combinations rather than others, but this is hard for most of us to imagine. Even harder to imagine is that preferred patterns and preferred combinations of connections – like well-worn pathways across fields or woods – are influenced by experience in early childhood while the brain is still developing. So the environment, particularly our early environment, gets inside us at a physical level, influencing subsequent learning. The contents of the skull are dense; it is dark in there. However, it is often imagined to be hollow, and filled with the light and sound of experience. So we heuristically infer that we have cognitive structures because the private processing of information about environmental contingencies tends to follow certain patterns. We quickly learn that stimuli are not always what they seem, that not all brightly coloured tablets are sweets, that not all sincere offers of help are just that, and that sometimes the *absence* of stimuli predicts much – 'the dog that didn't bark'.

Given the niche-filling pressures of natural selection (e.g. camouflage), responding to the surface features of stimuli would always have been dangerous for our primitive ancestors – as in different ways it still is – and so the behaviour of *interpreting* readily attracts reinforcement. As an activity, it contains the following elements:

☐ An examination of sensory data in great detail.
☐ The action of looking at the *context* of stimuli to establish their meaning (a pie cooling in the kitchen evokes quite a different set of responses to a pie cooling in a field).

☐ Responding to the images that stimuli evoke in our heads through classical conditioning. For example, if I write 'apple' it is virtually impossible for you not to 'see' one. The image may be immediately followed by an association with computers or Beatles records.

☐ Attempts to establish causality and intent (a hand placed unexpectedly on the shoulder can mean friendly support or the sack).

☐ The action of looking at relations between stimuli: two sets of stimuli are not just one set plus one set. 'Jane took a deep breath and headed into the bank' evokes quite a different meaning if the previous sentence contains the word 'boat', but think how far on you were on with that little story just now. The conjunction can produce quite different implications. The client who assures us that things are getting better to the accompaniment of non-verbal signals of anxiety might be said to be adopting a strategy (for any one of several different purposes). Only further interpretation of these conjoined events, perhaps followed by some careful encouragement, will discover the true meaning or intent contained in the behaviour; that is, the effect it is designed to have, or the internal state it is designed to conceal. In these cases, usually, to believe the *behaviour* is good advice.

☐ A range of conditioned associations produced by the stimuli that are only partly stored in memory. These are the raw material on which future computations about how best to behave are made. In addition, they help to trigger and sustain emotional reactions that then enter the equation as inhibitors or enhancers of particular behavioural options. Thus, if we recall that last time we were in a particular kind of fix we 'stuck to our guns' and this image is accompanied by pleasant feelings of control, then unless powerful contra-indications are present, we are unlikely to hesitate long before repeating this sort of sequence.

☐ The facility of language (inner speech) used to talk to ourselves about contingencies (see Vygotsky, 1962): 'Now wait a minute [warily], someone must simply have *dropped* this large pie in the field, there's *bound* to be a logical explanation, bit surreal though, shades of Magritte ... '

☐ The use of previously reinforced and shaped problem-solving strategies. We manipulate data in pre-set ways. There are many possible variables here. For example, we may have learned that *speed* in decision-making is crucial, and so select a course of action on the basis of little detailed evidence that this plan will pay off. Or we may tend to weigh up such issues (scan and re-scan the data) because we have learned that precipitate action leads to regrets. Kahneman (2011) posits two different sets of brain circuitry in *Thinking, Fast and*

Slow. System one favours rapid, emotionally driven decision-making; system two is typified by reflection and cooler consideration. When we are shaped genetically and through learning generally to favour one system over the other, the maladaptive polarities are either unnecessary procrastination or released-balloon impulsivity. Similarly, we may approach a problem (a complex set of contingencies) on the assumption that it provides yet further evidence that others are out to get us; or, in the absence of any well-practised methods of computing likely outcomes, that it provides yet further evidence that we are getting 'past it' and cannot cope any more. These *thinking styles* give rise to self-concepts; that is, to views of our likely efficacy in influencing the environment, our ability to discriminate among complex stimuli and so on: 'I'd be useless at that sort of thing', 'I'm damaged goods'.

☐ The potential occurrence of 'insight learning'. The process here is one of scanning outer (environmental) stimuli and inner (physical/emotional stimuli) and by manipulating, or even deliberately suspending, the rules by which such events are assessed, coming up with highly original responses. In humans these creative responses often attract generalised reinforcement (see p. XX). They produce a satisfactory feeling of cleverness. Together these factors give the experience of insight, or creative problem-solving, its unique 'Eureka!' feel. In addition, most kinds of problem-solving, however refined, take place against a background of negative reinforcement possibilities provided by worry and anxiety. We often experience profound relief when we reach a tenable solution to a problem that has been bothering us, or use our 'wits' to escape a seemingly unavoidable obligation.

☐ The development of rules. Human beings can produce what seem like entirely novel and spontaneous responses because they learn the abstract rules that govern the relation and succession of stimuli, and the likely effects of particular actions. This is particularly evident in language development where the rules are born in us, reflecting evolutionary influences about things, kinds of things and kinds of action. However, rules lead to the point of view of an inferred, controlling I (see Pinker, 1995 – do read this, it is full of useful insights). Rule-following behaviour is sparked off by hosts of discriminative stimuli present in the environment, and the application of existing rules to new combinations of stimuli can lead to new combinations of responses. This kind of computation gives to human behaviour its special 'knight's move' characteristics.

It could be objected that not all thought processes are so consciously strategic as in this list. Cognitive patterns of these types give us important clues as to how clients/patients develop problems, and why they are resistant to extinction. For example, in the case of 'daydreaming' or contemplation, the thoughts that we experience are not driven by an urgent need to come up with a quick behavioural policy; instead, quite a lot goes on when we lie in a darkened room before sleep. The philosopher Gilbert Ryle had this to say about thinking of this kind:

> Not all pondering or musing is problem tackling. While some walking is exploring and some walking is trying to get to a destination, still some walking is merely strolling around. Similarly while some meditating or ruminating is exploratory, and some, like multiplying, is travelling on business, still some is just re-visiting familiar country and some is just cogitative strolling for cogitative strolling's sake. (Ryle 1949: 28)

But then, you never know what you might encounter on a cogitative stroll – an until now unrealised danger, a solution to a long-standing puzzle and so on.

Ryle's is an important distinction, but not one that seriously threatens the analysis already developed. We have long known from studies in physiological psychology that the brain cannot easily do nothing, not even in sleep. It is simply not wired up that way. The system is at an optimal level of arousal when it is working away. Much below this level, strange things begin to happen. These are symptoms of 'stimulus hunger', which can even include hallucinations and depersonalisation. We can all experience something a little like them on long motorway drives when we conjure up people walking in the road (so called 'motorway ghosts'), which is just the tired brain in 'what if?' precautionary mode.

Ruminative thoughts, although not about urgent behavioural decisions, nevertheless are likely to be connected to more distant general contingencies. Thus, outside depressive illness, we ruminate about our long-term future without too much anxiety, and without feelings that a solution must necessarily be found quickly. External stimulation of even a slightly unusual kind disrupts this pattern and replaces it with thought patterns geared more directly to short-term problem-solving. There is undoubtedly a role for reinforcement here too, and it is likely that relatively non-specific thinking is maintained by conditioned reinforcers.

If these assumptions are roughly correct, then there is no reason to view private, cognitive events as in some way disconnected, non-physical phenomena that have little to do with behaviour unless we operate some sort of mental 'clutch' to make the connection, nor to assume that they obey principles markedly different from those contained in the various theories of learning reviewed earlier. That said, we are all aware that some sequences of complex thought are in the form of object, event or picture *symbols* rather than in fully formed 'photographic' images or fully formed words and sentences. These bio-electrical flashes 'stand' for things and concepts, allowing us to compute from sensory experience or memory with astonishing rapidity. Musical memory, for example, conjures up images – Bach's lovely Cantata 140 that leads to black horses, banks and overdrafts; or the British Airways advert that used the gliding notes of *Lakmé* to distract from memories of the usual pre-boarding and 'in-flight experience'.

Abstract thought is a challenge to cognitive psychology's attempts to say what thoughts are *a bit like* that we already understand, for example internal speech, mental pictures, sounds and smells. In the end, we may have to accommodate the view of the philosopher, who on being asked what he thought in, answered 'I think in thoughts'. He might be as right as the psychology professor who defined IQ as 'what intelligence tests measure'. Not everything has to be conveniently like something else that we are used to.

If the phenomenon of interpreting and thinking about stimuli and their response connections complicates matters, then the fact that in humans the environment virtually always includes the social environment multiplies these complications many times over. A response to a response to a response is a common enough occurrence in everyday life. Sane people, other than games theory researchers, do not try to draw such complex inter-relationships schematically, but this is not to say that they completely defeat rigorous analysis.

Social learning theory

The conceptualisation of social learning theory shares many of the assumptions of cognitive theorists, and yet in Bandura's view it is compatible with many of the basic tenets of behavioural psychology. As a theory, then, it has always been well placed to integrate a number of current trends. Here are two quotations that should give you a flavour:

> Stimuli influence the likelihood of particular behaviors through their predictive function, not because they are automatically linked to responses by occurring together. In the social learning view,

contingent experiences create expectations rather than stimulus–response connections. Environmental events can predict either other environmental occurrences, or serve as predictors of the relation between actions and outcomes. (Bandura 1977: 59)

And regarding the question of determinism and whether behaviour and the learning function are powered from inside or outside the individual:

Environments have causes, as do behaviors. It is true that behavior is regulated by its contingencies but the contingencies are partly of a person's own making. By their actions, people play an active role in producing the reinforcing contingencies that impinge upon them (as with laws and academic awards). As was previously shown, behavior partly creates the environment, and the environment influences the behavior in a reciprocal fashion. To the oft repeated dictum, 'change contingencies and you change behaviour', should be added the reciprocal side, 'change behaviour and you change contingencies'. In the regress of prior causes, for every chicken discovered by a unidirectional environmentalist, a social learning theorist can identify a prior egg. (Bandura 1977: 203)

It is Bandura's view that behaviour within this huge closed circuit is dominated by two sets of influences:

☐ *Outcome expectations*: a person's estimate that a given behaviour will lead to certain outcomes: 'Do I really want this?'
☐ *Efficacy expectations*: representing the conviction that one can successfully execute the behaviour required to produce a specific outcome: 'Could I pull this off?'

These two influences are differentiated because someone can believe that a particular course of action is likely to produce certain outcomes, but retain serious doubts as to whether they are capable of making the against-the-grain changes necessary to bring these about. Or they may feel that a given objective is within their grasp, but that they do not *actually* value it. However, remember also Aesop's fable of the fox and the grapes, which the fox cannot reach so consoles himself that they are likely to be sour anyway.

Bandura lists the following sources of efficacy expectations:

- □ *Performance accomplishments*: gained through participation and desensitisation to perceived threats or fears about failing that inhibit approaches to feared circumstances. (Bandura thus sees reinforcement simply as an *incentive-giving or regulating* influence, cognitively mediated and reflected on.)
- □ *Vicarious experience*: gained through watching others perform tasks containing an element of risk (modelling).
- □ *Verbal persuasion*: by suggestion, guided self-instruction, interpretations and so on.
- □ Reducing fears associated with particular performances by *imagining* oneself coping in a step-by-step manner: the 'inner game' of sports psychology.
- □ Other approaches include relaxation techniques, or exposure (imagining and discussing one's worst fears for lengthy periods as a way of extinguishing them).

Bandura suggests that the main effort of the would-be helper should go into directly modifying thoughts and feelings that affect perceived self-efficacy. This is in line with many of the treatment procedures and styles already made use of by professionals (e.g. CBT). However, referring to research into pathological fears, he adds a still relevant word of caution – and this is the point where his theory is connected to mainstream methods of psychological help:

> Developments in the field of behavioral change reveal two major divergent trends. This difference is especially evident in the modification of dysfunctional inhibitions and defensive behavior. On the one hand, explanations of change processes are becoming more cognitive. On the other hand, it is performance based treatments that have retained their power in effecting useful clinical changes. Regardless of the method involved, treatments implemented with an actual performance element achieve results consistently superior to those in which fears are eliminated via cognitive representations of threats. Symbolic procedures have much to contribute as components of a multiform performance-oriented approach, but they are usually insufficient by themselves. (Bandura 1977: 78)

This is still the case in clinical practice today, where the behavioural component of methods is de-emphasised because it cannot always be conveniently carried out in an interview room, and replaced by

largely 'remote control' cognitive approaches (CbT, not CBT). However, there is a growing body of research to show that modelling proce-dures and social skills training have useful if not striking effects, since they help bridge the gap between understanding and performance (see Emmelkamp, 2004; Heinsen, Lieberman and Kopelowicz, 2000; Sheldon 2011). Bandura's contention that behavioural change occurs mainly through a strengthening of perceived self-efficacy (motivational interviewing) is, as yet, still unproven.

At this stage, then, cognitive-mediational theories of this type have made great gains in the research literature, and no longer need to be approached with caution. They offer the possibility of a meeting ground for therapists of different persuasions. In addition, they are attractive in that they deal in an ungrudging fashion with the private 'world within the skin', however awkward in scientific terms, of which we all have personal, although not always objectively accurate, experience. Furthermore, they are likely to be welcomed by those working out-side controlled clinical settings, who have to rely to a considerable extent on programmes that aim to develop a degree of self-control in clients/patients.

Against these attractive features must be weighed the fact that the classical and operant theories of behavioural change have served us well and continue to do so. *Contra* the stereotype, they are very sophisticated theories, well grounded in scientific research, and they have given rise to exceptionally reliable and well-documented therapeutic outcomes (see Lambert, 2011a; Sheldon, 2011).

I have already given some indication of the places where standard formulations are relatively inadequate. My own position is that exist-ing theories provide a good explanation of the various problems that fall within their scope, and a strong skeleton structure on which to base experiments in areas where the therapeutic implications of existing theories are difficult to implement – for example, the hard-to-motivate families struggling with a range of problems at once, which make up a solid proportion of health and social care case loads. As long as the established standard of evidence, and the established ways of evaluating therapeutic outcomes, are kept in sight, what is there to lose?

We have seen so far that the special nature of human behaviour is con-ferred on us through what Pavlov called the 'second signalling system' – language – and through it the facility for 'inner speech' and symbolic imagery, which enables us to act on the environment in an extraordinar-ily strategic way by conducting mental experiments to see what might happen if we did A or B, *before* we actually do it (see Pinker 1995, 2007).

On the face of it, then, there is such a *prima facie* case for supposing that in some cases we may be able to intervene effectively in the causal chain at this point:

☐　By suggesting an alternative evaluation of the data on which the client is basing decisions or lack of them.
☐　By challenging actions based on negative self-concepts ('I'm bound to mess it up', 'I'm hopeless at . . . ') that do not seem to us to be justified by the evidence, or by any comprehensive view of the individual's potential.
☐　By trying to substitute different imagery from that evoked by existing stimuli.
☐　By trying to get the individual to consider new evidence on their existing view of personal efficacy.
☐　By presenting a different interpretation of the likelihood of certain positive or negative consequences occurring.
☐　By trying to reinforce a different pattern of self-commentary to run alongside particular actions.
☐　By conducting little *in vivo* experiments to see what *actually* happens when something new is tried.

To this list I would add the rider that effectiveness is likely to be strongly influenced by the extent to which the would-be helper can overcome their professional agoraphobia and abandon their computers and their offices temporarily – which means (gulp) going *outside*, to the school or into whatever job centres are called this year, enlisting the help of partners, families and so on to ensure that the new, trial *behaviours* that occur are reinforced. All these caveats aside, we now have intellectual riches to back up our therapeutic endeavours as never before. The *behavioural* not the *cognitive* task remains, which is to extend these approaches to those who do not conveniently self-refer or readily cooperate.

Conclusion

When we speak of the influence of environmental factors versus, or in combination with, inborn predispositions, then *learning* is the mechanism by which the environmental influence largely occurs. Therefore, we are better off if we understand the details of exactly how learning works. However, we are more or less open to learn different things at different *stages* in our lives, and this is the next theme of this book.

4
Stages and Dimensions of Psychological Development

Now that we have discussed the mechanisms of learning, which influence behaviour, thinking and feeling throughout our lives, we are free to consider the evidence on whether this is a continuous process, largely controlled from without, or whether it unfolds in set stages, in a pre-determined sequence, largely from within. That is, are stages of cognitive and linguistic development real and rather immutable, as Vygotsky, Piaget and others have argued, or are they artifacts in the eye of the beholder? Note that there are strong clinical implications attached to what we decide. Vygotsky, a pioneer of stage theory alongside Piaget, was clear on this issue:

> As we know from investigations of the process of concept formation, a concept is more than the sum of certain associative bonds formed by memory, more than a mere mental habit; it is a complex and genuine act of thought that cannot be taught by drilling but can be accomplished only when the child's mental development itself has reached the requisite level. (Vygotsky, 1962: 82)

Such arguments have long been a preoccupation of developmental psychologists: whether early and continuous exposure to particular kinds of stimuli speeds up development (a widely-held popular view if you look at the plethora of child-rearing manuals) or whether the genetically pre-programmed brain is largely responsible for triggering sensitivities to stimuli at a given developmental tipping point and not much earlier. The associated question is whether an absence, infrequency or low intensity of stimulation at particular stages is inevitably harmful in the longer term, or repairable by later experience. Similarly, do childhood traumas have a lasting influence on later development or can they be

compensated for by later, positive ones? You should avoid simply say-ing 'yes' to both questions, because we still have to determine what *level* of trauma, of what *kind* – for example, loss of a parent to illness or to suicide; if child sexual abuse, by a family member, by a stranger, what level of abuse, at what age/stage?

Research in this field concentrates on two complementary forces: first, the pre-programmed influence of genetic and epigenetic factors, partic-ularly on the configuration of the developing brain; and second, the level of exposure to facilitative environmental stimuli. We know, there-fore, that babies will begin naturally to explore their environment, but that different environments can encourage or discourage this. Anthro-pologists studying the native American Hopi tribe made use of a natural experiment. By tradition, the women worked in the fields straight after birth and took their children with them, tightly swaddled to keep them out of the way. The babies were unswaddled late in the usual motor-development stage (walking unsteadily alone at about 12 months) and they, well beyond this norm, unsurprisingly, fell over. However, they quickly recovered movement and began crawling and walking as usual, just later. We know that children spoken to in Polish will speak Polish, and those spoken to in French will speak French. So, an entirely environ-mental influence is at work building on inherited common structures for language *per se* (see Pinker, 1995).

What of children who hear little or no language around the time that most acquire it? There is evidence that so-called feral children, who have little or no contact with others, suffer severe, irremediable delays. Chil-dren who do not hear much language spoken and are sparsely interacted with, suffer serious delays in speech acquisition as well as other emo-tional and social deficits. I recall seeing a family, referred by a health visitor, whose child could speak hardly at all at three and a half years old. When asked how much the couple spoke to the child, they replied exasperatedly that there was no point, 'Because he *can't* speak, that's the problem.' Their child had no physical or neurological problems, it was just that his young, isolated, poorly housed and poverty-stricken parents had a model of language acquisition that was peculiarly innate. They thought that the speech was inside the child somewhere but had failed to come out, and needed little help from them. Bilingual children learn both tongues with remarkable ease as small children, but learning a new foreign language past adolescence requires five times the effort. However, *no* child speaks in meaningful sentences before the age of 1 year. *No* child, however much dangling there is, walks before 9 months (see Thies & Travers, 2009; Berk, 2012).

From the mass of research on child development and its stages, and on the power of environmental influences, a sensible view of the process would be that there is an unfolding sequence of heightened sensitivity to particular classes of stimuli (which were always there), but that the *order* of the acquisition of new skills is virtually universal, although children develop at different rates – between 1 and 2 years for 'metalanguage', babbling in speech-like patterns, later producing recognisable speech. The best way to imagine this developmental sequence is as a series of overlapping bell curves, with some children ahead and some behind the average.

The overlapping bell curve model, which can be adapted to virtually all developmental tasks, uses the percentile approach employed in child assessment. The question is: How many children in a population achieve this stage (say, first words, crawling, or sitting unaided)? If the answer is 90%, then extra encouragement and watchfulness are indicated for those below this level. The basic point is that although some children may be a little ahead or a little late compared to the average, head lifting and sitting with support (3–4 months) *always* precedes reaching for objects and manipulating them (at circa 6 months), for instance.

The factors affecting delay are genetic history, birth trauma, family stress/disruptive events, parental overanxiety about milestones (trying too hard) or very adverse environments. Regarding parental anxiety, I have seen many children who were not toilet trained by 4 years who have had numerous medical consultations as to what might be physically wrong, but nothing found (see Feldman, 2000). Where parents have been given a hyper-reliable set of guidelines based on positive shaping and *shown* how to implement them, they tend to calm down and achieve results remarkably quickly.

Vygotsky (1962) had a brilliant idea regarding the measurement of skills called 'the zone of next development'. He favoured testing against age range, providing detailed remedial encouragement and education based on what the child *could not yet do*, then retesting in search of gains. As in his studies of intelligence, he regarded the degree of responsiveness to targeted remedial measures as the important point of assessment. Vygotsky was mainly interested in cognitive development, but this (somewhat neglected) model has applications elsewhere as a test of the tractability of many developmental problems.

Most of us are aware of lacunae in our developmental histories: the ability to catch a ball, ride a bicycle or swim. Learning to start a conversation with a stranger at age 16 is infinitely more difficult and

embarrassment-filled than learning the skill earlier, when most children are acquiring it.

Studies involving EEG (electroencephalography) and MRI scans show that neural development from 2 months into the early teenage years is not a process of *steady* growth or a gradual building up of complexity of interconnection. There are marked differences between the right hemisphere of the brain (concerned more with language, anxiety and positive emotions) and the left (more concerned with memory, shapes, facial recognition and negative emotions). The left hemisphere shows sudden spurts of growth and rapid increases in neuronal complexity. These are not separate 'areas for' functional developments, but dominant features in a pattern of increasing interaction and growth. Nevertheless, these growth spurts occur at the same age/stage periods at which psychologists have recorded quick, qualitative changes in behavioural reactions to stimuli, or the quite sudden development of new skills.

Evolutionary psychology has made some inroads into how this developmental blueprint has evolved as a result of genetic adaptation to what is present in the changing environments into which we are born. It takes a long, long time to get something into the genome and a long time to get it out (see Barrett et al., 2002; Dennett, 2003). Survival and the passing on of genes is all, although something that we now recognise as nice and good can attend on this ruthless process. Our environments get inside us. Materials have shaped the tools we use. See Charles Causley's poem 'I Am the Song' for a wonderful evocation of this rather counter-intuitive idea. Did we domesticate the grasses for food production, or did they domesticate *us* into farming them? (That is the evolutionary idea behind this book's cover design, incidentally.)

The evolutionary priority given to thinking and problem-solving is biologically demonstrated in four ways:

☐ The enormous production of ready-to-be-interconnected neurons during foetal growth (circa 255 000 per *minute*).
☐ The precarious evolutionary trade-off between the baby's head size (60% of the adult) in order to accommodate all this tissue, and the size and elasticity of the mother's birth canal. Elastic cranial fontanels help a little, but I do not need to tell some of you what a struggle this is, nor point to the appalling mortality rate of even three generations ago – still to be found in parts of the world without medicine and safe, accessible midwifery.
☐ The cerebral cortex, the seat of consciousness, intelligence and planning and the inhibition of raw reflex actions, which accounts for 60% of the total mass of the brain.

☐ The genetic push behind continued development after birth, a 50% increase in size over 2 years, 80% by age 4.

There are two substantial growth spurts in humans, between 0 and 4 years and during adolescence (it will be easy to see why in Chapter 5). Neural growth outstrips all other physical developments (see Figure 4.1).

All of these signs and factors show that the physical basis for intelligent adaptation to the environment – which includes shaping it – is, in humans, an evolutionary priority. Let us next look at how this unrivalled cognitive capacity develops throughout childhood.

Stages in cognitive development

The still predominant theory is that of Swiss psychologist Jean Piaget (1896–1980), who was also a biologist. His researches in developmental psychology and genetic epistemology were focused on the growth of knowledge from childhood into adulthood. He posited the existence of logically embedded 'structures', in retrospect, somewhat akin to universal language facilities being 'hardwired' into our brain. These, he argued, come to prominence in our problem-solving activities in an orderly
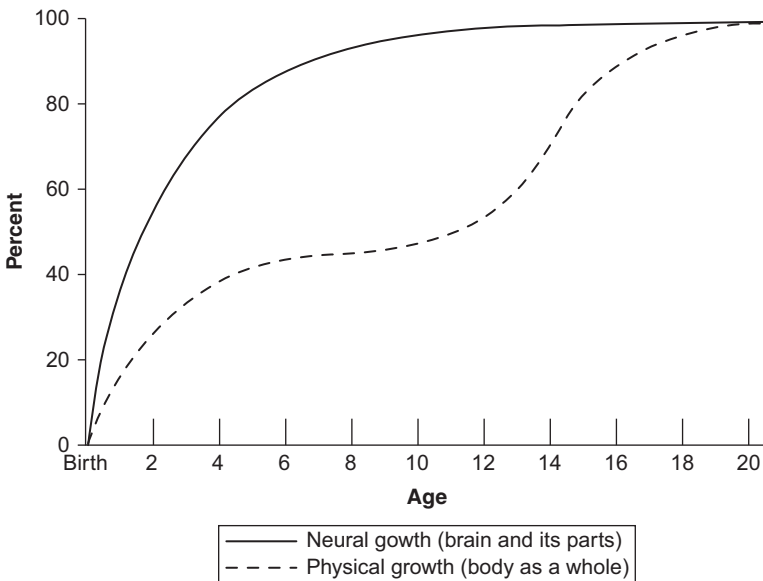
Figure 4.1 Neural growth and general physical growth compared
Source: Adapted from Gerrig et al., 2012.

sequence, each stage being qualitatively, not only quantitatively, different from the one before, and very different from adult ways of thinking. Thus, children are not just inexperienced, as yet uneducated, little adults (although if you look at paintings of them before the early nineteenth century this is exactly how they used to be viewed). Their thinking employs different modes of logic at different ages and stages. These theories, many of which began through close observations of the behaviour of Piaget's own children, pioneered more objective methods of testing their thinking and disinterring the cognitive precepts on which their responses were based. If a child gave an interesting, unusual or objectively wrong answer, he pursued his enquiry into why *they* thought it fitted. The title of one of his major works is *The Child's Conception of the World* (1997 [1929]), which sums up his field of interest and his unique methods.

Piaget's theories are still in force as a 'scaffolding' structure for experiments in this field. Empirical tests have occasionally suggested that the ages linked to the stages are a little out, or that there is more environmental influence on the move from one stage to the next than he thought, but they remain influential, particularly the idea that experiences have to be represented, organised, interpreted and differentiated, and that the ability to achieve this is an orderly developmental sequence unfolding from within, is largely impervious to early, special coaching. It is possible to get children to perform, parrot fashion, beyond the usual stage boundaries by selective reinforcement, but this is not the same as concept formation; a justified criticism levelled at Lovaas's work in speech development in autistic children (1966).

Piaget's notions of the processes behind the development of childhood skills, intelligence and thinking illustrate the developmental sequence:

☐ *Assimilation*: where the child sees anything novel, he or she tries to fit it into what is already known, for example early on, sucking things not designed for sucking or banging things not meant to be banged, playing a piano with spoons, saying 'quack quack' to a picture of an eagle, or a chicken.

☐ *Accommodation*: later, the process is one of modifying conceptions and expectations so that new stimuli/information can be made a better fit. Thus responses are broadened, added to and differentiated. For example, the transition from breast milk to drinking similarly pleasing stuff from a cup, where different reflexes are required: same goal, different method, same result. Such accommodations build

motivations to explore the novel, at first via little motor experiments and their feedback.

☐ *Schema*: these are increasingly organised assumptions about the world and what different combinations of stimuli mean and predict. At certain stages these 'flip' quite suddenly into new, more complex conceptions and associated reactions.

In the Strange Situations Test developed by Mary Ainsworth (see Ainsworth & Bell, 1970) to determine the extent and quality of attachment behaviour in 12–18-month-old infants, the stages in the experiment were parent and child alone (all observations via one-way window): parent leaves child with stranger; parent returns and stranger leaves; parent leaves child alone; stranger returns; parent returns and stranger leaves. The study observed and scaled separation anxiety (visible unease, distress); the child's willingness to explore or continue exploring; stranger anxiety, reactions of distress, or interest in the stranger; and reunion behaviour, whether and how the parent is greeted/attended to, the level of emotion the child displayed. These authors developed a (clinically useful) typology from this work and its replications:

☐ *Securely attached*: children have learned that they have a parent who will meet their needs, if not immediately, then soon, and that the parent figure represents a secure base from which to explore the novel and unusual.

☐ *Insecure-avoidant*: children do not relate to the parent figure when exploring the environment and are both physically and emotionally independent. They do not seek comfort from the attachment figure when distressed. Such reactions are mainly seen where parents/carers are insensitive, rejecting, or prone to withdraw when helping the child to perform a task if it is not a quick success.

☐ *Insecure/ambivalent/resistant*: children do not display any feeling of security and get little in return from the parent, therefore they tend to be reluctant to leave her to explore their environment. The attachment figure displays inconsistency in any approaches to the child. This category is associated with distant, unpredictable levels of care. These findings tend to be consistent from 18–24 months up to age 6 or beyond. Piaget noted that when things were out of sight or people left, the child seemed to show no recognition that this was temporary (that is, had little sense of time or the conservation/preservation of objects/people temporarily somewhere else).

There is mediating biochemistry to consider when thinking about the 'bonding' process between mother and child. The key hormone is oxytocin ($C_{43}H_{66}N_{12}O_{12}S_2$), named from the Greek for 'quiet birth'. Syntheses of it are used to speed up labour and typically shorten this painful time by up to 2 hours. Oxytocin also appears to have a function in influencing positive emotions towards the newborn child via the pleasure system in the brain, and has been called the 'love molecule' or the 'bonding molecule'. Oxytocin-replacement therapies produce speculative results outside obstectrics (see http://www.worldofmolecules.com/emotions/oxytocin.htm). Nevertheless, we have to balance such influences against environmental and other physical influences, as in Case study 2.2, p. 84, where the child's first contribution to the 'bonding process' was projectile vomiting into the face of his less than devoted mother (pyloric stenosis was the cause).

Piaget's overall observations led him to propose that there were distinct stages in cognitive development. They are described in what follows, together with a running critique based on later research and developments in neuroscience.

Sensorimotor stage, 0–2 years

The first of Piaget's stages is concerned with the infant's task of finding out, by trial and error, where he or she ends and the outside world begins. The child is already equipped with a few basic reflexes such as suckling, seeking closeness, face recognition, grasping, anxiety regarding falling, and adverse reactions to sudden, looming and fast stimuli, and to loud noises. Crying – a discomfort signal, which has the effect of saying 'do something, try something that makes this external or internal distress go away [negative reinforcement; see p. 132] or else this noise will continue', is also there right from the start. Competent mothers become expert at discerning the different pitches and qualities of crying and at adjusting their comforting behaviour accordingly. Babies in turn vary the pitch and intensity of crying until relief is forthcoming – a mutual behaviour-shaping process.

Until recently, crying and fractiousness have constituted an underestimated triggering factor in child-maltreatment cases (see Macdonald, 2001). However, if the level of care and comfort is poor and unreliable, then the child's natural reflex is to turn up the volume. Parents sometimes overinterpret such behaviour as malign intent, even in children for whom this is a developmental impossibility.

If we were to look at the distribution of nerve endings for motor and sensory activity received and instigated by two adjacent strips at the side

of the brain (the motor and sensory cortexes), representing the areas given over to different parts of the body (divined by tiny amounts of electrical stimulation originally, and now by MRI scans), then the 'picture' of the body is strange at first sight. Think Homer Simpson: with huge lips (which is why a small mouth ulcer feels enormous), large eyes, large hands (touch) and large feet (for later mobility). You can confirm this internal representation for yourself. Bend a paperclip into the shape of a V, and get a friend to close their eyes and say out loud whether they can feel *one* or *two* pin pricks when you touch them on different parts of the body. On the hands and feet they will be unerringly accurate, but on the forearm, shoulder or legs, usually wrong. These are 'non-priority' areas for sensation.

Piaget inferred patterns of cognitive development, which are closely aligned with these nerve cell receptor concentrations:

☐ Growing control and accuracy in recognising and responding to the stimuli that reliably accompany the satisfaction of a need or drive (CS; see ch. 3). Feedback itself comes to have this reinforcing effect, as when the infant pushes against something and it moves. A good example is when children moderate their crying when they hear the footsteps of someone coming towards them or smell their mothers (do you remember, later on, that distinctive smell?).

☐ The infant develops a growing sense of itself as a separate, active agent (the foundation of a sense of self). This happens via the modification of reflexes, by trial-and-error experimentation and through a growing recognition of simple contingencies: when this happens, that happens too. Thus kicking, clutching, eye and lip movements, smiling, gurgling and bashing objects produce feedback, or emotionally mediated reactions to the liking of the child. The more established they become, the more positive or negative the consequences, the more the child will repeat or inhibit them.

☐ Towards the end of the second year, Piaget thought that infants began to form mental representations of objects, even when they were temporarily absent, as when parents interact with children from a distance, when out of sight or reach. This phenomenon is called 'object permanence' and is the precursory development of the concepts that things exist *outside* the child, *independently* of her/him, that things come and go, that things happen in a temporal sequence. These are the foundational learning experiences that lead children to the development of a 'theory of mind' – the idea that others have

feelings and intentions too (as when mothers look exaggeratedly sad when hit on the face while feeding their child).

Regarding object permanence, the best time to try to entertain a child with the peek-a-boo game is at about 3 months. The adult face, to which the infant is responding, is suddenly hidden. Children lose their smiling, attentive expression. The object of interest has gone, no longer exists. Then it suddenly reappears, and the child giggles and reaches for it ('it's back!'). The older the child, and the more such games are repeated, the more he or she grasps that things continue to exist somewhere else, out of sight but in mind.

A number of empirical experiments have been conducted on object permanence over the years (see Donaldson, 1978; Flavell, 2004; Wellman et al., 1987; for a meta-analysis; see also Baillargeon et al., 1985). Tests of this part of Piaget's theory have used ingenious methods such as filming the child in infra-red light. We have already discussed what happens when a familiar toy is hung on a wire and passes through the child's field of vision. The lights are switched off, but the child's head keeps moving to roughly where the object should be. Such 'conservations' happen a little earlier than Piaget predicted – as is true in empirical tests of each of his stages today; but then, we live in more sensorily stimulating environments. Look at most children's rooms nowadays and consider the opportunities for viewing and manipulating the brightly coloured objects that are all around them. All measures of cognitive ability show a similar increase (see Flynn, 2012; and p. 182).

Pre-operational stage, circa 2–7 years

During this stage there is a rapid advance in the child's ability to represent, using memory, objects that are not physically present. There are some defining characteristics of this phase of mental development:

☐   A sort of pre-Copernican ego-centrism, in that the child has a fixed point of view (his or her own) about things and about what makes things happen in the surrounding world. Children find it hard to evaluate the contribution of others to an event. Piaget's mountain-scene tests (he was Swiss, remember) demonstrate this well. Subjects were shown a model of a mountain range from the side, and then asked to draw what it would look like from above. They found this very difficult. Try something similar yourself when presented with a drawing by a child of, say, a house, garden and trees with a strip

of sky and a sun at the top: ask them what there is in the background *below* the sky, and observe the struggle. Play, at the start of this sequence, is largely solitary even in a group of children. Later we see the beginnings of cooperative play, which involves guessing what another person might want to do plus some early thoughts about equity and sharing.

☐ Animism and anthropomorphism: where would childhoods be without it? No Alice, no *Wind in the Willow*s (where do badgers get their hams from?), no *Thomas the Tank Engine*. Little distinction is made at first between animate and inanimate objects. We encourage this: if a child throws a teddy bear against the wall, we try to get him/her to think about what Teddy might think and feel: 'poor Teddy, let's make him better'. But as with Santa Claus, despite our best efforts logic catches up eventually, although never completely – have you never shouted at a vacuum cleaner or a computer? Thinking is pre-logical, as shown in Piaget's conservation experiment where a child is encouraged to help prepare two identical glasses of coloured water, to adjust the level so that each contains the same amount, then tip one glass into a taller, narrower vessel and answer the question: Which has more now? Pre-operational children go for tallness and apparent size, as they will if one of two identical rows of coins is spread out. The key idea is *centration*: children respond to the dominant feature of an object, such as size or colour, and only later can they grasp ideas about interchangeability.

Recent research findings on pre-operational intelligence

The main trends are as follows:

☐ If tasks are very sympathetically controlled and feature only age-appropriate children (not always the case in the past), then results conform quite closely to Piaget's own.

☐ However, there is a trade-off between how sympathetic one can make these tests for children who are supposedly unable to answer them because of their stage of development. The issue here is how mutable the boundaries are between Piaget's stages. The methodological danger is that subjects are subliminally prompted to give adult-pleasing answers of which they have little conceptual understanding. Some sensible measures have been taken, such as the use of toys already familiar to children: 'What can *your* teddy see from where he is?' The water conservation test can also be turned into one of 'fairness', as when sharing out a soft drink.

☐ Children make more logically informed decisions when they are habituated to test conditions and circumstances.

☐ Allowance has to be made for language proficiency. Some children know (for instance from facial expressions) that something is wrong in the answer they are giving, but lack the ability to say why. For example, when optical illusions are used and moving objects appear to pass through solid ones, the children often evince surprise, laughter or dislike, but lack the linguistic facilities to explain their reactions.

☐ The key ingredients of Piaget's theory, namely that cognitive development follows an orderly sequence across cultures – that there is more to this process than steady progress in learning about the complexities of the world, and that psychologists merely jump in at certain points and consider that they are dealing with a new stage – fails to account for the rapidity of these changes and the surprise shown by children themselves, and by parents, when some new *transferable*, *generalisable* way of thinking has been demonstrated. That said, individual differences are more pronounced than Piaget allowed for, and it is more or less the case that the later the study, the more likely children on average are to jump to a new stage earlier than he thought likely (see Bornstein & Lamb, 2011).

These points notwithstanding, it is Piaget's carefully constructed model that has helped build this subject. Modifications have occurred, as they do in all useful theories that are not pre-immunised against refutation. It may be that learning and logic (cognitive development) proceed quantitatively forward, but not uniformly forward. That is, at certain points there is enough experience, and enough dedicated neurophysiology, to produce a marked one-way, quite sudden development, akin to when water warms incrementally and then at a certain temperature level something different happens. The ideas of 'catastrophe theory' have an application here, in my view (see Woodcock & Davis, 1978).

Clinical implications

Adult reactions to abuse in childhood, particularly to sexual abuse, vary from it being a shadow in the background of their lives, to almost ever-present feelings of desecration, anger and guilt, which come between victims and their later attempts at making trusting relationships. The age/stage at which such abuse occurs colours later thinking about it (see NSPCC, 2012; Macdonald, Higgins & Ramchadani, 2006).

The pre-operational stage, with egocentricity, centrism and fixed points of view as its predominant features, often leads to self-blame

based on misattribution, or some notion of complicity, regarding events over which children actually have little or no control. I have seen three cases of serious depression in women with histories of this kind. Case study 4.1 is the testimony of one of them; see Smith et al. (1999), Butler et al. (2006) and Sheldon (2011) for more on the attribution-redirecting methods used.

Case study 4.1

'I think I was a prostitute at seven,' said one 40-year-old client, Mrs J, at the start of her first interview. Her referral was for clinical depression with suicidal ideation, and with some obsessive-compulsive features. She was adopted as a 3-month-old child and had a 'favourite step-uncle'. But abuse began when she was 5, starting as 'games' during walks. It involved lots of touching and later some attempts at digital penetration. This abuse went on for three years. It was maintained by the giving of 'treats' (money, sweets and unexpected presents), but threats were also involved: 'don't talk about us or our secrets, people might not understand, and you and I and the family might get into *serious* trouble.' In the background were always implied threats that she might be sent back into care. Alongside these threats were blandishments: she was told that she was 'his special girl', was 'very clever', 'very grown-up' and 'not like other children'.

Mrs J confided that she always knew that what was going on was wrong, but liked the idea of a dark secret; she even enjoyed and looked forward to the treats. Part of the conversation went as follows:

Therapist: 'Do you really think you ever did anything to encourage him?'
Client: 'Definitely, to my shame. I think I even found some of it exciting. Being an adopted child, I think I liked the idea of being special; there wasn't much real love around in my family.'
Therapist: 'Shame now? Or shame then?'
Client: 'Shame now, not very much then, but *I always* felt there was something not quite *right* about it.'

The client's overriding feelings were that she was somehow responsible for the abuse; that she might have 'egged him on';

and that she was an odd/bad person, which to her was why she was given up for adoption in the first place. The fact that her birth mother, when traced, refused all contact confirmed this in her mind, as did a number of failed and violent relationships in her life. She did not expect her new, supportive partner to stay when he found out what sort of person she 'really was'. 'Really nice, but too nice for his own good' was her defensive evaluation of his character.

The therapeutic intervention in this case was cognitive-behavioural therapy (12 weekly sessions lasting 1–2 hours). The cognitive element consisted of a long exploration of Mrs J's childhood and regular attempts to raise the questions of who exactly had the *power* at the time of her abuse. The behavioural element consisted of scheduling pleasant events, regardless of her early expectations that these would not turn out to be pleasant. They virtually always did, so there was an element of experimentation here. There were also discussions of small relationship-building attempts with her partner, to which (to her surprise) he always responded positively.

The case was monitored on the Beck depression inventory and the Hamilton Scale and she had normal scores on both at 10–12 weeks. She is now happily married. (Yes, I hope so too.)

Concrete operational stage (circa 6½–11)

During this developmental stage virtually all children master the idea of conservation (see p. 171): they are significantly less ego-centric in their thinking and can decentre and look at issues from more than one point of view. The ability to apply logic to problem-solving appears and develops during this stage, although there is little abstract reasoning. Another key feature is the 'downloading' of factual information and received opinion. This is the age of collecting information – rather despised by educational theorists over the last few decades, but surely a substantial element in any notions of intelligence, unless you accept the Rousseauesque notion of natural quickness or creativity, with little thought for what it might later be advantageous for children to be quick or creative *about*. To capture the idea, think of the endless hours that children spend in classifying dinosaurs (10-year-olds now probably have the knowledge of most 1930s paleontologists). I took down car numbers in a special book (God knows why) and

was also once the youngest member of the British Interplanetary Society.

This foundational exercise of learning the basics about the world in which we live and about our particular culture, storing it in memory and making comparisons (tallest, broadest, fastest and so on), gives us something to think *about* and *with*, and every child has to do it all over again in every generation. The behaviour of children at this stage is heavily governed by rules, which in Piaget's observations are almost 'God given'. Try this, when next playing with a child of this age: say 'let's go up the snakes this time and down the ladders', and see what you get.

Formal operational stage (11 onwards)

This stage is demarcated by an increasing use of abstract concepts, such as the logical derivation of outcomes from principles; and by cognitive and perceptual relativism, so that objects and events can be seen and analysed from more than one point of view. There is an increasing interest in concepts such as truth, justice, fairness and the meaning of existence.

Problem-solving becomes more efficient, since the stages are manipulated mentally without always requiring a return to the concrete (algebra gives a flavour of this).

That is all well and good, but this phase in cognitive development runs alongside the hormonal surge of adolescence, with its preoccupations with identity, one's place in the world, and with sexuality. It is this collision of intellectual development and stirred-up emotional states that gives rise to stereotypes. Increasingly, the influence of the peer group (the non-shared environment) becomes predominantly influential.

Intelligence and its measurement

> 'Something peculiar happens to the study of intelligence when it becomes sociologically blind.' (Flynn, 2012)

It is easy to see how intelligence (which the *Shorter Oxford English Dictionary* defines as 'quickness of understanding, sagacity, and cognitive complexity') came to be selected during evolution. We would have had little else going for us in a world full of dangers and shortages, no particular burst of speed, small, not very powerful jaws, weak arms, and one-thousandth of the sense of smell of other animals. What we *were* able to develop is the use of symbols to plan, foresight, a memory of

past events, language, a capacity for intricate thinking before action, and the ability to guess more or less accurately the intentions of others.

We all know roughly what we mean by intelligence. When arboreal tribespeople had their first contacts with members of 'developed' societies, they were always able to tell anthropologists who was the most knowledgeable, quickest to grasp the essentials of a situation, wisest, most understanding person in their group – all this without benefit of a paper test. Yet the concept of intelligence remains riven with controversy, particularly regarding the question of whether we are born with different cognitive capacities, or whether they are due to later experience and the way in which we are brought up and schooled.

The easy (probably correct) answer is just to say 'both'. However, this is a little intellectually lazy, for it still leaves open the questions of relative contributions, *kinds* of intelligences, cultural knowledge and its worth, and gender differences. There are also questions about whether we can compensate for the inborn part of any 'quickness' that we inherit by amplifying environmental circumstances to encourage it – the only part of the equation that we can presently manipulate. However, the largest controversies about the concept of intelligence surround how best to measure it.

The study of intelligence has become highly politicised and infused with competing ideologies. For if it is very largely inherited (see James, 1890; Burt, 1909), what is the point of all that parental or scholastic encouragement? If we are largely products of our environment, how can we bear even our current levels of educational discrimination? Received opinion has swung over the years from one polarity to the other: from all is breeding and inheritance in the eighteenth century and before, to all is environment and nurturance in the 1960s and 1970s. Furthermore, something very illogical is going on in this field, but discussions of the fact lead quickly to eye-rolling (I once proposed the development of an ERQ or eye-rolling quotient to quantify what happens when certain very important concepts, which are likely to lead to rows, are raised outside specialist academic circles, and sometimes inside them). Be sure, nevertheless, that there are very different political and social implications if one settles on either of the following precepts:

☐ Every child has enormous potential to develop their intellect if only we provide them with the *right* schools, with *good* teachers and the *right* curriculum (it is the 'rights' and the 'goods' that cause controversy).
☐ Educational success is largely a question of selecting out the naturally gifted and making sure they are not held back by less intelligent

peers – which is something that we can assess accurately at age 11 or even earlier.

Visit any 'early learning' establishment (not to be confused with a toy shop) and look at the objects on the shelves. Each colourful box has a list of desirable attributes that the contents will enhance: visual skills and shape recognition for jigsaw puzzles, dexterity and creativity for modelling clay, hand/eye coordination for balls and so on. Play, an essential, almost unstoppable feature of childhood as a source of stimulation and the rehearsal of skills, is becoming more detached from its other purpose – fun. It is now a closely controlled, development-enchancing activity with the *next stage* always in view. So parents or their surrogates must think that any apparent improvements in intellect, speed and skill are down to their purchases and their efforts. In this section we shall be looking at the evidence for and against this at once encouraging and exhausting proposition.

More twin study research has been devoted to these nature/nurture contributions (see Chapter 2) than just about anything else in psychology. There are hundreds of twin comparisons and mass database comparisons. Let us remind ourselves that these studies comprise monozygotic/dizygotic (identical vs fraternal) variance comparisons; adoption studies where identical twins were separated at or near birth and reared apart, to assess the contribution of the new environment; and cross-fostering studies where children with no particular inherited susceptibility are reared by people who do have. Add to these studies of advanced educational environments and the question remains: Why is there no really well-established scientific consensus? Here are some contending answers.

First, intelligence is not a *thing* with a particular brain site to host it, but a set of cognitive, perceptual and behavioural attributes. Some researchers would add in emotional control and empathy and have put forward the idea of an EQ (emotional intelligence quotient). Furthermore, intelligence is more than being good at sums, being able to write a meaningful, grammatical sentence, being able to interpret the meaning of a poem or tell what should logically come next in an array of abstract figures – although all of these feature in tests of it. It is held in whatever variant we are measuring that there is always some underlying, general, computational/manipulative ability behind such skills (Spearman's concept of 'g' [1923] for general intelligence).

Secondly, conceptions of intelligence differ in the extent to which it is conceived of as a measure of *performance* or *capacity*. The question in the former case is: How generalisable is it from particular test conditions

to real life? In the latter: how predictive is the measure over time and circumstances? How affected by age and developmental stage is it? Also, can we separate raw intellectual ability from cultural influences? Is it possible to be highly intelligent but untutored and from a place where no particular value is placed on the products that we would select as evidence of it? As a result, many attempts have been made to design 'culture-free' IQ tests (now called 'culture-fair' tests).

Thirdly, tests of IQ correlate reasonably well with later school performance, but then the measures are rather similar in content and we have to look out for self-fulfilling prophecies. Also, if current estimates are correct and inborn intellectual capacities account for about 46% of the variance found in twin studies, then this leaves quite a lot (even if we allow for epigenetic factors) for environmental factors; that is, social, parental, educational, peer, class and cultural factors.

The next question is whether IQ is the whole story regarding the assessment of intelligence. What of creativity, novel solutions to complex problems, or the influence on performance of persistence and concentration? One can have a high IQ with little to show for it, or a median IQ that is exploited to the full, after all. For example, Harvard has something of a puzzle on its hands regarding admissions policies in science and maths; not the old one of admitting mainly WASPs (white Anglo-Saxon Protestants), but what to do about the dominance in SAT entry tests and in first-class degree results of students of East Asian origin or background. Such applicants make up 2% of the US population, but 14% of students admitted. What is fascinating is that these students score no better or worse on IQ tests. Here is an explanation from Flynn, the predominant researcher in this field:

> Anyone who dines at a Chinese restaurant and sees a child sleeping over school books wake up, stretch, and pick up a book, knows that something other than intelligence causes the academic achievements of Chinese Americans. (Flynn, 2012: 177)

The same phenomenon can be seen across American universities, with comparative IQ deficits of 7–8% having no impact on degree results. The 'something other' is likely to be cultural expectations regarding education; family expectations and disciplinary regime; or personality differences favouring staying power, attention to detail, persistence and lower distractibility. Therefore, experiments with narrow definitions of intelligence (tests are standardised against each other, remember) leave out other psycho-social factors that influence performance.

The fifth potential answer is that the concept of intelligence is inevitably tied into the way it is typically assessed. This has implications for educational policy and child socialisation. Intelligence tests have been around for 100 years or more (see Stern, 1914) and there are few concepts in psychology that have not undergone *major* revisions over such a timespan. It is doubtful, given the literature on anomalies, that we got it more or less right first time (see Gould, 1996; Eysenck & Kamin, 1981; Flynn, 2012), so why the contrast between the settled use of psychometric instruments and the chorus of opposition? Might we eventually come to view intelligence instead as a multifactorial set of interacting abilities that is routinely *mismeasured* at present?

There exists a growing range of specialised tests by psychologists that are important for clinical practice, but these are not always expertly used. For example, for the young man diagnosed with ADHD in Case study 1.1, later, more productive attempts to involve educational psychologists showed, to everyone's surprise, an above-average intelligence score, but with a severe short-term memory deficit at work. Stimuli and situations *were* attended to, but the data were almost immediately lost. Moreover, although the young man's reading age was low, this was largely due to lack of any *practice* at it. (I once offered to buy him a book for his birthday, but he said he already had one.) Other measures of cognitive capacity, for example tests delivered via a computer and abstract general intelligence measures such as Raven's (see the later discussion), again showed above-average performance, but in a young man who could do very little with it that did not involve trial and error or manual manipulation.

My plea is for psychologists to be fully integrated into the clinical team, not merely consultants to it, as if they were providing the equivalent of blood test results ordered up by colleauges who do not always understand *what* they are ordering and why.

The main tests of intelligence are indeed venerable: the Stanford-Binet Intelligence Scales, the Wechsler Adult Intelligence Scale (WAIS) and the Wechsler Intelligence Scale for Children (WISC), plus Raven's Progressive Matrices (RPM) – a test of abstract problem-solving involving the manipulation of shapes – are all old and surprisingly little revised. Studies of their validity and reliability led to the development of new, but even more reductive tests, such as reaction time, examining how well IQ factors correlate with speed. The problem is that intelligence is not merely a take-it-or-leave-it scientific concept: it collides with sociological factors. For example, Binet supposed in his pioneering work that an accurate test of mental abilities in children would indicate who needed

special, extra help. Paid for by whom, provided by whom, available to whom were the unanswered questions. In the early mid twentieth century, IQ tests were more often used as a 'scientific' pretext for exclusion from normal educational provision. This remained the case for many years. The focus has, therefore, been on what an individual *cannot* do, or what he or she struggles with in comparison with other children of the same age, not what he or she as an individual *can* do. Nevertheless, a steady revolution to try to reverse the social prejudices reflected in this approach, particularly those for learning disabled children, has taken place in the last three decades (see Sheldon & Macdonald, 2009).

Furthermore, how scientifically sound is the research on which the ideas of intelligence testing are based? In 1981 a well-researched and accessible book was published on the origins and nature of such testing (Eysenck & Kamin, 1981), focusing on the work of British psychologist Sir Cyril Burt (1883–1977), who argued that he had discovered a 0.77 correlation between identical twins reared apart (the current best estimate from the Minnesota Twin Study is similar). The book, presented in case/counter-case form, has H.J. Eysenck arguing strongly for a substantial genetic basis for IQ, and Kamin accusing proponents of extreme methodological sloppiness, or worse. It is true that Burt, who started his work in the 1920s, was no methodologist: he would add in data from other sources during his studies (acceptable in a properly picky meta-analysis, but not merely to prove a point). Kamin has accused him of fraud, saying that the fact that his published correlations are all even, and that attempts by other scientists to see the original data were all frustrated, is highly suspicious, and recently declared: 'Burt probably never assessed an identical twin in his life'. Nevertheless, politicians seized on Burt's ideas to claim that since IQ is distributed across classes, with the right selection methods and separate schooling bright working-class children could be lifted out of the influence of their poor backgrounds. Does this not sound a lot to you like the current debate on educational policy? The only problem is that so little attention is devoted to the *means* of selection (a high ERQ debate if there ever was one). There are, after all, few campaigns to 'bring back the secondary modern' – the destination of *most* under a selective system.

I failed my 11-plus, the selection exam for admission to a grammar school. There was no preparation for the test at my school, but some of us noted that certain pupils, including the head teacher's daughter, were often absent and were attending small coaching classes on their own, doing lots of mock exams (poor devils, the rest of us thought). I always did quite well at school, winning the occasional prize, but coming from a poor, working-class family (no books in the house, no

particular interest in education, although more than enough love) I had had no particular interest in the idea of going to grammar school. The head teacher assured us (somewhat hypocritically) that practice was in any case pointless, since the *scientific* tests that we were suddenly being asked to take would be able to see past any attempts to anticipate the questions (that is not true). The 11-plus at the time was largely made up of Raven's progressive matrices and was all about successions of abstract shapes. This was an attempt to create a 'culture-free' test, but, following the arguments of Vygotsky, I remain convinced that nothing could have been more 'culture *unfair*'. The abstract did not figure much in the lives of a family who *made* things. I did not know what these shapes *meant*, and I still do not care. I started to play truant from school, but I spent most of the time in the public library; then I went on to night school, achieved O- and A-levels and went to university (probably character-forming I am told, but an unnecessarily circuitous route).

Your father's, or even your grandfather's, occupation is still, statistically speaking, a reliable guide to your own chances of social mobility, with your mother's occupation now entering the mix – this even after years of social engineering experiments to promote social mobility. We have to be very careful with mobility statistics, and to separate out those that have been cherry-picked by journalists or campaigning politicians from proper statistical work (see Goldthorpe, 2012). Nevertheless, it is curious that significant social mobility is surprisingly rare given all the money that has been thrown at the problem. There is still an unexplained mismatch between the distribution of intellectual talent (even as routinely measured) and social mobility, which remains stubbornly skewed towards social class factors.

Alternative conceptions of intelligence

Those studying and modifying the WAIS and the WISC have long recognised a tension between the need to measure mental ability in an economical way, and the fact that we are dealing with a complex set of overlapping abilities that correlate *somewhat* with standard measures. For this reason, subtests have been included. However, they are not as routinely or expertly used as they should be.

Howard Gardner (1983, 1985) conducted empirical studies investigating the question of whether simple, administratively convenient tests (however willing we are to take up to 0.80 correlations and ignore the other 20%) could ever capture typical *ranges* of human ability. His results led him to recommend replacing the term 'intelligence' with 'intelligences'. He proposed that there was evidence for seven different clusters and suggested that we should not be asking 'How intelligent is this child?' but rather 'What *kind* of intelligence does this child possess?'

☐ *Linguistic ability*: the use of language to achieve goals.
☐ *Logical-mathematical ability*: the ability to manipulate numbers and quantitative concepts.
☐ *Spatial ability*: a sense of space, position, perspective, the ability to track and predict movements.
☐ *Musical ability*: the ability to perceive pitch and musical structures.
☐ *Bodily kinaesthetic skills*: control of bodily movement/coordination.
☐ *Interpersonal skills*: social skills, empathy, being able to read others' likely needs or intentions.
☐ *Intra-personal ability*: understanding oneself, one's motives and capacities, and creating a secure identity: 'groundedness'.

This idea makes sense, since we have probably all encountered skilled users of the language and left the lecture hall with few notes of much use; mathematically gifted people who could not iron a shirt; highly musical people who cannot play an instrument; otherwise clever people who are always getting lost; athletes and sports people who cannot string together a coherent sentence about what they have just achieved (demonstrated in the post-match discussion at the end of almost every football game); and people of high intellectual ability who have almost no interpersonal skills. We have also all met those with a breathtaking lack of insight into their own motives: 'I need to learn to be less *giving* towards other people' and so on.

The problem with this broader view of intelligences is that it is hard for clinicians to get the various tests done, and harder still to get the results implemented in practice. We seem content to continue with slightly dubious numbers from something simpler.

The young man in Case study 1.1 had this to say about (yet another) assessment he had to undertake:

> Listen, if you could just turn these questions into things that I can either *do* or *not* do, I'd be alright, but sitting down and looking at words and pictures just isn't me, I get bored. Anyway, I finished the test in about three minutes, so I probably did alright.

However, there are other unsettling results coming in from intelligence research that we must now consider.

Intelligence gains?

Something is happening that is not supposed to. People are scoring higher and higher on tests of IQ and even on subtests for particular

abilities (see Flynn, 2012), the so-called 'Flynn effect'. This is occurring across all cultures, and it threatens the idea of a basic calculating ability that is supposed to underlie, or at least to be highly correlated with, a range of intellectual tasks. So, if intelligence as a capability is substantially inherited, and if there is a central 'g' factor underlying it, and if IQ tests are essentially comparative and are carefully standardised at the average 100 points level for populations, then how come they are not stable over time? They are not, not even on the 'high "g" loaded', 'culture-fair', abstract, 'fluid intelligence' tests, let alone on the measures for vocabulary, information, knowledge and so on. Let us be clear, these are not small gains, they are substantial (see Nisbett et al., 2012). Here is an authoritative summary of what is currently going on:

> Nations with data about IQ trends stand at 31. Scandinavian nations had robust gains but these peaked about 1990 and since then, may have gone into mild decline. Several other nations show persistent gains. Americans are still gaining at their historic rate of 0.30 per year (WAIS, 1995–2006; WISC, 1989–2002). British children were a bit below that on Raven's from 1980 to 2008, but their current rate of gain is higher than in the earlier period from 1943 to 1980. German adults were still making vocabulary gains in 2007 at a slightly higher rate than US adults. South Korean children gained at double the US rate between 1989 and 2002. (Flynn, 2012: 5)

Just look at those gains over time: WISC, 1947–48 = 100.00, 1967 = 107.6, 1989 = 113.00, 2002=117.63. For WAIS, 1953–54=100.00, 1978 = 107.50, 1995 = 111.70, 2006 = 115.07. Gains in the developing world are even more explosive, including on tests that rely little on scholastic ability.

As in the case of epigenetic influences, all this concern began with a Dutch study featuring a large sample of 18-year-olds. These showed 20 IQ-point gains between 1952 and 1982, with comparison data from identical twins suggesting a 50% level of increase over the course of the twentieth century. As to what exactly is happening, here are some contending explanations:

☐ These tests, which can best be thought of as 'pastry cutters stuck into a lump of intellectual dough', and for all the attempts at standardisation, are nowhere near as predictive of the shape of the whole, and what it *could* be made into, as was previously thought.

☐ Insufficient allowance has been made for the *age* at which people are tested. We have already learned that development proceeds at different paces in different people. To be tested at 11, and then for that test to be used to determine the scope of future education, can become pessimistically self-fulfilling. People with Down's syndrome now write novels in later life; people with autistic spectrum disorders are writing about some of the benefits as well as the drawbacks of their conditions (see Jackson, 2002).

☐ Flynn is persuasive in arguing that the cause of these increases in measured intelligence is the result of the after-shocks of the industrial revolution, and now, perhaps of the internet revolution; to the spread of ever-more collaborative work; the ready availability of streams of information and ease of access to them; and the influence of the mass media. In other words, the cause is *modernity*, and with it the exposure to scientific, hypothetical ways of thinking.

☐ To survive and prosper now requires ever more complex cognitive skills – the world is exploding with complexity and we are adapting to it.

As our intellect changes, will tests to measure it adapt, too? Flynn is a little pessimistic:

> Some thirty-five years ago I began my periodic visits to the field of psychology. Over time I became uneasy about something that seemed both odd and crippling: the isolation of the study of intelligence from an awareness of the social context within which all human behavior occurs. Many psychologists are happy to infer the social consequences about what they learn about intelligence. But all the causal arrows tend to run one way: they do not infuse their study of intelligence with social awareness. (Flynn, 2012: 159)

Clinical implications

This book has argued that all human behaviour and all human abilities require three levels of explanation: the *biological*, what comes with us, what has happened to our parents before we arrived, and so what has happened in the womb as a result (epigenetics); the *psychological*, what our learning experiences have been and how our thinking and our emotions have been influenced by them; and the *socio-cultural*, what is available in our society/culture, what is valued and what pays off in any given time. We should not, therefore, regard each aspect of this field of study as belonging to incompatibly different kinds of academics.

We also need to be wary of the professionally flattering lure of brain science, which might give us physiological correlates for 'g'-type concepts, but which steers us away from the closer study of environmental influences. Analytical intelligence (a favourite for measurement) does not exhaust the range of cognitive abilities that contribute to the achievement of our society's values.

Members of the helping professions who instigate psychological assessments sometimes get block responses: trawling, not angling. Awareness of the multifactorial nature of intelligence should allow us to prompt more specific, problem-related, social circumstance-related assessments.

Low intelligence is a factor in child abuse and crimes of violence, although it is a little politically incorrect to say so. We should therefore bring estimates of intellectual capacity into our deliberations about such cases in a more straightforward way, particularly where clients manifest little understanding, for instance of the complex logistics of caring for a child.

Moral and emotional development

> We have the power to defy the selfish genes of our birth and, if necessary, the selfish memes of our indoctrinations. We can even discuss ways of deliberately cultivating and nurturing pure, disinterested altruism – something that has no place in nature, something that has never existed before in the whole history of the world. (Dawkins, 1976: 215)

Morality, doing the right, good, unselfish thing, even if no one is watching, feeling for and with other people, is as widespread an attribute of human beings as is aggressiveness. This strangely Darwinism-defying characteristic was selected by evolution because it cuts down on dangerous fights; it reduces the need for distracting, energy-sapping vigilance; and it reinforces the social bonds that allow us to act in concert and multiply our influence many times over. We prize this attribute in our children above all other characteristics, and devote enormous amounts of time to inculcating it. 'Clever but selfish' is not usually our idea of a well-brought-up person.

There are three elements to the development of this moral sense. The first is *moral reasoning*, the cognitive ability to compute and prospectively assess and prospectively evaluate a longer-term view of the consequences of our own and other people's behaviour. There has to

be *knowledge* of what doing the right thing in particular circumstances means, not merely the stored products of operant experience. There is a trade-off here involving impulse-gratifying behaviour, a conflict between emotion and intellect, which we manage differently at different stages of psychological development. The famous Stanford University marshmallow experiment shows this beautifully. Children aged between 4 and 6 years are invited into a room and sat at a table with marshmallows on it, plus a timer. They are told that they can eat *one* marshmallow immediately, or have *three* if they wait a short time. The adult leaves the room, but observes through a one-way screen. The younger children typically grab the one available sweet right away, while the older children struggle and talk to themselves ('No, no, don't'). Older children have less difficulty in delaying first impulses (see Mischel & Ebbesen, 1970).

Most of us, *mostly* grow out of impulse-driven behaviour, but we can all still fall foul of it if the object of desire is compelling. The existence of 'payday loans' at 274% interest or more is evidence that cortical suppression does not always hold sway in desperate circumstances. Interestingly, Mischel's recent analysis of longitudinal follow-up data from his and others' early work shows that impulsive children tend to grow up to be relatively impulsive adults, and those capable of delayed gratification as children tend to hang on to the ability in later life; as with personality differences (see Mischel, 2014).

The second variable is *emotional constituents*. We vary by personality and by developmental stage, in the degree to which we have an ability to feel ourselves what other people might be feeling (empathy). We learn this through socialisation ('poor teddy!' 'How would you like it if . . . ?'). The physiological basis for empathy is the 'mirror neuron' system in the brain, particularly under the influence of the frontal cortex, but backed up by the limbic system, which triggers emotional reactions. The work of Rizzolatti and Destro (2008) and Ramachandran (2011) – a 'must read' recommendation – was foremost in registering the implications of this brain circuitry. We have learned much by studying individuals where such emotional responses are compromised (see Baron-Cohen, 2011). Ramachandran has developed a useful cognitive-affective concept called 'the salience landscape':

> We measured galvanic skin resistance (GSR) in a group of 37 autistic and 25 normal children. The normal children showed arousal for certain categories as expected, but not the others. For example, they had GSR responses for photos of parents but not for pencils. The children with autism on the other hand showed a more general heightened

autonomic arousal that was further amplified by the most trivial events, whereas highly salient stimuli, such as eyes, were completely ineffective. (Ramachandran, 2011: 149)

'Some people do what they call glancing, I see everything,' wrote Luke Jackson (2002), discussing what it is like to have Asperger's syndrome. Thus, the emotional component of moral development requires that the underlying brain biology is in working order. Some of the implications of this can be quite indirect, for instance a gene mutation can be associated with loss of thyroid hormone production, which can have effects on neuronal connectivity in the developing brain.

The danger with new findings in neuropsychology is that, in the face of the irksome mysteries of consciousness and its links to behaviour, we seize on them and over-extend their explanatory power. This may be happening with 'mirror neurons', which are coming to be seen as little empathic, homunculi-like cells solely responsible for human niceness. However, it may be that their main function is in *recognising* emotional states in others (salience) and signalling the cortex to do some interpretive work; we shall see.

Thirdly, the *social context* in which moral behaviour either occurs or does not, is easy to ignore when it is not obviously dominant. We are programmed to see *ourselves*, not the environment, as 'the initiating force' behind behaviour (dispositional attribution). Nevertheless, study after study in social psychology (see Brown, 1982; Kahneman, 2011) has shown us just how much our behaviour is conditioned by the environment in which it takes place. An example should make this clear.

Darley and Batson's ingenious study (1973) was based on the parable of the Good Samaritan. The experimenters invited trainee priests to participate in a study of 'religious education and vocations'. Following a group 'testing' session (in which subjects all completed 'religious questionnaires'), students were randomised to one of two groups. All were asked to prepare a 3–5-minute talk based on a brief. Group one was given a passage outlining the vocational challenges and opportunities facing seminary students. Group two were given the parable of the Good Samaritan. After a few minutes, the assistant told participants that they were short of space and time, and would need to move quickly to another building on the other side of the campus to record their talks. Some students were told: 'Oh, you are late. They were expecting you some minutes ago...they are ready for you, so you had better hurry!' This was the 'high hurry' group; other conditions were 'less urgency, intermediate hurry' and 'low hurry'.

The resarchers had placed an actor slumped in a doorway near the recording office. He sat head down, eyes closed, not moving, but coughing and groaning as the subjects went past. Those who stopped were told that everything was OK and that he had been given a pill for respiratory problems. But by no means did everyone stop to ask, and those in the 'high hurry' group stopped very rarely. The researchers observed wryly that trainee priests late for a discussion of the implications of Jesus's parable of the Good Samaritan literally stepped over a person in need as they went about their business.

Stanley Milgram's experiments investigating 'obedience to authority' (1966–74) remain for me the most important psychological experiments of the twentieth century. Volunteers were asked to take part in a study of the 'effects of punishments on learning'. They were to administer a recall test and, if the subject got it wrong, progressively higher-level electric shocks. Understand that no electricity was actually involved, but the subjects did not know this. An actor, allegedly selected on the toss of a coin (introducing a 'could have been me' element), was employed to register severe pain. The complicated-looking machinery for delivering the shocks had a lever and a scale designated from 'low shock', to 'danger', to 'severe shock, 450 volts'. The question was how many subjects would comply with the instructions from a man in a grey lab coat. The answer was that 64% went to the highest level. Even when there were protests or new information about 'heart conditions' from the person on whom they thought they were inflicting severe pain, the volunteers continued. If they protested about the ethics of what they were doing, they were just told, blankly, to 'please continue with the experiment'. This unsettling study has been repeated many times over in many different countries and the results are always fairly similar. Variations in compliance fall into the following categories:

- ☐ The closer the 'teacher' is to the 'learner', for instance where they have to actually press the latter's hand onto an allegedly electrified plate, the lower the conformity.
- ☐ Two volunteers together, who can exchange views on the ethics of it all, are less likely to conform.
- ☐ There was no apparent association with socio-economic status. Both decorators and accountants conformed.
- ☐ Counterintuitively, women conformed at about the same rate as men.
- ☐ Post-study interviews showed that *no* subjects doubted that the study was a real situation.

☐ When the subjects were separated from the experimenters in different rooms with an audio link, even yells of agony and banging on the wall yielded small differences in compliance.

☐ When the experiment was repeated in less prestigious surroundings, away from the university (in an office above a shop) but *in exactly the same way*, compliance rates fell.

The social context of all this was of course 'science' – clever people just doing their job to increase our knowledge. It is very difficult to replicate Milgram's experiment today, because so many people know about it. However, in later studies where groups of hospital doctors prescribed medications in an *obviously* wrong way, nurses still tended to conform to instructions and not to challenge them if they were assertively repeated (see Brown, 1965). That may also not be repeatable today, since nurses have found their feet, professionally speaking.

Once the environment makes the claim to being an exceptional one, organisational necessity can overrule all other considerations of humanity, and immoral acts become 'normal' for that space. If you have the stomach for it, look at this extreme example from a history of the role of women in the Third Reich:

> On one occasion Petri [the wife of an SS officer] was returning from nearby Lviv in her carriage. She spotted six naked Jewish children in the woods ... Petri took the terrified children home. She fed them and calmed them down, and then took them out into her plantation and shot them one at a time in the back of the head. (Lower, 2013)

Regarding moral behaviour, therefore, we not only have the task of ensuring that we teach our children clarity of thought regarding good and bad actions (see Aristotle, 2011), but should also encourage feelings about the suffering of others. More specifically, we need also to alert them to the dangers of apparently small incursions on liberty, put forward for, on the face of it, laudable reasons. My local bird sanctuary has a policy of refusing entry to 'lone adults' (*men* on their own) 'on child protection grounds' (Myra Hindley and Ian Brady together would presumably have got in); my local parks department is seeking to ban smoking as 'a sensible public health measure' (what they mean is, it might set a bad example). I have heard of no proposals so far to introduce weight restrictions at the gates, but diabetes does cost the NHS millions. Thankfully, the government has shelved the proposal for a national computer database (always a scary conjugation, that, which

we should arrange to set off claxons in the Public Accounts Committee offices) where anyone with 'concerns' about a child could register them – provided of course that there would be someone to *assess* the entries, and procedures would be in place for dealing with the massive false positive rates.

John Rawls made a splendid philosophical contribution to the debate on the role of society in shaping human behaviour in his *A Theory of Justice* (1971), where he encouraged readers to try to devise a good society, with whatever laws, prohibitions or indulgences they liked, but in the knowledge that *their* place in it would be decided by chance (as it somewhat is).

In 1964, a murder in New York outraged public opinion for different reasons than the obvious. Kitty Genovese was stalked and then stabbed. Her attacker came back on three separate occasions to finish her off, apparently in full view of many local flat dwellers who, hearing the screams, switched on their lights and frightened the assailant away. The *New York Times* recorded that no one called the police, although later investigations showed that *some* people took *some* action eventually to alert the authorities (see Cook, 2014). However, the question remains, as so often in the scores of bystander-intervention experiments, why so few individuals took the *immediate* actions that most people would have expected. Interestingly, in a pilot phase of the Milgram experiment described earlier, ordinary members of the public were asked whether in such circumstances they would ever simply do as they were told, and 98% said no. When summarising such studies (see Zimbardo & Gerrig, 2010), one is led to the following conclusions:

☐ Intervention is not guaranteed to anything like the extent that we imagine it should or would be.
☐ Intervention is slower and more calculating than we might expect.
☐ The more people in the locale, the less likely it is that any one person will spontaneously intervene.
☐ The more familiar the surroundings, the more likely helpful intervention is to occur.
☐ Social-status signals such as dress, previous behaviour and the presence of *any* smell of alcohol influence both the likelihood and the speed of response.

Lawrence Kohlberg was a pioneer of psychological studies in the field of the dimensions of moral behaviour. Here is one of the test items that he used with children of different ages:

In Europe a women was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost him to produce.... The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together half of what it cost. He told the druggist that his wife was dying and asked him to sell it cheaper or let him pay later. But the druggist said: 'No, I discovered the drug and I'm going to make money from it.' So Heinz got desperate and broke into the man's store to steal the drug for his wife. (Kohlberg, 1969: 379)

Most younger children (age 5–6) take the simple view that 'it's wrong to steal' when asked who was at fault in this story, and so blame the husband for his actions. Then at about age 6 or so, complexity, multiple factors in causation and contextual factors begin to appear in responses. In Britain, girls, slightly ahead of boys, tend to reinvent the National Health Service (try it out on your kids).

Table 4.1 summarises the stages of moral development that Kohlberg deduced (p. 192).

As in intellectual development, there are bell-shaped differences in the speed, age and stage at which children acquire these ways of looking at moral decisions. However, they always develop from the simple to the more complex, and always in this particular order. Recent neuropsychological research has found that some children have 'mirror neuron system' deficiencies, which might account for delays in thinking about and being able to handle moral questions in other than an ego-centric way (see Ramachandran, 2011). Also, poor connectivity between the frontal cortex (thinking, calculating, perceiving in detail) and the amygdala (production of emotional reactions) sites in the brain plays a part. There is obviously an interaction here between the developmental state of the brain equipment and the level of provocation present in the environment. It is easier to behave well in controlled, predictable, familiar and safe environments that in unfamiliar, fearful and demanding ones.

Clinical implications

A worrying subset of children, over-represented on our case loads, probably never make stage 3 of Kohlberg's model at all. I have written court reports for children whose initial defence was that if shopkeepers cannot take the trouble to chain up their more expensive electronic goods,

Table 4.1 Kohlberg's stages of moral development

		Characterisation
Pre-conventional morality	Stage 1	A simple, 'here and now', pain avoidance/satisfaction-seeking orientation.
	Stage 2	Cost–benefit calculations regarding behaviour; beginnings of reciprocity (both positive and negative).
Conventional morality	Stage 3	More complex thoughts and speech about how to gain acceptance from peers and authority figures.
	Stage 4	Widening knowledge of rules for conduct, as if 'God given' (as in Piaget's concrete operational stage).
Principled morality	Stage 5	Development of the idea of a 'social bond' or a social contract; the overall good of the group, not just in the here and now, emerges.
	Stage 6	Notions of social justice become apparent, plus self-condemnation for not living up to wider ethical obligations.
	Stage 7	'Cosmic orientation' (a little fanciful, I think) and the embracing of universal ethical principles.

then what can they expect? Designers of computer viruses show similar moral stunting.

Some people never develop an adequately functioning conscience. Measures of their CNS activity via MRI and GSR tests show little emotional arousal when they are shown images of suffering. However, their ability to plan for their own interests is intact or even enhanced. Twin studies demonstrate a noteworthy inherited risk for this kind of disconnection (see Baron-Cohen, 2011).

Psychopathy, a condition at the extreme end of this failure in development, is a life-long abnormality. The prevalence rate is between 0.5% and 3.5% of populations (see DSM-V). Such people can have a hugely disproportionate effect on those around them, and there is little that can be done therapeutically except to blunt or contain this influence. Another effect is the tendency to parasitise organisations in health and social care, education and so on, where well-meaning offers of help in the early stages can be quite deviously exploited. The only approach, when the evidence is clear (to start with it usually is not), is to try to assess the *persistence* and *ubiquity* of manipulation, and to take note

of the sheer improbability of the level of external attribution used to explain behaviour: five sets of impossible neighbours, four different sets of persecutory teachers and so on. I have only ever found one approach that limits the damage from such cases:

☐ Abandon rescue fantasies, particularly if you are new to a case (they *do* get passed around, unfortunately).

☐ Set up case conferences where all concerned can share experiences, but also agree some cast-iron rules about not casually referring on. It is common for people for whom exploitation is natural to allow a little respite to the nearly exhausted so that they can be returned to after the next failure. Ethical containment and damage limitation should be our aim.

☐ Make sure that any complaints scheme involved has the full facts, including those pertaining to previous encounters. In my experience there is always 'previous' (see Baron-Cohen, 2011).

The chances of the diagnosis of psychopathy being misapplied are to my mind much less than the risks and costs to others, of professionals not being willing to contemplate it.

Emotional development

> Feelings let us catch a glimpse of the organism in full biological swing, a reflection of the mechanisms of life itself as they go about their business. Were it not for the possibility of sensing body states that are inherently ordained to be painful or pleasurable, there would be no suffering or bliss, no longing or mercy, no tragedy or glory in the human condition. (Damasio, 1994: xvii)

Is there anything more important in life than feelings of love, or dedication to a child, or close friendship? Is there anything worse than the grief that touches us all at some point in our lives when we lose someone? But where do these stirred-up states of feeling originate? They are not simply free-floating experiences determined by our cognitive calculations, that is for sure. *They* happen to *us* and they tend to determine our thoughts rather than the other way around.

As we have seen, the visible stages of normal emotional development begin with eye-to-face gazes and facial-expression mimicry in babyhood, provided of course that there is nothing much wrong with the child, and that these expressions of attention and recognition are encouraged

and shaped. After the establishment of these early signs of attachment, emotions are mainly visible in the increasingly social interactions of children. Reciprocity begins to emerge, and this leads to the development of empathy and a theory of mind. It is from families where these normal developments are inhibited either by genetic/developmental factors or by impoverished physical and/or emotional environments that we get most of our cases of children referred for odd or uncommunicative behaviour or for depression. We should look next at the extent to which such tendencies are learned or inborn.

Parenting styles

There is now a large literature on parenting styles and their effects. These research projects, and digests of them for public consumption, range from an emphasis on increasingly detailed, supportive, affirmative parenting, to 'tiger mother' manuals suggesting that the more children are given challenging things to do, the better it will be for them. Pinker (2002) suggests, and I agree, that we relax a little more, because the shared environment contributes much less to the character of our grown-up children than it is comfortable for us to believe. Fox-Keller's work (2010) also suggests that most determinant or strongly influential factors in shaping child behaviour are already inside the child, or are 'imprinted' by experiences in very early development. Therefore, the best that anyone as a parent can do is to provide a safe, loving, encouraging, relaxed, 'with the grain' environment and offer information in as unbiased a way as possible. *Facilitation* should be the main goal.

Emotional problems in childhood and adolescence have been on the rise for at least four decades (see Rutter & Hersov, 1995; Rutter & Smith, 1995; Rutter & Taylor, 2002). There are two contending reasons for this increase:

☐ The usual one that we are getting better at diagnosis or merely worrying more as cultural pre occupations seep into organisations
☐ As a culture we are much more in touch with our own feelings and those of others – all to the good, so long as stiff upper lips do not get lost for ever.

Parental styles and emotional development

Rutter's research on this vexed question (2006) is important since, although the names and categories of parenting styles are ever-changing, the essence of a *predominant* behavioural and emotional style still contains the same basic factors showing up in outcome studies. The research demonstrates the following:

☐ Few parents have one single style or guiding plan in the face of all circumstances. So *predominant* features is what researchers need to look at.

☐ Increasingly (see Chapter 2) the contribution of the *child* and his or her substantially inborn temperamental characteristics need to be entered into the equation.

☐ There are critical periods for learning things, such as linguistic or social skills, or for acquiring a sense of emotional security. These can be recovered a *little* later, but with much more difficulty. Rutter's work in Romanian orphanages is telling here. If basic emotional bonding with, at least, a familiar figure who provides durable care is left beyond a certain development stage, then it is *much* harder to re-establish it later – there is a critical(ish) period for emotional development, as there is for other kinds (see Rutter et al., 2009).

Table 4.2 (p. 196) summarises the main factors identified in research into the effects of different parental styles and the factors that are most influential.

There are some problems with the research findings summarised in Table 4.2, and with later (not readily distinguishable) additions to it:

☐ The research is either old and bold, or contemporary but confined. That is, later studies tend to focus on successful replications of measures or methodological critiques – without addressing the big question, known to all of us, that the way we are brought up rather defines the kind of people that we become, or at least *wish* to become.

☐ There are scales and instruments available against which parental styles can be assessed for research purposes, but I am a little wary of them, because there has been too little discussion of questions of the validity/reliability/standardisation precautions, or because most are based only on self-reports or brief observational approaches.

☐ Parental style is not, even allowing for the growth of single parenthood, a unidimensional effect on children. For example, General Sir Bernard Montgomery had a kindly, other-worldly vicar for a father, but a very strict and somewhat unforgiving mother. What was *the* parental style of Mr and Mrs Bennet in Jane Austen's *Pride and Prejudice*? If you recall, Elizabeth and the girls had a quiet, kindly, slightly detached father – 'I shall be glad to have the library to myself as soon as may be' – and a hysterical mother – 'what is to become of us all?'

Table 4.2 Characterisations of parental styles

	Characteristics	Effects
Authoritarian	Punitive, restricting, reliance on rigid rules. Oversimplified right/wrong thinking with limited room for discussion or mitigation. Controlling and exhorting with a high value on compliance, work and effort.	Failures of initiative when outside immediate parental/authoritative influence. Higher levels of anxiety; lower social and communication skills, reduced empathy.
Authoritative	Encourages independent thought and considered risk-taking. There are clear rules, but a ready willingness to discuss them and the reason for them. There is emotional warmth and negotiation, but parenthood is not confused with friendship.	Reportedly higher levels of social skills, self-reliance, initiative and sense of responsibility for one's own actions.
Permissive/ indulgent, love/lax	Emotionally expressive, involved, but there are few enforced rules. Instead the emphasis is on personal freedom. Few if any sanctions.	Some negative effects reported: lack of respect for even reasonable rules; prone to personal indulgence and lack of self-control, but higher on social skills and empathy levels.
Permissive-indifferent	Uninvolved parenting, where children are left to their own devices and designs. This style is often categorisable as parent self-preoccupation with too little room for the demands of children.	Lack of self-control, feelings of neglect, weaker sense of identity or feelings of worthlessness.

Conclusions

This chapter has suggested that research evidence supports the existence of a series of common stages in cognitive/intellectual, emotional and moral capacities; that these are real, not artifactual; and that we can investigate them empirically and produce consistent results. Furthermore, these changes occur in an orderly fashion, and although the timings of the unfolding sequence may vary, the universal order does not. Such development is signalled by, and turns on, the acquisition of new *concepts*. These are formed under environmental influence (see

Hogg & Vaughn, 2013), but are not completely dependent on learning in the sense of specific, targeted, external influence (see Vygotsky, 1962). Genetic and epigenetic (predispositional) factors play a larger role in development than previously thought, and it is for clinicians and helpers to design 'with the grain', *facilitative*, therapeutic methods and regimes, rather than deluding themselves that it if the management and contingencies are tight enough, anyone can be turned into anything.

5
Adolescence and Early Adulthood

I was supposed to be having the time of my life...
> —Sylvia Plath (1964: 1)

So begins Sylvia Plath's iconic semi-autobiographical novel *The Bell Jar*, about the struggle to become an adult. All definitions of this stage in human development stress the difficulties of the transition from childhood to adulthood, yet, as with notions of childhood itself as a distinctly different stage with distinctly different patterns of thinking and emotional reactions, the concept of adolescence is a fairly recent invention. In the eighteenth century children were dressed as, and expected to behave as, young adults. This was a waiting period for full adulthood that offered a few opportunities for practising their future roles. Young people were expected to assume these as quickly as possible – the earlier the more promising. The demands of work and raw economic survival also required this for most, and given the prevailing mortality statistics, particularly among the poor (see Sheldon & Macdonald, 2009: ch. 1), there was no time to dawdle. The more general point holds today:

> Traditionally psychologists have focused their attention on the developing individual as distinct from the social–economic–health context in which the child grows up. The assumption has been that these environments were relatively normal, and similar enough for those people being studied that they could be ignored, or discounted as significant contributors to variations in psychological development. (Zimbardo & Gerrig, 2010: 184)

Interestingly, the physical accompaniments of this psychologically testing time (causes, I would say) are all coming down. Victorian girls could

expect to begin their menstrual cycles between 15 and 17; now the typical age is 13. Also, people typically used to be smaller. If you have visited an old English manor house and hit your head on every lintel this is a reminder of that fact. If you attend antiques fairs, look at military uniforms from the Boer or the First World Wars: a modern 14-year-old could just about squeeze into them. Improved nutrition because of greater agricultural productivity is part of the reason for the growth in height.

Although stories have always circulated about the special nature of the teenage years, particularly regarding tensions with adults – in 400 BCE Socrates wrote, 'the young today go about wronging the ancients and getting young women with child' – the first serious psychological study was by G. Stanley Hall, who produced a two-volume account called simply *Adolescence* in 1914. He was an early pioneer of the influence of evolutionary forces on the developing psychology of the individual, and his ideas on child development anticipated some of those of Piaget. He invented the *Sturm und Drang* view of teenagers, and we are still rather hooked on the idea. However, most *empirical* studies (to distinguish them from intrinsically biased, clinical or juvenile justice samples) featuring ordinary teenagers suggest otherwise. *Most* teenagers in community samples do not take hard drugs (overall consumption is falling); do not have serious brushes with the law; do not drop out of school or get expelled; do not get pregnant before they want to; do not threaten suicide, but *do* say that were they to have serious worries they would consult their parents first ('they *tuck* you up your mum and dad'). *Most* aspire to finding a career suited to them; would like to find a life partner; and now, should the issue apply, do know that if their sexuality turns out to be different from the majority of their peers, then this fact need not be hidden away.

So where does this enduring idea of adolescence as a stage of potentially dangerous rebellion come from? Not from nowhere, for sure. Here are some possibilities:

☐ The idea of teenagers as a separate, somewhat troublesome group, to be guarded against by society, is as old as the hills, as we have seen. However, under the influence of psychoanalysis, it came to be seen almost as an illness for which time was the only certain cure, but which could perhaps be a little curtailed with three or four years of therapy.

☐ We must not neglect historical and socio-economic factors. After the privations and sacrifices of the Second World War, which followed

on from the great depression of the 1930s remember, there was a strong mood of 'enough is enough' among the populace in the countries that had done the sacrificing. Thus, people actively sought prosperity, social mobility and full employment – they felt they had earned it. For the first time teenagers had a little money to spend and became a 'market' to be cultivated.

☐ Cultural changes also had a large-scale influence on how young people defined themselves, most notably, and not repeated on the same scale since, through the invention of rock and roll. That may have had its precursors, but it burst on to the music scene in the late 1950s as a life-defining force for young people. It championed free expression, rebellion against the constraints of the stuffy established order and every kind of fuddy-duddyness – never better defined than by Phillip Larkin's description of his parents' parents' generation as 'soppy stern'. The music, which was definitely *ours* and not *theirs*, had a vitally important influence.

At my school in 1959 (just on the cusp), we had an after-school modern dance club ('a white sports coat and a pink carnation') and an old-time dance club ('Gay Gordons' and 'Strip the Willow'), which were both good fun, but a few of us wanted to set up 'The Rock and Roll Appreciation Society'. We booked the school hall via an unsuspecting caretaker and played Bill Haley, Little Richard and Chuck Berry at full volume. The headmaster found out, declared at morning assembly that he 'would not tolerate these ape-like gyrations' in his school, and summarily closed us down – so we moved it somewhere else. The 'Shock of the New' was too much for him: 'Is this why I survived Dunkirk?' he would ask. This was some time ago, but the same tensions still exist between young people wishing to establish their own identity within a culture that they would quite like to influence, and the usually unconscious, routine oppression of adults for the 'good' of the children in their care.

I used to set an exam question on my developmental psychology course: 'Adolescence: mainly in the genes, or mainly in the jeans?' In ten years only one brave student took it, although the question remains an important one. I recall working on the eleventh floor of a university tower block at the time, and on a snowy day, taking in a Lowry scene of hundreds of students all clad in dark blue denim on the 11 o'clock break from lectures. Why were they all so similar, in so identical a dress style? The answer came to me quickly: these young people wanted to be different not from *each other*, but from the rest of us.

Leaving aside jeans for a while and concentrating on genes, what do we know about the physical influences that bring about adolescence?

☐ There is rapid weight and height gain (see Figure 5.1). The two graphs follow the same pattern, except that the girls get their increase earlier. This is not the largest growth/weight spurt, which occurs between fertilisation and birth, turning a tiny cellular mass into a baby in only 9 months (see Tanner 1978), but it is the one of which we are most conscious. This acceleration in body mass and height has two major effects: first, it propels children out of any notion of retained childhood and its securities; second, it introduces size/age confusion into their dealings with adults. That is, the child, who may still feel young and somewhat insecure, rapidly develops the body of a young woman or man, which triggers a host of new expectations – not all of which are liberating or easy to live up to, since emotional development lags well behind physical development (see Bogin, 1999; Tanner, 1978). Encouraging patience is the answer to such changes (subject to availability).

☐ Increased body mass, particularly muscle growth and limb extension, interferes with the *kinaesthetic* sense. This relies on receptors in the joints telling the brain where arms, hands and legs are when they are not being looked at. Rapid growth and the time it takes to recalibrate this sense explain the slightly clumsy, coltish behaviour of which young people are often accused. Teenagers have to learn to walk again, and indeed practise doing so, looking at shop window reflections to check, looking in mirrors to see who exactly the person looking back at them *is*.

☐ The fact that girls mature physically and emotionally up to two years ahead of their male counterparts also creates problems. Quite suddenly they are no longer very interested in watching the rough-and-tumble contests that boys play out in front of them, but rather in sitting together in groups talking about their feelings and aspirations. This may be why teenage girls tend to prefer older boys who have level of maturity nearer their own, plus, perhaps, access to a means of transport (cue Carmina Burana music).

☐ However, alongside growth patterns come hormonal changes, which alter feelings and emotions in quite a sudden way. Freud was right about childhood sexuality: it does not start at 13, it is there in the background throughout earlier childhood, but in a way that children can do nothing much about.
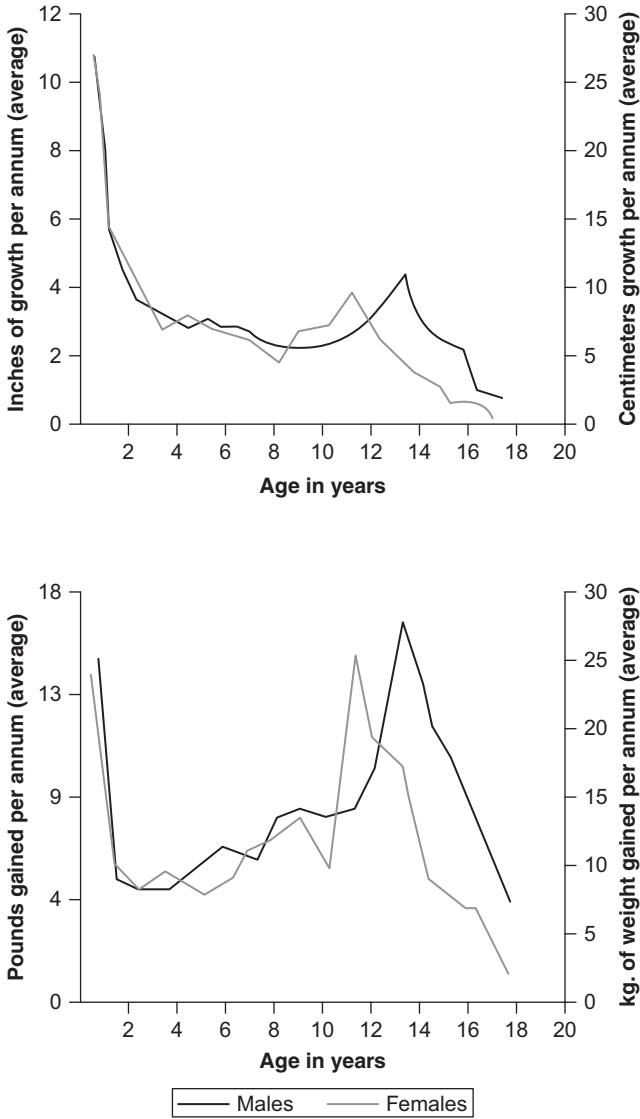
Figure 5.1   Mean typical growth/weight patterns in young males and females

☐   Puberty produces major physical, emotional and cognitive changes in the individual. Occurring now between 11 and 13 years, it produces significant variations (another bell curve) that have noteworthy psychological and behavioural consequences. The biochemical changes involved are the production by the endocrine glands (which secrete hormones directly into the bloodstream) of increased levels of sex hormones. This production is instigated by the pituitary gland (at the base of the brain) and regulated by the hypothalamus via a gonadotropin hormone that stimulates the testes and ovaries. The hormones involved are of two types: *androgens*, dominant in males; and *oestrogens*, dominant in females, who experience an additional hormonal influence via *progesterone*, influencing female reproductive capacity.

All of the figures, both for height/weight gain and for sex hormone release and its timing, moving leftward in the figure, are a result of improved nutrition and healthier life conditions. In females these are signalled by breast growth and the onset of menstruation; in males by testicular descent, by changes to voice pitch and the onset of ejaculation, which changes all previous points of view. Anatomy is not *quite* destiny in the way that Freud, Erikson and others imagined, but it is emerging from contemporary research to be an underestimated influence. The problem with biological influences is that they often *feel* psychological or social; in other words, the trial-and-error fumbling towards a new sexual identity is normally defined by what happens environmentally – the early rejections, the mismatches, the confused communication of intent, are seen as causal, when actually the driving force is biological. These are just the painful effects of being 'all biologically dressed up with nowhere to go'. That said, the period of transition from childhood to adulthood can, remember, quite often be delightful. Think back to your own adolescence, and if you were at all lucky, to the new, sheer *intensity* of feeling, possibly never quite to be repeated.

The other powerful hormonal influence is testosterone ($C_{19}H_{28}O_2$), a steroid hormone from the androgen group. Secreted by the testicles and the ovaries, this is found in both males and females, but male concentrations are around 7 times stronger than those of females. Males make 20 times more metabolic use of this (dangerous) chemical, which influences outgoing, competitive behaviour, risk-taking and aggression. Pinker (2002), in discussing whether there is any biological basis for criminality, plays with his audience in a table listing various types of violent crime in two columns headed 'with the biological makeup' and

'without the biological makeup'. In one column the phenotypic effects are *massively* more present. Then we are let into the, retrospectively obvious, point that we are talking here about men compared to women.

However we would like things to be, men and women, boys and girls, are different. Some typical trends can be countered by environmental influences, but the evolutionary pressures remain, not as an *excuse* or justification for anti-social behaviour, or quiescence in the face of unfair treatment, but something that we cannot just wish away, or easily counter.

Case study 5.1

John, age 14, was referred to social services by his parents on the advice of the police. He had received three cautions for aggressive behaviour and suspected involvement in setting fire to pillar boxes (insufficient proof). Contact with his school showed that he was performing badly and accumulating a string of disciplinary offences. Senior staff regarded his expulsion as 'as close to inevitable as makes no difference'.

At the first family meeting the contrast between John and his family was stark. His father was a senior local government official, his mother a kindly ex-teacher, who was on her own admission rather dependent on tranquilisers. His sister was polite, friendly with a 'gosh what *is* all this about?' manner, and was doing very well at school. By contrast, John was strikingly small for his age, had a shaven head, wore combat boots and fatigues, swore a lot in front of his wincing parents, and was known to be a member of a local gang of boys of serious interest to the police.

The house, in a pleasant suburban cul-de-sac, was tidy and well furnished. However, there was trouble between the neighbours and this family because John enjoyed kicking over rubbish bins, firing air guns at their pets and throwing stuff into their front gardens. This would have been no big deal, except for its persistence in the face of complaints and family rows.

The social history also revealed contrasts. Until the age of 11 he had been regarded as 'his father's boy', they went fishing together most weekends and there were then no noticeable problems at home or school. Then around age 13 things changed quickly and remarkably. John would stay out late and get into fights with his father, he changed his dress style – we all do, but his was a

strange mixture of US marine meets British skinhead, even though his home was quintessentially suburban and middle class. One of the strangest patterns of behaviour was his adoption of an ersatz South London accent and macho style to go with it; he was from the Midlands.

John's father was tall, still fit, and had a cabinet full of cups and medals from amateur athletics contests. Half way through the first family interview he stated (in front of John, and to his wife's dismay) that he would like to look further into his son's birth records to check whether some mistake had been made and the wrong baby brought home.

Most adolescences pass off with only a few 'Kevin the teenager' episodes, but this one was obviously not going to.

The therapeutic approach (with avoidance of youth custody as its first aim) had more to do with diplomacy than casework of the usual kind. The commonest complaint of young people in dispute with their parents is of inconsistency or hypocrisy. Therefore, the approach taken here was initially to clarify some agreed and sensible rules to make living together a working possibility. It was based on a contingency contract (see Sheldon 2011), in which behaviours that the parties held to be of roughly equal value were made conditional on each other, for example 'If you get in by roughly this time, I won't wait up for you' (this was where dangerous fights typically broke out). To the astonishment of the father, a recommendation was made that pocket money was to be *increased* in exchange for John undertaking a few chores around the house, so he would be less tempted to steal it anyway. Separately compiled lists of desiderata were exchanged. Fascinatingly, one of the treats or privileges in John's list was a resumption of fishing trips with his father, but 'without sermons'.

The behavioural contract worked well at home and in John's school, but was more to do with 'strategic arms limitation talks' than psychological therapy. He is now married with two children, and thinks of himself as having been 'going through a phase' – but a rather dangerous phase at the time.

Adolescence is the period when increased expectations and increased responsibilities begin to fall on young people who still have many child-like feelings and attitudes. Matching up psychological and hormonal/physical development is something that all would-be helpers should

have in mind when devising their interventions. In Case study 5.1 John was probably developing a macho image to ward off bullying attempts at school; as a compensation device for his slow physical growth – he bought himself a full shaving kit when he had nothing to shave; and as part of his battle with his (basically caring) parents to establish a separate identity in the face of his father's rather self-serving bewilderment and disappointment. Remember that this greatly changed behaviour happened *suddenly*; there was little to predict it. John was never abused, never uncared for, and therefore 'it' happened to him, I think, largely from within.

Strangely, the reflex action of society when confronted by bad behaviour from teenagers is to up the disciplinary stakes. Nothing nice or understanding must be allowed to happen, in case it appears to condone troublesome behaviour. However, most pieces of controlled research show this to be harmful. Petrosino et al.'s updated research (2013) examined again the effectiveness of programmes to scare young people out of early criminal behaviour, arguing that however socially gratifying the impulse, the outcomes did not justify any confidence in them:

> We conclude that programs like 'scared straight' are likely to have a harmful effect and increase delinquency relative to doing nothing at all to the youths. Given these results we cannot recommend this as a crime prevention strategy. (Petrosino et al., 2013)

Diverting and containing until this youthful stage is over might be a better solution than the enduringly appealing 'get tough', zero-tolerance policies.

The total number of offences committed by youths (under 18) is currently over 175 000 per annum and falling (unexpectedly so, at the tail end of an economic recession). The cost of these offences to society is about £4 billion p.a. in the UK, but then we have a population of some 64 million and rising, of which teenagers make up 9.2% (14.5% in the US).

Systematic reviews of intervention research tend to show some hard-won but worthwhile gains in projects designed to divert young people from disruption and crime. Nothing works brilliantly in the field of child and adolescent mental health and certainly not in the field of delinquency prevention, but there *are* reinforceable approaches (see Bartollas & Schmalleger, 2013). Early intervention programmes, once

derided by sociologists as likely to result in deliterious labelling effects, continue to do well in experiments, particularly if combined with parent-training programmes focusing on specific aspects of early anti-social behaviour and responses to it. The effect sizes are not huge. The systematic review by Piqero et al. (2008) supports the findings of Sheldon and Macdonald (2009) in their review of trends in social work effectiveness research:

> The results of this review indicate that early family/parent train-ing is an effective intervention for reducing behaviour prob-lems…the weighed effect size was 0.35…evidence indicated that family/parenting training was also effective in reducing delinquency and crime in later adolescence. (Piquero et al., 2008)

Another systematic review by Wilson and Tanner-Smith (2013) pro-duced some important results. This study looked at the effectiveness of interventions for provisions for children dropping out of school (known to have damaging sequelae for involvement in crime, being unem-ployed and having a wage below the poverty level). The researchers examined 152 studies and found that involvement in such schemes was modestly effective (13% dropout in intervention groups, 20% for controls, so nothing to write home about). However, the more spe-cific problems were targeted and the more programmes were faithfully implemented against an intervention protocol, the better the results. This problem of implementation of treatment approaches has been around for years. Processes are nowhere near as measurable as pill dosages.

Results from cognitive-behavioural programmes (see Chapter 3) remain the most robust in this most difficult of fields (see Lipsey et al., 2007; Kazdin, 2004; Sheldon, 2011). The problem remains that access to these therapies, indeed training in them on mainstream courses, lags behind increasing research evidence for their effectiveness.

School and community programmes aimed at providing education on issues such as drug abuse, bullying and gang membership have a limited impact. The results are slightly better from evaluations of projects that are attuned to the actual living conditions and day-to-day pressures of young people and to their family circumstances (that is, they are cultur-ally attuned). Results from studies of the effectiveness of schemes run by the probation service in England and Wales confirm this general pic-ture (see Ministry of Justice, 2010), particularly if specialist therapeutic

services with a proven track record in particular conditions, are made available as part of the scheme.

It is interesting that so many of the major threats to the developing identities of young people have their beginning during this period of struggle to form a distinct, separate identity. These include the onset of major forms of mental illness – somewhat independently of home circumstances, but certainly made worse by the more adverse of these – and eating disorders, the body–image dysmorphic components of which are exacerbations of average teenage preoccupations with appearance, size and weight. Surveys of the adolescent population regularly show dissatisfaction with these normal-scale variations, to the tune of 50% in girls and 44% in boys. Over the years these reported dissatisfactions have been rising steadily (see Haney & Durlak, 1995; Huang et al., 2007; Van den Berg et al., 2010; Mäkinen, 2012). Much in the modern research literature looks at the correlation between self-esteem and eating or weight problems. There are two good standardised measures for clinical practice: the Rosenberg self-esteem scale, and the Body dissatisfaction subscale of the Eating Disorder Inventory. Images of super-slim American teenagers with perfect teeth probably have a triggering and dissatisfaction-maintenance function in everyday life, but the more severe forms of eating disorder have a strong genetic component that is semi-independent of these (see the earlier discussion of anorexia and bulimia).

Problems in adolescence do not come in ones. Imagine being an overweight teenager with the usual complement of acne and being made fun of by your class mates, these days largely via the internet. Then you have to ask yourself what these *other* adolescents have been through, or not been through, to make them want to do that. Self-esteem and identity problems would be my first hypothesis, the nastier side of human nature that involves temporarily boosting one's own sense of worth by reducing that of others nearby; 'self-esteem by contrast', as it were, my second. At this age peer relations become *vital*. Surveys regularly show this preoccupation with the opinions of contemporaries – the 'non-shared environment' that makes twin comparisons more awkward than they used to be when we ignored this matter. If respondents are asked to whom they would look for assessments of their behaviour, then it is their contemporaries they cite. The internet has quintupled this effect and most adolescents now take a good proportion of their sense of self-worth or otherwise from a virtual peer group. Pious recommendations from government and charitable agencies (usually after something has gone badly wrong) that parents take a greater interest (that is, police)

their teenage children's online activities are pie in the sky, because it is the very separateness and *unpoliced* nature of internet communication that give it its allure. Sensible 'immunisation' earlier in childhood, and a known second tier of loving, positive support on tap, is probably the best we can do.

The influence of this non-shared environment is increasingly seen as a previously missing element in twin studies looking for the influence of genetic loading. There are five things to bear in mind when assessing the methodology of such studies:

☐ Genetic loadings are relatively easy to investigate scientifically and statistically.

☐ Family environments are difficult to access, cannot readily (that is, scientifically) be assessed to be 'the same or very similar', and it is very hard to establish the *differential* impact on individual young people. Even well-standardised, high-reliability measures of environmental factors (about 0.86 is the best we have) leave much room for contaminating errors in nature/nurture research. Most of this comparative work is based necessarily on interviews against a protocol. Yet would your parents, if involved in such a project, freely admit that they were 'often unfair', or that they had 'sometimes used unnecessary coercion'? CCTV ratings involving expert reviewers are useful, but happen infrequently.

☐ Such studies of environmental influences tend to feature clinical populations, which by their nature are untypical.

☐ Elements in the shared and non-shared environment depend on *learning*. So why should one type of learning experience, at least *somewhat* under parental influence and reinforceable every day (for good or ill), be such an apparently weak force in development, whereas the learning influence present in the non-shared environment (much less controllable and persistent) is such a strong one? This is the age when modelling (see p. 145) moves from the casual behavioural contagion of the school playground to an actively sought-out set of new influences. New inflections of speech, new hairstyles and new forms of dress sweep through populations of young people with epidemic force. New patterns of behaviour and self-expression are tried on and taken off like clothes. The aim is distinctiveness, but the result is often collective sameness.

Predominant influences include the power of hormonal changes to affect emotional expression (see LeDoux, 1998), the desire for loving

relationships, special, enduring friendships, the need to have membership of a distinct group separate from the family, and above all the mating impulse. However, our genes are concerned mainly with biological readiness, not with social mores and what is currently socially acceptable. Evolutionary forces and social mores are now *well* out of step in complex societies. Laurie Lee's touching, semi-autobiographical novel *Cider with Rosie*, with its innocent scene of two youngsters romping in the hay with a flagon of cider, which was once set as an English O-level text, might now be regarded as a debauched account of 'inappropriate behaviour' between underage children involving the elicit consumption of alcohol. Thank heavens neither of them lit a cigarette.

One third of women now delay having their first child until they are aged 30 or over, which, although perfectly understandable, has a few physical and social consequences of no particular interest to the ancient, fascist, genetic programme still inside us. At the same time, the teenage pregnancy rate in the UK is the highest in Western Europe, despite programmes of sex education in every school. The under-18 pregnancy rate is circa 39 per thousand, half of which lead to an abortion. This is twice the level of France and Germany, and five times the rate in the Netherlands. In the US the rate is 72 per thousand in 15–19-year-olds, with a third ending in abortion. The most at-risk groups are: children leaving care (after being brought up by experts, remember) – there are similar distortions in the juvenile sector where < 1% of the child population are in care, but around 30% of those in youth custody have been in care – a new report on post-care services has just been commissioned from Lord Laming; children of parents who were themselves conceived early; socially deprived and poorly housed children; those who underachieved at school; and, of course, those suffering from the malign effects of drugs and alcohol (see Avery & Lazdane, 2008).

Why, with free contraception now widely available plus the ready availability of the 'morning-after' pill, would anyone get themselves into such a situation? The answer is probably the increase in impulsivity and imperviousness to risk that the biological and psychological experience of adolescence brings with it.

As a parallel example, the boy with ADHD described in Case study 1.1 once casually confided that he and his friend (a notorious substance abuser) were taking their mopeds down to a dual carriageway to practise 'wheelies'. 'Sounds a bit dangerous,' I said. 'Have you ever done anything like this before?' 'No, but I'll soon pick it up, I think I have a natural sense of balance' came the reply. (I didn't ring the police, but I did drive out late at night to check for mayhem, and saw in a car park

two cold, sad-looking boys trying to jump their front wheels two inches off the ground. I suggested they went home, which they did.)

Emerging sexuality, and finding a way to give it safe physical and emotional expression, can constitute one of the most formidable obstacles to making the transition from childhood to adulthood. Education and information are one thing, practical experience (as with learning to swim or ride a bike) quite another. In the end this has to happen operantly, and so is unlikely to be a smooth and fumble-free process, even now. Sylvia Plath's *The Bell Jar* (1964, Chapter 6) gives an illustration:

> Suddenly, after I finished a poem, he said, 'Esther, have you ever seen a man?'
>
>   The way he said it I knew he didn't mean a regular man or a man in general, I knew he meant a man naked.
>
>   'No,' I said. 'Only statues.'
>
>   'Well, don't you think you would like to see me?' . . .
>
>   'Well, all right, I guess so,' I said.
>
>   I stared at Buddy while he unzipped his chino pants and took them off and laid them on a chair and then took off his underpants that were made of something like nylon fishnet.
>
>   'They're cool,' he explained, "and my mother says they wash easily.' (Plath, 1964, Chapter 6)

Another issue is that whatever political platitudes we hear, relationships are not always the same in ethnic minority communities. Asian families, for example, have often hung on to an older view of courtship and marriage (which would have been very recognisable to people in Georgian England). Status, suitability and potential earning power are still predominant factors. The problem for young people brought up and educated in the West, however, is our cultural celebration of personal freedom and choice. This can lead to severe clashes and serious psychological consequences.

Friendships in adolescence are intense, and can be the main buoyancy aid in the transition from childhood to adulthood. Nevertheless, it is out of the mix of relationships that bullying emerges. This is not an age-specific form of oppression. Children experience bullying in both primary and junior school, or, indeed, later on at work (see Case study 5.2, p. 216). However, it is in adolescence where the active undermining of self-worth and failed or broken relationships have their most serious impact. Young people take their reflections of self-worth predominantly from peers, and if the peer group turns hostile, they are

often insufficiently emotionally secure and resilient to cope with it. Psychological studies of bullying reveal the following:

☐ Boys tend towards active, aggressive expressions of power and dominance, while girls tend to use more subtle psychological means and harness the power that the threat of exclusion from a social group brings with it.

☐ Both types of bully rely on followers as much as instigators. That is, a kind of Stockholm syndrome is often present where henchpersons avoid being targeted themselves by aiding and abetting the oppression of others.

☐ Certain vulnerable groups are selected as easy targets: the unusual looking, the less tall, the disabled, those not yet sure of their sexuality.

☐ Social media have increased the impact of bullying fivefold. It can now be carried out vicariously, with cohorts of assistant bullies at finger-touch length. This results in a virtual network of relationships, which can be turned on or off at whim, where the consequences of this form of hurt are not immediately noticeable to the perpetrators. Alternatively, victims can be readily parasitised for dark, harmful purposes. Being 'unfriended' by someone – or, more usually, by a group of other people – having too few 'followers' on Twitter, or being anonymously 'trolled' just for the sadistic fun of it, can give a new dimension to adolescent alienation, one that is not particularly well understood by an older generation. The consequences of all this and the numbers involved are far from trivial. There are strong links to bullying in 38% of teenage suicides. Other associated factors include dropping out of school, developing anxiety states or depressive reactions (see Gardner and Davis, 2014; Bauman et al., 2012).

☐ We have reasonably secure figures on the prevalence of such problems in adolescents and of their effects. An NSPCC survey (2013) gives a figure of 40% of children and young people reporting that they have experienced bullying; 18% of these respondents said that they would not talk to their parents about it for fear of making things worse. The figures for subgroups, such as those who know they are or think they might be gay or lesbian, show increased reporting (55%; see Guasp, 2012).

☐ These are not at all harmless, transient influences. The suicide rate in teenagers in Britain is about 1700 deaths per year. Happily, it is falling slowly thanks to better health and social care interventions,

and because of more careful use of antidepressants. However, apart from the personal pain that each of these tragedies has at its heart, the malign effects also ripple through the whole family, and some families never really recover. Young males are over-represented in suicide figures. They are less likely to seek professional help, and only 14% of the individuals concerned were in contact with mental health services. Young women seek help a little more readily (20%). The collision between ordinary adolescent developmental factors and adverse effects, including bullying, seems the most likely explanation for these troubling statistics.

☐ We are more secure on the effects of interventions against bullying than on its epidemiology. This is because of wide variations in what constitutes bullying and how it is defined, and because much of the collation of statistics is done by charitable bodies and pressure groups, who have a known tendency to use them in pursuit of funding. However, a good systematic review is available (see Farrington & Ttofi, 2009). This concluded that the most important ingredients in anti-bullying strategies were:

> ☐ clear definitions of what constitutes the phenomenon, clear and predictable sanctions being in place, and regular enforcement of these rules.
> ☐ Clear behavioural consequences for bullies with the close involvement of senior staff, for example the head teacher.
> ☐ Serious discussions with bullies about the consequences of their actions for victims as well as for themselves.
> ☐ The close involvement of *all* staff concerned – no delegation of this function to a group of staff concerned with a 'special problem'.
> ☐ Meaningful and immediate loss of privileges.
> ☐ A clear, no-fault system for reporting concerns, as opposed to 'zero-tolerance' programmes based on punishment and exclusion. These approaches do less well in outcome research; effect sizes here are modest at best (see Skiba et al., 2008).
> ☐ Early preventative action is more effective than remedial action. The involvement of other young people as a source of support has been found to be more effective than if an anti-bullying policy is mainly left only to teachers to administer.

Adolescence is the time at which major mental illnesses first appear in any event, and bullying can precipitate them. Depression in young

people, for example, is often linked to experiences of victimisation (see Nolen-Hoeksema & Hilt, 2013).

The development of more sophisticated, more abstract, more logical, less ego-centric cognitive strategies for understanding the world and one's place in it is possibly the saving grace for adolescents. Children from 11 upwards progress to Piaget's formal operational stage (see p. 175). Young people develop the ability to see problems from more than one point of view. They have also acquired much more knowledge to inform their thinking. This is why they are closely concerned with moral questions and with the fairness of economic arrangements. The crisis facing us now is that moral and political questions – how to build a better, fairer society and so on – are strongly associated in the adolescent mind with political failings and manipulations, of which there are many (see King & Crewe, 2013). Thus, *doing* something practical on the basis of improved moral reasoning is perhaps increasingly difficult for those affected by unemployment, job insecurity, tuition fee hikes, and a general political message that *they* need to get *their* act together (an improved CV, voluntary experience and so on) rather than the country doing so.

It has always been the case that adolescents have been on a hair trigger for pseudery. Think back to *The Catcher in the Rye*, the quintessential novel about the adolescent experience by J.D. Salinger. In a famous scene, Holden Caulfield catches his favourite lecturer deliberately mussing up his hair in the Gents to appear more 'bohemian'. If young people are looking for exemplars to follow and they find none or only a few, then they do not stay involved in the political process, having written it off as a confidence trick for the older and still secure. Novelist Gabriel García Márquez (2014) has observed that there is 'no innocence more dangerous than the innocence of age'.

At the time of writing we have 1.84 million unemployed in Britain (5.6% of the workforce), of whom 742 000 are aged 24 and under (Office for National Statistics, 2015). Moreover, these figures disguise the fact that some of the work available for young people is on zero-hours contracts, part-time, and seasonal, in addition to being undemanding and below their ability level. One can therefore understand the widespread disconnection between the young and traditional political institutions, although it remains a dangerous development.

The neuro-physiology of adolescence is quite fascinating (see Swaab, 2014), because much of the behaviour that stereotypes young people is explainable by the developmental gap that exists between physical

maturation of the pre-frontal cortex (in charge of inhibitions of impulsivity and reasoning about decisions) and the better-established hormonally stirred-up states of feeling that are also happening at the same time. However, most of the troubles to which this leads do not feel physiological at all; they feel circumstancial. Ask most young people about the origins of their frustrations and they will point to the unreasonableness, unfairness and hypocrisy of the adult world –there is plenty of that but, like it or not, this is the world they are about to inherit and, one hopes, change for the better.

The transition to adulthood

The tasks of early adulthood are formidable, because few allowances are made for not achieving them, and there is no question of much forgiveness on the 'just going through a phase' principle. They include:

☐ Increasing expectations regarding *self-direction*: moving from a world at school, college or home replete with rules and prompts, to one where something called 'self-motivation' is expected.

☐ Sexuality and gender identity has consolidated for most, together with the roles that accompany these. However, the young adult still has to negotiate the stereotypes and imbalances of the workplace – still harder for women than men.

☐ The supreme life task of finding a partner is the next challenge. Even with the internet (perhaps *especially* with the internet), this remains a very hit-and-miss affair.

☐ Occupational circumstances are now psychologically more demanding than they were. That is, the workplace is nowhere near so dangerous and life threatening as it once was. It requires far less gruelling physical labour, but is more mentally and emotionally stressful.

☐ The world of work is also increasingly precarious, more and more target driven, and employees are said to require ever more dedication, effort and enthusiasm. But then wages are flat or going down and living costs are rising. This is a perfect culture medium for the growth of anxiety reactions – less control, less predictability – which are steadily rising in the clinical epidemiology literature (see DSM-V; Carr & McNulty, 2006). Case study 5.2 is a case in point.

Case study 5.2

Mr J was referred for cognitive-behavioural therapy by his GP and was said to be suffering from generalised anxiety and obsessive-compulsive disorder. Medication had made only small inroads into either of these conditions. When asked *how* generalised were the manifestations of anxiety, the GP replied, 'I think you should look into his work experiences'; that was it.

   Mr J, age 30, was a young engineer in a regional TV company, a job he enjoyed greatly until a 'shake-up' overseen by a new management team occurred, leading to many sackings and redundancies.

   The social history revealed two interesting things:

☐ Mr J's mother, with whom he still lived, was chronically disabled by arthritis, but also had a serious case of agoraphobia. Following the early death of Mr J's father, she found herself unable to leave the house. She was thus entirely dependent on her son for provisions, company and help with housing costs. He described his mother as 'demanding', but quickly added, 'bless her, given what she has been through it's understandable.'

☐ Mr J described himself as always 'a bit fussy, to be honest', mainly as a late teenager, when he started developing first small, then larger rituals. For example, he developed a fear of driving and of 'making mistakes' (see Stahl & Moore, 2013).

When I first saw him he was late for the appointment and rather breathless. He explained that he had to perform certain rituals, notably checking his handbrake several times after parking his car to make sure it was 'really on', and washing his hands after touching the door handles of a building previously unknown to him. Walking to the window with him, I pointed out that the car park was flat, and that there was a large curb in front of his car plus a thick bramble hedge in front. When asked to explain his fear of what might happen had the handbrake failed, he replied that he was afraid that when he took his hand off it he might have dislodged it.

   Therapist: 'What about the flat surface and the curb and the
      hedge?'

Mr J: 'Well, it's a heavy car and my worst fear is that it rolls forward, bounces up the curb and through the hedge, out of control.'

Therapist: 'What about the steering lock?'

Mr J: 'They don't always work, do they?'

He described an unlikely scenario in which his car bounced unpropelled and unsteered through the car park partition, swerved left, then left again, and then right, then rolled down the hill and hit a crocodile of nursery school children on the zebra crossing.

Therapist: 'Have you ever had an accident?'

Mr J: 'No, because I am careful all the time.'

Therapist: 'In what you imagine, does anyone survive?'

Mr J: 'No, they are all killed, and the event is covered as a newsflash on my own TV station.'

Anxiety states and OCD have a strong genetic basis and Mr J had most of the credentials for that being the case. They also typically involve excessive foresight and wariness regarding responsibility for others. They can also be triggered, maintained and made worse by environmental experience, particularly loss and trauma; again, all the right credentials. Interestingly, however, he felt that earlier small obsessions were under control until the changes at work, which had also caused him sleepless nights, for which he took prescribed medication, but that made him sleepy in the mornings.

The big change in Mr J's life came when a new manager from Australia was appointed via a parent company.

Mr J: 'They "disappeared" the old one, but he was very kind and very experienced. It was different from day one, new rules, "sharper focus" on this and that and a general air of uneasiness among staff ... I tried to please him, I did my job, I did everything I was asked but he would pick me up on the *smallest* thing [tears] ... He started giving me jobs I think he knew I wouldn't be able to do given my grade, but *I did* try ... But however much I tried I just got public criticisms and jokes about how useless I was ... I swear, and I am not the only person to think this, that he could *smell* fear, he enjoyed it, and came on even harder.'

Therapist: 'A bully then?'

Mr J: 'Yes [hesitantly], but what can you do? I have stood up for myself once or twice, but it only made things worse and everybody else just goes quiet, so I don't know whether *they* think I am useless as well or whether they are just keeping their heads down.'

The treatment programme here was as follows:

☐ a statement that, although the therapist was willing to provide CBT for his anxiety condition, Mr J might like to think about how far this was just part of him as a kind of disability, and how much was due to the environment in which he was working and living. Interestingly, his manager requested weekly reports from me for the company, and insisted that it pay for his treatment (I do not charge). This was probably an excuse to build up a case for sacking my client.

☐ A suggestion that problems do not always come in ones, and that although he might benefit from a cognitive-behavioural scheme to control his anxiety both at work, at home and while driving, he probably needed an employment lawyer as much as a psychotherapist.

☐ He was encouraged to join a trade union and to explain matters to them. He did so very surreptitiously, leaving most of the explaining to me.

☐ He was urged to keep a record of bullying incidents, concentrating on specifics, times, places and issues.

☐ He was above all to try to talk to his colleagues outside the workplace and compare notes. This produced a cascade of supporting evidence for his case – so long as the details were not attributable, that is.

☐ He was urged to take up an offer from a neighbour, an old-time friend of his mother, to spend part of the day with her, and to be firm about limiting non- urgent telephone calls to him at work in an attempt to get him to come home early.

☐ The cognitive-behavioural treatment of his anxiety condition focused on his many catastrophic thought patterns, their origins, and the need to experiment with (reality test) his worst fears. The second component was a combination of exposure therapy and response prevention for rituals (see Sheldon, 2011).

The union made a formal complaint to Mr J's company and amid much acrimony but with increasing support from colleagues, he began to feel more confident. A lawyer had the idea of investigating 'previous' (bullies almost always have 'previous' unless encountered early on in their careers). It turned out that this executive had a long history of browbeating staff, which was why he had been eased out of the parent company and sent to the UK. The long history came out at a tribunal and he was eventually sacked.

What happened next was psychologically fascinating. After the fairly successful CBT sessions had finished, Mr J came to my office at lunchtime without an appointment, saying: 'I really need you to explain something to me. I've just sent this man a greetings card saying "No hard feelings, I hope." *Why* did I do that, *why*?'

'Because you are a kindly man?' I replied.

There followed a discussion of 'Stockholm syndrome' plus a description of Freud's concept of 'identification with the aggressor' (see Tehrani, 2012).

This young man had contemplated suicide and stockpiled a few pills on about seven occasions. The National Confidential Inquiry into Suicide and Homicide shows that early adulthood is the peak age for such contemplations and actions. Suicide is the biggest cause of death among young males. They have to adjust to the demands of relationships expected to last rather than be transitory, accommodate the demands of the world of work and develop a career path for themselves – where inevitably some will succeed and some do less well – but all with consequences for self-esteem. Young women tend to seek help with their problems, young men typically do not. So stiff upper lips, though a valuable part of our culture, can sometimes be fatal. The number of suicides in Britain for over-15-year-olds is around 5000 a year; females account for about 1000 of these and so males for approximately 4000. There are two peaks in these data, young adulthood and those in middle to old age, particularly if they have suffered bereavement or other significant loss. Having a mental illness greatly increases the risk and, contrary to the view presented in the mass media, those with such conditions are statistically much more likely to kill themselves than anyone else.

Much of the above discussion comes down in the end to stress: a pervasive fear of loss of status, self-esteem and predictable stability. It is often confused in modern managerial cultures with the arousal, focus

and motivation necessary to do a good job. However, stress above this level of determined, goal-seeking engagement is altogether different, because fight/flight mechanisms come into play. The last thing you need in air traffic control, or even when compiling statistics for the annual report due next Thursday, is this level of fearful arousal. The worst kind of stress features anxiety over which one has little personal control: the 'learned helplessness' concept mentioned several times in this book (see Seligman, 1975).

David Hebb (1980) long ago nailed down the relationship between arousal and performance (see Figure 5.2). Note in this figure that once arousal reaches its optimal level, it drops like a stone with each additional increment or arousal. So a good recipe for getting 'the best' out of your staff might be to get them to relax a little more and allow them some thinking time.

The so-called work/life balance is one of the predominant issues of early adulthood. Failing to get it right can have consequences for
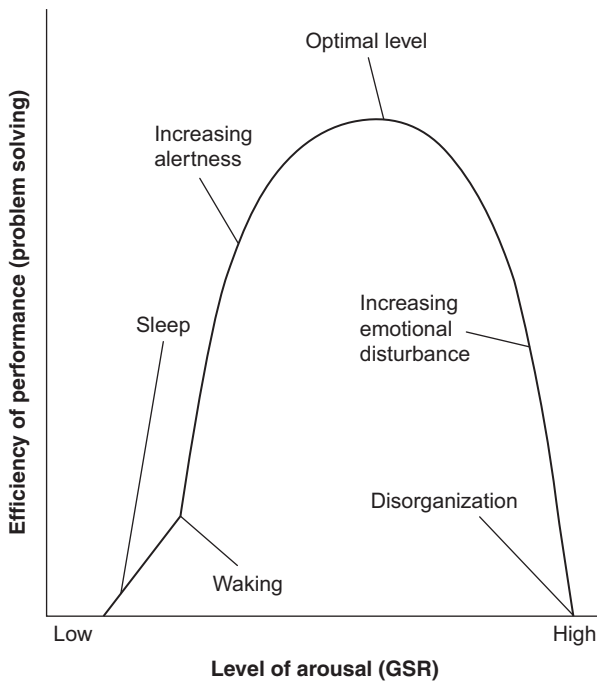
Figure 5.2   Problem solving and anxiety
Source: Adapted from Hebb (1980).

marriages and partnerships, and for the children born into them. Britain has the highest divorce rate in the European Union: there was a total of 118,140 divorces in England and Wales in 2012, representing 10.8 per 1000 married couples. The peaks are between 25 and 34. However, bear in mind that these figures only cover formal unions. Partnership arrangements are rather more likely (statistically) to break down (Office for National Statistics, 2014a).

Psychological studies of the effects of parental separation show that when compared to other causes of loss, the acrimony that can surround divorce has the worst effects on children, particularly when they are involved in custody battles and disputes about visiting rights (see Rutter & Taylor, 2002; Rodgers & Pryor, 1998). A good, short summary of research findings on the effects of divorce and separation would be that the fact of separation and breakup has *some* implications for children, but compensatory mechanisms can always be put in place; and that the largest negative effects come from the *way* in which separation and what follows are handled – acrimoniously, bitterly or through negotiation, with a plan for the continued welfare of children.

There is now no sharp cut-off between adolescence and early adulthood. The 'rites of passage' that once marked the transition no longer exist (with a few exceptions, such as the Jewish bar mitzvah). As elsewhere in psychological development, mental, experiential and socio-economic factors are all strongly influential. Ordinary people get the mixture of influences *together* – only academics, who belong to different tribes, study them separately.

6
Middle Life and the Transition to Old Age

If it be not now, yet it will come – the readiness is all.

—*Hamlet*, Act V, Scene 2

There are two more transitional stages with fuzzy boundaries to consider: the changes that occur between young adulthood and the (postponable for only so long) state of middle age, and then the consolidating retreat into unequivocal old age. But then, people settle down and start a family earlier or later; grow more emotionally mature and stable more quickly or more slowly; physically age at different rates; attempt to defy or embrace change in more or less successful ways; and nod at 'time's wingèd chariot' or try to hide from it, so there is no *fixed* developmental timescale at work here.

It is curious that so few collections on developmental psychology – even the cover-everything, lavishly illustrated American tomes, full of pictures of perfect babies, happy teenagers (in case you have never seen one) and the fulfilled elderly – look in any depth at middle age; that is, at the 20 or so years from the likely end of reproduction to the onset of significant signs of senescence. *Chambers Dictionary* defines middle age as 'that period between youth and old age, variously reckoned to suit the reckoner'. Yet it does require investigation beyond a sympathetic treatment of the menopause and light-hearted stereotypes about a possible male version (see Bainbridge, 2012 for an interesting exception). Self-help books and magazine specials abound, so something must be going on. The media, ever conscious that fear and relief from fear sell, portray early middle-aged people (for whom they always use younger models, just a little more sensibly dressed) as hard-working/hard-playing people sandblasted by life's events, but still confidently managing the work/life balance, keeping all the plates spinning at once *and* squeezing in three

weeks at a Hawaiian beach hut with the quietly grateful family. Late middle-aged people are depicted as successful, with rugged good looks or 15-years-younger complexions (thanks to Botox or night cream), possessed of tantric composure, unimpeachable credit scores, wisdom and lots of 'shoring-up' against the (unlikely) vicissitudes of old age, which is still *years* off. Apart from worrying about where the rest of the population are, all you have to do to understand the real preoccupations of middle life is mentally to place in front of these images of Sanatogen-overdosed people 'fear of . . .' or 'fear of not . . .'.

The preoccupations of the usual kind of middle age include work and career, physical decline and looks.

Work and career

Despite the best efforts of international finance, most of us work. However, only some of us have a career; that is, a job that satisfies more than our survival needs, where we have *some* control over the direction and pace of what we do and a reasonable expectation of staged seniority and pay to match. Jobs without inbuilt progression and control are now rather more typical of the general workforce, although they need not be unskilled occupations – watch an electrician or a car mechanic at work, or marvel at the sight of someone poking about in a telephone substation. Nevertheless, 'human resources coordinators' are likely to earn much more. A little below this skilled but not well-off level (how *can* a Barts midwife married to a London firefighter afford to buy a house anywhere near where they work?), there is an increasingly empty category of unskilled occupations that were once the destination of the manually adept, but not particularly academically inclined, majority. The young man discussed in Case study 1.1 is desperate to find a job, but what he is good at – operating garden machinery, handyman work, working with animals – all now require qualifications or experience – which he cannot get because he has not already had it. Manual jobs have all but disappeared from the economy, but nevertheless he *will* become middle-aged and probably will have children to support while *they* train for work.

In my clinical experience, stress at work that is taken home (watch any cop drama) is either a primarily causal or powerfully contextual feature of the development of psychological problems in mid-life. Stress at work is usually brought on by a combination of the following factors:

☐ Lack of control over tasks assigned, increasing prescriptiveness regarding both ends and means with little scope for individual creativity.

☐   Workplace relationships, which can be a source of self-esteem, respect and validation, *or* of acrimony, competition and point-scoring.

☐   The rules and targets that all organisational productivity, whether in factories or hospitals, requires, which tend to be based largely on punishment and negative reinforcement (in the technical senses used in Chapter 3) rather than on reward or positive shaping (see Steptoe-Warren, 2013).

☐   The need to cope with change, since a defining feature of middle age is the settling of one's core views as a result of long experience, being somewhat conservative about new schemes, and being more cautious in embracing new technological innovations.

The check-out operators who *talk* to customers will be aware that their throughput rates are being monitored and compared. Leadership is a known antidote to alienation, but often arm's-length *management* (a much more formulaic process) is carried out by people who are themselves under increasing pressure to 'deliver' X or Y, but, implicitly, not to bother much about A. That may be fine if X and Y represent commodities, but what if, in health and social care, X is waiting time, Y is recording results and A is dignity-preserving, pleasant, personal care (which is much harder to measure)? By definition, not everything *can* be a priority, but when things go wrong staff are often blamed for not striking the right *balance*, usually without critics saying much about how exactly this trick is to be pulled off. So suddenly in a crisis, front-line staff become free-thinking professionals with judgements to make, not, after all, cogs in the organisational machinery.

All the knowledge, stability and predictability of behaviour that middle-aged people possess should be more valued by society. They have a width of knowledge, but they may think at a slightly slower speed. If you are of a certain age, you can have this experience while watching the *University Challenge* quiz show, when you just know that you know the answer and much else relevant to it besides, but are defeated by undergraduates' sheer *speed*. The problem is that modern, global, socioeconomic circumstances favour this speed, and insist on 'flexibility' (which usually means lower wages and less security). Furthermore, workplace standing is often measured against commitment to a new policy rather than measured pragmatism regarding it. Thus, 'whistleblowers' have a hard time in the NHS, and social workers who can see that yet another restructuring is making children *less* safe are often seen as disloyal or 'off message', rather than as ethically concerned. Consultations

about changes to workplace practices where everyone is invited to contribute and where 'ah buts' are allowed and listened to, can take the sting out of these threats to stability and sense of a meaningful contribution to organisational life.

Physical decline

Physical decline, or rather our perceptions of it and our attitudes towards it, is another strong theme in the psychological literature. The signs of this appear quite rapidly. Our skin becomes less elastic, our muscles are less firm, our hair begins to go grey, and mammary glands begin their southward migration. However, the culture gives two contradictory messages regarding these natural changes:

☐ Shame on you for minding – why should we, the providers, the more knowledgeable, the more experienced, the passers-on of essential information, depend on superficial looks as the determinant of self-esteem?

☐ It need not happen, at least not for *years* yet. The right diet, more exercise, the right anti-wrinkle cream, hair dye, outfit or book entitled *Being True to You* can halt this process or at least slow it right down.

Another event is that the typical amount of sexual intercourse declines steadily, partly for hormonal reasons, partly because of the distracting/preoccupying stress factors already discussed, partly for evolutionary reasons. The genes are drivers of replication. If reproduction has in all statistical likelihood already taken place, why continue heavily to invest in repair when physical processes can simply be left to tick over? In a narrow, genetic sense it does not therefore 'matter' that the bones of late middle-aged women become more brittle (osteoporosis), because they have probably already given birth and cared for their offspring – the 'psychopathic genes', perhaps, not the merely selfish ones.

The next point is obvious, but shrouded in romance. Satiation occurs in all stimulus–response combinations, and all curves flatten here too. There is nothing cynical in this. It makes no sense for organisms to respond anew with full engagement to familiar stimuli. Desensitisation is an energy-saving, stability-preserving device. When we have exhausted most sources of available novelty, the desire to do something different with someone new can be a dangerously impelling force, particularly where the negative emotions of shame, guilt and loss are deferred until later. Faithfulness is in only a few circumstances beneficial to our genetic programming, and we get only limited biological help

to fulfil our best cultural aspirations or avoid the dire punishments of which religion used to warn us.

Thus, women have a slower, more selective arousal response, and generally favour reliability, protection and security more alongside excitement. That may be why, following the menopause, their sexual responsiveness falls away more rapidly than that of males, who can, physiologically speaking, continue to father children until their seventies. However, we are also genetically programmed for other things not to be found at Ann Summers or the office party: security-seeking; love that contains commitment; sharing of the risks of raw competition for mates; love for, and an instinct to protect, children; fear of loss of status and regard; a desire for the safe and the happily predictable; and an avoidance of the need for vigilance, jealousy and the dangerous things that flow from them. P.G. Wodehouse was taken as a young man to see a production of Shakespeare's *Othello*. When asked what he thought of it, he replied, 'I couldn't help but think that the whole thing could have been settled by a bit of give and take on both sides.' What is more, you do not have to be an Abélard or Héloïse to pull off this desire to love and be loved by one remarkable person, and to favour the friendship and easy companionship that flow from that. It just is not necessarily *natural* to us; we have to invent and sustain it, like so much else worth having in the human condition. Nevertheless, there are the divorce statistics to be set against this. Middle age is a prime time for separation, with all its consequences.

Looks

Some common aspects of human behaviour are difficult to talk about. We have large cerebral cortexes that as part of their work give us an overriding sense that there is a decisive inner 'I' directing them – not a product, but an initiating, calculating force. However, we are also evolved as animals replete with impulses and drives, mainly linked to survival and reproduction. Research in neuroscience, and the increasing use of brain scanners, reveals that many of these priority-demanding urges are unconscious (notice your breathing now) and that cortical appraisal or inhibition occurs *after* and during their automatic expression (see Brooks, 2009). In other words, we come programmed with unconscious desires (not in any Freudian sense; see Barrett et al., 2002: ch. 5; Swaab, 2014). One such works to maximise our chances of combining our genes with those of a healthy, nurturant or protective mate. However much we like to think that personality is more important than skin-deep looks, personality takes a while to establish, and our brains are working to a shopping list of physical attributes and markers: height,

body build, skin quality, facial symmetry, pupil dilation, hair colour and quality, teeth. All of these are ancient symbols of health and fecundity, or of provisioning and defence capability (see Barrett et al., 2002). The overlay of civilisation, which moderates instinctual preferences, is but a blink of an eye in evolutionary time.

There are gaze-tracking machines that can monitor scanning behaviour when strangers meet, and these patterns are *far* from random. More social and psychological variables come into play shortly afterwards, but these tend to operate after more biologically inspired 'short-listing' (has intelligence, power, status – likely to be an able provider; has a sense of humour – unlikely to be a threat to me or my children; kind manner – likely to share resources, and so on). Of course, these attributes can be faked to an extent, therefore we continually appraise and evaluate the behaviour of others and compare it with their spoken intentions.

In preference studies where individuals are shown pictures of strangers what is surprising is the *speed* at which evaluations are made, and also how, on the basis of very limited information, there is an exponential attribution of qualities or their supposed absence. Middle-aged subjects are more picky than most – they have experience, and more to lose, perhaps. Look at the lists of desiderata on any dating website (nearly one in three people now meet their future partners in this way) and it is hard not to think, 'Look, he's clever, kind-sounding, funny, solvent, has a good job, likes walking and music like you do, does it *really* matter so much that he is 5′7″ not 6′ tall? Interestingly, well-named individuals (nothing made-up, nothing too foreign-sounding, perhaps) are still invited for more job interviews than others with identical qualifications and experience (see Pinker, 2002). None of this is to say that predispositional substates *determine* who one settles down with or changes to, rather that they are predominant at the outset as deal breakers.

Assortative mating (when people choose to partner with people similar to themselves) is more complex still, for into this equation come self-regard, self-perception and self-esteem. Thus, often relationships fail to take off because of second-guessing about the probable evaluations of others and the risk of disappointment or hurt. Such preoccupations resurface in middle age, as physical wear and tear begins to show. This is not so much about establishing a place in a 'pecking order', but hanging on to one. A common way to reduce the cognitive dissonance between the way I look, what I can still do or not do and the way I think and feel about myself (my self-concept) is to invest in age-defying pursuits. Beyond the stereotypes of the grey-haired sports car driver (who has the money now), or the expectation that one would be 'a natural' at skiing

or wind-surfing if one only invested in the necessary equipment, lies a truth about the desire not to go gently into that good night. Thus, men and women of a certain age are well represented in the gym. The diet industry is worth billions, and jogging becomes addictive (endorphins).

The father in Case study 5.1 was definitely preoccupied with his lost youth just as his son was trying to get through his. His old athletics cups were polished and prominently on display – so far so normal – but his other paunch-denying device was to ridicule his son, who had no interest in these pursuits.

The reason for a preoccupation with physical decline is often phrased as a concern to maintain health. The endless 'better safe than sorry' screening messages from the Department of Health (despite the false positive and false negative figures and their consequences) add to this anxiety. Yet for men this cannot really be the full story, otherwise we would not have the current troubling figures for undiagnosed prostate cancer even in the presence of symptoms. Continued *vitality* is what we are after. For women the menopause, which can vary from being a nuisance to gruelling, at least marks a definite stage of transition, something that, however difficult, has to be psychologically adjusted to.

Bainbridge (2012: 62) sums up the pressure and preoccupations of mid-life well:

> These changes take decades to be completed but their onset can be sudden and depressing. Many of us want to look like Luke or Leia at a time when nature does not care if we end up looking like Yoda.

Clinical implications

While no one gets referred for suffering from the problems of middle age, thousands do for depression (particularly women) and thousands for stress-related conditions. NICE guidelines, on the back of many systematic reviews and hundreds of trials, suggest that cognitive-behavioural approaches (see Sheldon, 2011) are the psychological treatments of choice, and that anti-depressive or anti-anxiety medication can also play a significant role, providing that side effects and dependency are monitored. However, unlike with CBT, cessation is associated with relapse. One further point is that we tend to focus on the referred individual as the person who *has* the problem, but then all problems exist in a context. These collateral factors may not always be primarily causal, but can still give rise to serious concomitant problems. Some of these influences are age related (hence the present discussion), some are embedded in family dynamics, some in workplace pressures. Whatever

the intervention selected, these different aetiological patterns must be addressed. Few are more pivotal than the state of the relationship with the partner.

Research on the effectiveness of interventions for relationship problems is of variable methodological quality, and features a wide array of intendedly therapeutic approaches, making systematic reviews and meta-analyses difficult. However, we do have some (see Benson et al., 2012; Sexton et al., 2004). Here is a list of factors and emphases associated with positive outcomes:

☐ Encouragement of increasing objectivity about the relationship.
☐ An attempt to transcend reflex-interpretations, particularly regarding blame.
☐ Encouragement to try to see problems or events from more than one point of view, plus a recognition that disliked or unhelpful reactions from one partner may have validity for the other.
☐ The establishment of the idea that problems are interactive over time (responses to responses to responses etc.).
☐ The identification of small, remedial steps that could be taken, which, after initial awkwardness, might become more routine, natural-seeming exchanges.
☐ The framing or reframing of sources of conflict, disappointment or unhappiness as *hypotheses* to be tested, not givens, and avoidance of second-guessing ('he would never . . .').
☐ The encouragement of behavioural 'experiments' that try out and test any new-found knowledge of the dynamics of problems. Thoughts are changed as much by behaviour as behaviour by changes in thinking patterns (see Sheldon, 2011: chs. 3 and 4). Not relying on 'talk and hope' interventions alone.
☐ Approaches that focus on understanding and obviating emotional avoidance are associated with good effect sizes; that is, where things are not done because of emotionally inspired motives (anger, fear, revenge; see LeDoux, 1998 for a general treatment of the origins and impact of emotion on behaviour).
☐ Improving communication skills, sometimes via direct training, is helpful. Not everyone has had the experience of solving a problem by thinking and talking about it. The encouragement and reinforcement of active listening can be a good starting point for dialogue.
☐ A concentration on strengths and assets is an important corrective to focusing on failures.

☐ Alerting clients to the dangers of confirmation bias when listening to each other (consonance seeking).

☐ Separate but monitored treatment for addiction problems (drugs, alcohol) if necessary by referring on to specialists.

Effect sizes are modest but worthwhile, across a range of approaches, with larger gains for CBT, plus evidence of longer-lasting impact. Most treatments are better than none (see Sexton et al., 2004).

Demographic and social changes have altered the challenges of middle age over the last few years. We are having children later, and so the contrast between adolescence and later life is sharpening. Care for growing children now has to be traded off against the growing dependency of one's own parents, for although we are all living longer, the extra years may not always be healthy, independent ones. But then, we are also an increasingly dispersed population and so time and distance from one caring function to another add to stresses.

The age/stage boundaries are stretching too. Growing children now have a much lengthier period of dependency, stay in education for longer, and cannot afford to leave home and establish their own separate households until their thirties in some cases (3.5 million offspring in the UK aged 20–34 still live with their parents). Space, privacy and stress are known issues in these circumstances.

Divorce is now the outcome of one in three marriages, requiring separate accommodation and denting family income considerably. Add in unemployment, now just below 2 million, with a substantial cohort of unemployed young people, low wages, rising cost of living, cuts to welfare and health services, and you have a perfect culture medium for the propagation of psychological problems that might otherwise have been manageable or not precipitated. Human beings do not thrive in circumstances where one potential solution is blocked by other considerations, where options, even options to do the right thing, are unavailable, or where 'nothing works'. This state of 'learned helplessness' is well established in research for its links with depression, apathy and errant behaviour (see Seligman, 1975; and Gilbert, 1992, a book aptly subtitled *The Evolution of Powerlessness*).

Middle age sees the start of a preoccupation with death, or rather an increased consciousness of what Philip Larkin, in his achingly true poem 'Aubade', described as 'what's really always there:/ Unresting death, a whole day nearer now'. When children discover the reality of death (at about 7–8 unless they have direct experience) can be troubled by the prospect, but they have a stretched view of time, so there is seemingly

endless space ahead during which they can adapt. For teenagers too the prospect is far off, which is why they can afford to indulge 'the good die young' lyrics such as The Who's 'Things they do look awful cold/Hope I die before I get old'. Even given the upward extensions that we now all allow ourselves, the late middle-aged person's view of death is rather more sharply focused.

We get a little practice with death, because later middle age is when we lose our own parents, first one, then the other, and then we realise that everything is now up to us and that we are next. Most of us have our parents, their ways and their values, inside our head as a permanent reference group, or if childhood was a bad or neglectful time, a vacuum where they should be. Jeanette Winterson (2011), who was adopted, refers to her somewhat troubled life as 'beginning with a question mark'. The death of parents can bring guilt about the things we never got around to doing for them, the debt for a good childhood never quite repaid, or unresolved anger about a bad childhood with which we never quite came to terms. There is an association between depression and bereavement, which interestingly applies whether we had a good childhood or not. You might like to look at Charles Causley's wonderful poem 'Eden Rock' for insights about how the influence of parents stays with us as we age.

Most of us in late middle age do not suffer excessive feelings of loss or guilt towards parents (debts of love and care not quite repaid, the good not done). Yet some of us had awful childhoods, but still cannot let go of what *should* have been; some of us were well cared for, sacrificed for and set free, always thinking that we had *lots* more time to give practical expression to our gratitude. Caring for ageing parents, while seeing one's own children on their way, while working hard and mapping out the finishing touches to a career, are all culturally favoured, politically convenient things. The circle can apparently be more or less squared by the application of something called *balance*. But to retain balance one has first to tilt one way and then the other, and each inclination means a temporary neglect of the other. Women who work still do most of the caring in Britain, and the first line of most reference requests these days asks not could they do the job or what qualifications and personal qualities they possess, but how much *time off* they have taken in the last year. Therefore, when seeing a client/patient in this age group, with these circumstances, for a particular problem, be aware of the background level of stress that will most likely be there. In Case study 5.2, where the desire to please and look after a dominant, not that supportive mother, was matched only by the fear of her loss – if the son was not *very* careful,

and led to OCD and depression. CBT is currently the approach of choice (see NICE, 2007; Sheldon, 2011).

Preoccupation with declining physical prowess, and with our finite span of years, can manifest itself as hypochondria, where an already obsessive personality focuses on small, overinterpreted symptoms of illness, or on 'stitch in time', hyper-precautionary principles. Evidence suggests the need to treat the underlying anxiety, not the multiple, replaceable targets of supposed ill health (see Hollon & Beck, 2004). The all-encompassing nature of modern medicine, and the impulse of health departments to screen everyone for everything, will probably create an increase here. Watch this space for greater dementia screening by GPs, who will be paid £55 for asking the name of the queen's husband when you next visit the surgery to get your ears syringed; if you are of a certain age, that is.

Old age

The euphemism is 'older' – older people, not *old* people. Yet I am older than my brother, but not really *that* old yet. My granddaughter is older than my grandson, but neither of them is at all old. We employ euphemisms to wish away awkward truths, in this case *memento mori*, and we do ourselves few favours in the process. It is true that deciding where middle or old age starts – 'life begins at forty,' '67 years young' – is difficult because of individually different ageing rates and attitudes. Around 40 and around 65 will do respectively. However, the majority of us are living longer. Thus all the old divisions of ageing are being stretched upwards, but with attendant problems. Do you really want to work until you are 70+ with little choice in the matter, with everyone suggesting that it will 'keep you active' and no one noticing the difference between firefighters and accounts managers? If you do, fine, liberating possibly, but it is the retention of choice, a measure of freedom and a sense of a worthwhile contribution that keep us feeling young.

The UK now has a population of circa 64 million, with 17.4% of people over the age of 65 (Office for National Statistics, 2014b); the US has a population of circa 316 million, with 14% over 65 (World Bank, n.d.). In the Western world, the numbers in this age group are steadily growing, and will continue to increase because of two sets of factors:

☐ The demographic 'bulge' at the end of the Second World War, born of relief and hope for a better world that would be safe for children.

☐ The fact that, largely due to better nutrition, improved public health (although now in danger of obsessing over 'lifestyle choices' rather than renewing Victorian drains), better clinical services and increased, if wobbling, economic prosperity, people are now living longer, healthier lives.

However, this means that we are now, semi-routinely, living to ages where the brain disorders from which we would once have died before we got them take their toll. This is why the dementias are increasingly prevalent, bringing with them high dependency, larger demands on health and social care budgets, and calls for ever more intensive service provision.

Figure 6.1 illustrates the population trends that have been regularly referred to over the last few years as the 'demographic time bomb'. Do these figures look explosive to you? Certainly there is an eye-catching 40° upswing in the top right-hand corner, but this is for the *total* population of people over 65. So some of these allegedly economic-stability-threatening individuals will still be in work; the vast majority will be in pretty good health; most will still be active, and may make an important contribution to their families by caring for children while their children and in-laws both work. They may be volunteers, may sit on the boards of community bodies and so on. The caveat here is that it is as possible to be disabled, dependent, bereaved, mentally disordered or unable to cope with physical illnesses at 44 as at 85.
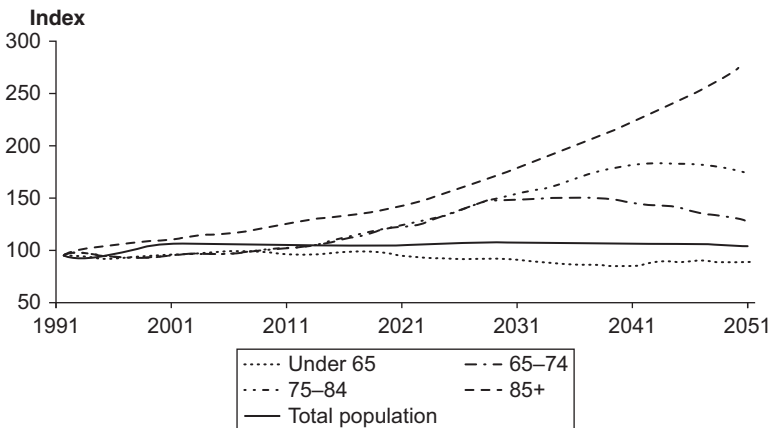
Figure 6.1   Ageing in the population – actual and predicted UK figures
Source: Royal Commission on Long-Term Care (1999).

We have got ourselves into a statistical tangle here by equating dependency and social need solely with advanced age. There *is* a strong relationship at the top end of the age scale, but below this level the picture is much more complex, and duly proportional interpretations of subdata are required. We can conclude the following from Figure 6.1:

☐ The population of over-65s is increasing steadily.

☐ There are reliable predictions for the number of the not yet *very* old (the 65–74-year-old group), which is also set to increase substantially, peaking in about five years' time, but then, note, falling back as nature takes its course – unless of course we get some remarkable new medical discovery (stem cell research is promising for Alzheimer's; see Swaab, 2014: ch. 18).

☐ The cohort containing people between the ages of 75 and 84 looks set to climb, and this is where problems relevant to the (half-hearted) prevention brief contained in legislation and 'service standards' documents begin to kick in.

☐ The cohort that everyone (society in general, policy makers, the NHS, service managers) is most worried about are those in 'extreme old age'; that is, the late 80s to over 90s group. They are often highly dependent, requiring intensive support or residential care. Therefore, we face a situation where a *relatively* small group of people in need of intensive social and health care cost the country (but do remember that it is *their* country too) as much as a larger group of semi-dependent people cared for at home – largely by relatives backed up by social services and health staff. But note, again, that the trends for these combined groups are increasing steadily, although not *very* dramatically. This fact should allow us time to anticipate and to plan. The major obstacles to this simple advice are that social and health services have many competing demands on their budgets; and that governments are elected for five-year terms and have few incentives to invest heavily in solutions for which political and electoral credit will be long delayed. If there are cuts to 'non-protected departments' as currently envisaged (social services, most likely) then there will be (readily foreseeable) consequences for the NHS in this field.

Vulnerable and needy elderly people are still regularly referred to in political discourse and by journalists in demeaning, and frankly ageist, language. We speak of 'the burden' of an ageing population and of services being 'swamped' – although many of these people fought to secure our democracy; campaigned for the welfare state and the NHS; and had

the political will to tolerate high taxes at a time of austerity to achieve all this. We describe chronically ill elderly people who need time to convalesce as 'bed blockers'. While government effectively fines social services departments if they do not conjour up safe(ish) landings elsewhere for these people at short notice, this often results in them merely ending up on a different target list. The evidence shows (see Bauld et al., 2000; Trappes-Lomax et al., 2002, 2003; Rabbitt, 2005) that we can do better than this.

The next issue is why we are not as a nation celebrating the fact that we (look at the dates on the graph and extrapolate them – it is the future of *us*, not *them*) are living longer and healthier lives? The answer is economics. Let us now delve into this subject, so often the confounding obstacle to good intentions in social policy.

We have a serious pensions crisis in the UK (whose schemes until recently were the envy of the rest of Europe). We have moved from a position where the state pension provided basic financial security, to one where its value has been steadily eroded. Therefore, large numbers of elderly people who, years ago, embraced the 'cradle-to-grave' principles of the welfare state and stuck with them now find themselves, in old age, dependent on a range of bafflingly complex, means-tested benefits. On top of this, those retired people who did take out occupational pensions – these are simply deferred income, remember – have suffered Treasury tax raids on their value. Employers have unilaterally declared pension contribution 'holidays' for themselves in good economic periods, but without subsequent shortfalls being made up during more difficult economic times. This is a real 'time bomb' worth trying to defuse.

Secondly, in Britain most savings exist in the form of bricks and mortar. The housing market, although just rising from a decline at the time of writing, has been inflating over previous decades and will probably do so again. These are also somewhat unrealisable assets, since people live inside them. Furthermore, the (usually implicit) expectation that families will one day inherit the asset has been eroded by a 40% (retrospective) tax on such previously routine arrangements. Further still, if relatives are no longer able to cope and residential care is required, this main asset will be seriously eroded or wiped out by charges either from social services or from private providers. This leads to a considerable sense of financial loss and insecurity in the elderly, and also to a sense of unfairness, since those who have saved little or nothing escape such consequences. Politicians talk a good deal about the need for 'joined-up' government, but here we have an all-too-typical case of where policies thought up by different departments are clashing (see

King & Crewe, 2013). Thus Chancellors of the Exchequer ask, only semi-rhetorically, why children *should* inherit such an asset when they have done nothing to earn it? The answers are because it has already been taxed several times already; and because the Department of Health and social services have long trumpeted the idea of family-based 'care in the community' – most carers are family members who receive limited state help and the system would collapse overnight if they withdrew from it.

It is thus hard to arrive at any conclusion other than that current financial policies towards elderly people are fragmented and over-bureaucratic, producing perverse disincentives against the family, and against community-based independence, which politicians (in most countries, incidentally) say, in *other* speeches, constitutes the best way forward.

The family unit in Britain has the following characteristics:

☐ It is nuclear; that is, its members often have limited social contact with relatives.
☐ It revolves around one or two people working pretty relentlessly to pay increasingly high housing and child care costs.
☐ It may include biologically unrelated adults, which sometimes works well and is sometimes more complicated.
☐ It tends to value independence over family and community ties.

In such a cultural climate old people are often seen as a spent force, 'past it', dependent, a 'burden' on family and society who should get quietly out of the way of the new generation. There is also, at a time of austerity, a nasty media habit of pitting old and young against each other. Respect for the old is therefore by no means automatic, although condescension often is. Stand in any supermarket checkout line or post office queue and the impatience of younger people at the slowness of bagging up, at dithering over entering a PIN or at the desire to hold a conversation is palpable. We have a fast culture that rates speed and modernity over experience. Quite high levels of crime against the vulnerable elderly are carried out by young people. Stereotyping in the mass media and disrespect in the streets are not universal, but occur too often for our well-being as a decent society.

Psychologist Pat Moore (1990) conducted a fascinating experiment into what it is like, psychologically and physically, to be an elderly person going about their daily business. She (a young woman) wore a grey wig, old-fashioned clothes, ageing make-up and cloudy contact lenses,

had her joints and fingers bound to simulate arthritis, wore ear plugs that made her half deaf, and then walked around 100 American cities doing everyday things and trying to be as much her real self as possible. This is her summary of the experience:

> This 'little old lady' struggled to survive in a world designed for the young, strong and agile. She couldn't open jars, hold pens, read labels, or climb up bus steps. The world of speed, noise and shadows frightened her. When she needed assistance, few ever offered it. She was often ridiculed for being old, slow and vulnerable and was even violently attacked by a gang of adolescents. (Moore, 1990: 18)

This experiment shows how older people can come to feel surplus to requirements, and become invisible to the busy employed and a source of frustration to people who think they need something *right now*. There was also evidence of the stereotypical association between apparent physical infirmity and mental infirmity (ask any deaf or physically disabled person about this) and that, as we saw in the 'Good Samaritan' experiment (p. 187), culturally prescribed good intentions do not always lead to practically supportive behaviour.

What of other cultures, who by repute have more positive attitudes to ageing? There is little doubt from the social research literature that Asian and Chinese immigrants to Britain (this now covers a very long timespan) retain a culture within which ageing is associated with wisdom, authority and a store of valuable experience, where strong cultural prescriptions ensure expressions of social respect, practical care and inclusion in decisions about the family and the future of its members (the all-important psychological features of contact, knowledge, contribution and settled position). Typically there are strong ties to a much wider range of extended family members.

Is this too rosy a picture of life in Britain for the elders of ethnic minorities? 'Yes and no' is the awkward answer. The cultural insensitivities prevalent in social services provision for the elderly (and other groups) in earlier times were largely addressed through posters and letterheads proclaiming such themes as 'working towards inclusion'. Including the face of a black or Asian person on every social services pamphlet, as we do now, signals a *recognition* of ethnic diversity, but guarantees little of practical use to ethnic minority people. The underlying message of the developing system of community care was that, if very few members of minority groups signed up for

day-care centres, requested assistance at home or asked for regular meals-on-wheels services, this was because they (admirably) 'looked after their own'. The idea that these services were not sought because they were not thought appropriate to the needs of this group of fellow citizens dawned on social services managers only later, because of community research projects (see Sheldon and Macdonald, 2009: ch. 9) and because when these communities decided that they were effectively on their own, they set up their own voluntary groups, which both revealed and sought appropriately to satisfy a strong appetite for culturally adapted schemes – from which the rest of us belatedly learned. This is all to the good, because research in this field reveals that the second and third generations of immigrants are, rightly or wrongly, being influenced by the individualistic mores of the society they have joined, so that family obligations are becoming more negotiable and limited-liability in nature. They are also taking the view that if one pays for state services (which, indirectly or directly, we all do), then they should be made to adapt to the needs of all.

This section has shown so far that the numbers of elderly people living on into a state of dependency on supportive services is increasing and we need to stop dithering about this; that mass, automated, basic provision to sustain life and limb, although better than nothing, can deny elderly people their sense of individual identity and value; that cultural factors need to be addressed at the core of the process; and that a sense of control over one's circumstances and what is done on one's behalf is vital. One might add that an extensive research literature confirms that the needs of human beings are complex and not merely *practical*, as defined within the terms of a narrow budget for home care (from which the government saves millions for reduced residential and health care budgets anyway; and that, consequently, staff providing support need to know something of the *psychology* of ageing. The main message from this field is that, except in extreme cases of dementia, slowing down demands for information and taking *time* to consult yields better results regarding community tenure for people who, overwhelmingly, wish to stay at home. However, they do not, studies tell us, wish to be cared for at a tightly drawn cost, nor against a breathless case-management timescale and a rigid menu of what can and cannot be provided, and also not by just *anybody* who happens to be assigned to them that day (see Sheldon & Macdonald, 2009, ch. 15). Simple loneliness is the main obstacle to a contented life in old age (see Gibson, 2000; or, for a wider view of the problem, Dralyuk & Valentinova, 2014).

Case study 6.1 is derived from a tape-recorded research interview from a study involving 105 subjects. It illustrates how routine services can often fall short of almost all of the above precepts, and that the practical and the personal are intertwined, not separate.

Case study 6.1

Mrs W and the man who became her husband had escaped from Poland just before the German invasion. The rest of her extended family decided to stay in Krakow and ride out the storm. They all perished in a death camp, something about which she felt guilty, on grounds of a failure to persuade them to leave and (actually) a lack of any means to get them out. Mr W became an aeronautical technician and was first employed at an RAF base in Surrey; then he trained as a sergeant pilot and flew a Hurricane in the Battle of Britain. Mrs W became a piano teacher and found it hard to get work at first, given her limited command of English, but gradually she built up a group of students. After the war they bought a small house and lived quietly there for many years until her husband died of a stroke and she had, for financial reasons, to move to a small flat. Mrs W developed a late-onset diabetic condition and also severe arthritis, which meant that she could no longer play the piano – a cause of great distress to her, particularly because the incongruously large instrument dominated her small room. But then one quickly gathered that its presence was *psychologically* essential.

The purpose of this research project was to test consumer reactions to a new joint health and social care assessment process in line with community care 'reforms'. On the whole, Mrs W thought well of the services she received, and in particular valued the kindliness of the care assistants. When asked about what services she received, she explained that they amounted to one vacuum clean per week, plus dusting; meals on wheels (which she described as 'almost uneatable'); and help with washing two days per week. When asked to rank the importance of these services, she put help with personal hygiene at the top, cleaning in the middle and help with shopping and meals at the bottom – even though she was close to incapable of shopping for herself. When asked (carefully and with explanations) which service she could best do without if she had to, she said 'help with washing'. The

reason for this surprising nomination was that she felt sorry for the young girls who had to do it against an unforgiving timescale. 'They come in; I don't always know them. They tick the sheet on the wall and then I have to strip in the bathroom. They don't even have time to let me do my own private parts – it's not their fault, but if you understand, I feel very undignified and although I have to be clean, it's not worth it – perhaps they had better put me away.'

Clinical implications

Although most elderly people now live longer, healthier and more independent lives than in earlier generations, this majority is unlikely to be represented in the case loads of health and social care staff. Service threshold rules confine us, somewhat artificially, to the very vulnerable and isolated, who are likely to have multiple health, social and, perhaps, psychological problems. Therefore it is unlikely that routine 'maintenance' schemes will meet anything other than their physical survival needs.

Secondly, health and social care needs are all mixed up together in this field. It is politicians and, complicitly, we, the would-be helpers who once chose to separate them and are now scrambling to reverse this policy. There used to be debates about whether a bath was a social care or a health need – wait a fortnight and the distinction disappears, is my take. In Case study 6.1, typical of a significant minority from which it came and as in others (see Sheldon, 1997), there was a clear degree of untreated depression or at least of anhedonia (nothing to look forward to). The main triggers and maintenance factors for these health problems are bereavement, living alone and having little control over one's personal circumstances.

The increasing emphasis on integrated services is therefore to be welcomed, but good, holistic service provision on a tight budget, is still proving elusive. One obstacle is 'professional anthropology'; that is, 'tribal' identity and a sense of different expertise under threat from interlopers. However, we also have had good research for a long time on the effects of *a less* defensive pooling of these overlapping skills, and we can draw on experience from outside our own disciplines.

Here is playwright Alan Bennett's account of making a film about Marcel Proust that required a musical soundtrack. There were directors,

producers, musicians, continuity staff and so on, all with their own visions of what the final product should sound like – a situation ripe, one might think, for 'luvvie' discord and falling out. Yet what is striking about this diverse body for Bennett is...

> ...their total absence of self-importance. They play a passage, listen to it back, then give each other notes, and run over sections again. Guy Fenton, who is co-ordinating the music, also chips in, but he's a musician. David Hare, the Director chips in too, but he isn't a musician, just knows what atmosphere he wants. In the finish even I chip in, just because I know what I like. (Alan Bennett, 1990)

This film has been used for training purposes by the British Medical Association on how to get along with other experts even if they are not exactly like you.

In the case of Mrs W in Case study 6.1, three groups of professionals had assessed her 'needs'. In fact, more work went into the assessment than into subsequent service provision (loss-adjusting?). Nevertheless, and despite considerable investment by the authority in producing an 'integrated' system, most staff concentrated on their own area of expertise. This process, with back-up from her GP, helped to stabilise her diabetic condition, and the latter also prescribed for her arthritis. However, her repeat prescriptions were difficult for her to obtain because of a creaky home-delivery scheme run by local chemists. Mrs W also received meals on wheels, but found them unpalatable and disguised the fact that she was not regularly eating them. Thus, the insulin was going in, but the blood sugar level that it was supposed to control was dependent on not very palatable food supplied via a different department. It was the researchers who could perhaps claim to have made a difference in this case by referring Mrs W to a voluntary association for people of Polish origin, who, although she was a little out of their catchment area, agreed to collect her by car and take her to their centre, where she could eat the kind of food she liked and talk to people with whom she had something in common.

Research (see Tabernacle et al., 2009; Lymbery, 2005) has shown that simple health procedures produce large benefits, for example providing spectacles, sorting out ear and hearing aid problems, making false teeth fit so that eating is not difficult, dealing with foot problems that restrict mobility, and advocating reviews of 'cocktails' of medication that may be adversely interacting since they have been prescribed over the years by different medical practitioners.

To reverse the argument, health staff should pay more attention to the impact of social and psychological problems – tensions with carers, delayed bereavement reactions, family problems and so forth – and refer on accordingly. There is enough work here for everyone.

In the psycho-social research referred to in this chapter the messages are clear. Practitioners sometimes need to *slow down*, but not patronisingly, using a special sing-song voice (therein lies the skill), and build up a trusting relationship. Wherever possible, elderly people should ideally be allowed to get to know one or two carers with whom they have a good rapport and who have a working knowledge of past case details. When this happens it shines out of the early research data on the effectiveness of community care arrangements (see Challis et al.,1998; Sheldon & Macdonald, 1997; 2009: ch. 15).

Elderly people who have lived long, perhaps fruitful or perhaps troubled lives – or a mixture of both – are likely to live as much in the past, where most things happened, as the present. Such reminiscences, which are often all that clients/patients have to live on, can be identity preserving. Have a look at Philip Larkin's poem 'The Old Fools' (the title is ironic), which captures this beautifully. Younger and, understandably, very much present- and future-directed staff have to recognise the need to listen, to hear about things that may seem to them to be a very long time ago and to use these memories as a guide to their clients' thinking and moods now.

Try this thought experiment. You are not 24 or 34, but 84. It is 2059 and you are old. A member of whatever health and social care professions are then called, comes to see *you* and you reminisce about the awful events of the attack on the twin towers in New York in 2001 and being flooded out back in 2014. They respond to with: 'Very *interesting*. Now, have you had supper, and have you had a chance to look over those forms I hypervizzed to your wall screen?' How do you feel?

Mrs W in Case study 6.1 made the mild complaint that care staff knew nothing about her and did not seem very interested in finding out about her history, and that they addressed her by her first name at the outset. She was not frosty about this, but said that in the past only her husband had called her Anna: 'I would have let them of course, when I got to know them, and have said "please call me Anna", but then, I didn't really get to know any of them because they kept changing.'

The effects of some retention of personal control over what happens to vulnerable people has, leaving aside the ethics of the matter, emerged as a strong theme in the psychological research literature (originated by

Seligman, 1975). If this is not achieved, service users and their carers become *recipients* only. Whatever the services are, involving clients in each stage of making decisions about their future needs reinforces the idea of an individual's continuing social worth, and that of still being able to choose, perhaps even taking a few considered risks.

This discussion has been concerned with how best, on the basis of empirical research, we can attempt to help elderly clients. Nevertheless, there are more serious conditions that threaten most settled service-provision schedules; namely, the dementias.

The dementias

These disorders affect circa 800,000 people in the UK and cost the economy around £17 billion. Here it what it is like to have one of them:

> To see Mum at Weston, it's a beautiful day, and we walk on the sands. 'Has Gordon been to see you?' 'Oh yes,' she says happily, 'though I'm saying he has, I don't know who he is.' She peers at me. 'Who am I?' 'Oh yes, erm, you're my son aren't you?' 'My name?' 'Ah, now then.' She laughs as if this is not information that any reasonable person could expect her to have. But it doesn't distress me because it doesn't distress her. We have our sandwiches on a hill outside Weston with a vast view over Somerset. She wants to say, 'What a good view,' but her words are going too. 'Oh,' she exclaims, 'what a big lot of . . . about.' There are sheep in the field. 'I know what they are,' she says, 'but I don't know what they're called.' Thus Wittgenstein is routed by my mother. (Bennett, 1999).

Staff often lump together various conditions under the general heading of dementia, but there are various sets of (admittedly overlapping) symptoms with different aetiologies, different effects and different prognoses (see DSM-V), knowledge of which can help us try to adapt our services to their needs.

The key features of this group of brain disorders include multiple cognitive deficits, memory impairment and, in particular, short-term memory losses. In advanced cases it is quite common for clients not to be able to remember what they had for breakfast, but to recall the details of their earlier lives. In very severe cases, cruelly, both sets of memories fade.

There is also a reduced ability to connect one set of cognitions with another, and to remember descriptive, conceptual terms. Here is an example of a (mild case) known to me:

Interviewer: 'What are you going to do today?'
Client: 'Well, I'm going to have a go at cleaning…what are they called?…those things that the sun shines through and shows up all the dust?' (pointing)
Interviewer: 'Windows do you mean?'
Client: 'Yes, windows. I'm going to clean the windows.'
Interviewer: 'Are you eating OK at the moment?'
Client: 'Yes, I've had one of these flat, bready things with cheese on, what are *they* called? It's like that place where the tower leans over.'
Interviewer: 'Pisa? Oh, *pizza*?'
Client: 'Yes, pisas, I enjoy them, when I can get this new bloody stove to work.'

Note the pattern here, of working up to an idea via functional descriptions rather than concepts or labels. Many clients/patients are aware of the problem and find it frustrating. Some attribute it to their physical and social circumstances and develop an almost paranoid attitude to would-be carers: 'Why do things have to be always so tied up in puzzles? I never had this sort of thing before,' as this client heatedly put it. This work requires gentle, patient prompting without transmitting the feeling that the interviewee is slow or is failing in their part of the conversation.

The primary requirement for a diagnosis of dementia is that it is a recognisable physiological condition; that is, a brain disorder with a physical cause. Yet, as I have indicated, diagnoses are often complicated by environmental factors such as self-induced neglect, poor care, poor nutrition, sensory impairment or substance misuse – since both sets of factors are often present – and ruling these out or assessing their contributions is a task that falls within the scope of health and social care staff. The problem with the more common and more serious forms of dementia (for example Alzheimer's) is that accurate diagnosis can only be made post mortem. Diagnostic tests suitable for use in primary care do exist, such as the widely used Mini Mental State Examination (although this requires adjustments for age and education level); the Functional Activities Questonnaire; and the Informant Questionnaire on Cognitive Decline in the Elderly, which assesses both cognitive decline and activities of daily living.

Early to moderate dementia, whether through vascular occlusion or Alzheimer's (they mimic each other), is undiagnosed around 50% of the time in primary care.

Enthusiasm for genetic testing, for instance for the APOE-e4 allele, which is three times more common in dementia patients, overlooks the fact that many people with Alzheimer's do not carry this, and many who do, never develop dementia. Still, in an ideal world, the confident application of a standardised test by a GP, the ready availability of a neurological diagnostic interview by a specialist, early detection and an evidence-based prescribing regime (for instance of cholinesterase inhibitors) and the treatment of commonly associated sequelae, such as depression and anxiety, might be a promising model, particularly if combined with support and behavioural training for caregivers. However, these 'ideal' approaches have been shown in meta-analyses to slow the progression of cognitive decline and activities of daily living by only about 3–4 months. In the latter sphere, benefit durations were found of only 6–11 months on donepezil, compared to 6.9 months in the placebo group (see Birks et al., 2000). Against this must be set the stress and anxiety associated with the diagnosis and the wait times, the side effects of drugs (nausea and vomiting), labelling effects and stress on carers. Systematic reviews suggest that the decision about large-scale screening and early treatments was then a close call, and the picture has changed little since. (See Swaab, 2014.)

In severe cases, profound losses of cognitive ability, personal distress and memory lapses, even regarding the names of close relatives or of everyday objects, are common. In these troubling conditions, even remembering what one's last sentence was leads to long repetitions of the same idea. This can result in high levels of anxiety and sometimes even in aggressive behaviour, because, unlike in some psychotic conditions, some sufferers have often a retained background knowledge of diminishing functioning. In other words, clients know that this is not really normal or usual, and blame others or their circumstances for what is happening.

Depression and agitation are associated with dementia, but should not automatically be solely attributed to the physical condition – that is the easy option. Most often, they are strongly exacerbated by living circumstances and by a sense of fading control over those.

Prevalence and aetiology

Community studies (the best methodological bet for prevalence because they assess large samples of people, not only clinical populations, and

then wait to see what happens to each member) show that most dementias occur at the age of 85 and beyond (although exceptionally, similar-looking conditions can be found in younger people, even children who have had AIDS passed on to them or have suffered severe head injury; and that the one-year prospective prevalence rate in such studies is 37% (based on the Mini Mental State Examination). The risk increases steeply with age, so that for 65–69-year-olds the prevalence rate is 1.4–1.6%, rising to 16–25% for those over 85. The disorders are thus quite prevalent in older age groups, are steadily progressive and are incurable, although their worst effects can be somewhat contained by suitable medical and psycho-social interventions and sympathetically adapted care schemes.

Course

There is a sense in which the dementias are developmental disorders or perhaps inverse developmental disorders, in that the stages are known and follow in a particular order (over slightly different timescales). The progression is an orderly loss rather than gaining of functions until the patient ends up completely dependent and lying in a foetal position; an accelerated form of usual/normal brain-function decline.

Alzheimer's disease

This commonest cause of dementia, accounting for circa 70% of all such diagnoses, is named after Dr Alois Alzheimer (1864–1915), who was initially a professor of psychology. He collaborated with neurologist Dr Franz Nissl on a monumental six-volume work on the disorder, covering both its symptoms and the underlying histology. Alzheimer and Nissl noticed from post-mortem samples 'a paucity of cells in the cerebral cortex and clumps of filaments between the nerve cells' (Stelzmann et al., 1995). From microscope slide illustrations one has the impression of a kind of cerebral 'eczema' that disrupts complex neural connections. However, one has to be careful here, since medications that reduce these signs have proved ineffectual in restoring mental functioning once the damage has been done.

The DSM-V criteria for a diagnosis of dementia of the Alzheimer's type are memory impairment (an inability to retain new information or to recall previously learned information, plus one or more of the following cognitive deteriorations:

☐ aphasia (language disturbances);
☐ apraxia (impaired inability to carry out motor activities despite intact physical motor functions;

☐ agnosia (failure to recognise or identify objects despite intact sensory functions);

☐ disturbance in executive functioning (i.e. planning, organising, sequencing, abstracting).

All the above must present as significant impairments over previous capabilities, and must be differentiable from other confusional states or conditions such as delirium, profound self-neglect, subdural haematoma, Huntington's disease or brain tumour. Two further subtypes exist: with or without behavioural disturbance at a clinically significant level, for instance wandering off or the obsessive searching for relatives long dead; and general agitation. It is this latter group who contribute the largest challenge to the care system, since they carry significant risks of self-harm.

This disorder, for which there is a genetic predisposition, affects circa 100 000 people every year in the UK and remains stubbornly incurable, although pharmacological treatments can slow its progression a little. Some psycho-social interventions are known to help sufferers retain their sense of identity. A 'fighting retreat' from the irreversible sums up about the best that we can do at present.

Systematic reviews of psycho-social interventions show some benefits via a slowing down of the progress of the illness, some improvements in accompanying depressive states, and some positive effects on apathy from multisensory stimulation. Behaviour therapy and the scheduling of pleasant events and problem-solving approaches reduce depression in those receiving home care. Psychomotor therapy groups reduce aggression in nursing home patients. These are reinforcable trends in the face of modest gains, but for a steadily debilitating condition (see Verkaik et al., 2005 for a systematic review).

There are some problems concerning the number and quality of trials for the psychological treatment of people developing dementia. More high-quality trials are needed, not least because these approaches (particularly CBT) are the main alternative to medication, which has a patchy record with this illness and side effects that are often poorly tolerated (see Orgeta et al., 2014 for a recent Cochrane review).

Social care interventions, looking to practical needs, and holding understanding dialogues that help keep clients' fears at bay in circumstances where there is an increasingly troubling loss of control, physical functions and memory, are at present the mainstay of palliative care in the middle to final stages of this illness. Support for carers is vital. They bear not only heavy personal costs, but also the psychological burden of witnessing the slow deterioration of a loved one's personality

and functioning, often made worse by having known him or her before. Research suggests that we carry out our support duties to this group of beleaguered people only tolerably well, and that small measures of earlier support will often prevent the emergence of crises in care – the very opposite of 'targeting' respite care only at the already exhausted. Later, to have any measurable effect, even a self-reported ability to cope, respite care needs to be sufficient in length and level of support to make a meaningful difference. There is more on respite care later in this chapter.

Dementia due to Parkinson's disease

Dr James Parkinson (1755–1828) was an eighteenth-century physician who studied and gave his name to this progressive disorder, bringing his earlier studies together in an 'Essay on the Shaking Palsy' in 1817. Parkinson was also a social reformer, seeing a clear link between illness and social conditions, and was no mean psychologist when discussing the effects of the disease on the individual and the family. Later histological slides showed the intrusion of degenerated tissue between nerve cells ('Lewy bodies') plus overlapping functional effects, as with the other dementias.

Most of the early symptoms of Parkinson's disorder are physical, such as ambulatory difficulties (walking on splayed legs), shuffling gait, waxy complexion, tremor (shaking hands) and micrographia (increasingly tiny handwriting). Later manifestations include a marked slowing down of cognition. Novelist and philosopher John Bayley, Iris Murdoch's husband, in *Elegy for Iris* (1999) writes an eloquent account of this destructive process and its effects on a close relationship: 'Did I *really* write this?' she once said when shown one of her books.

Pharmaceutical interventions

The single most distinctive feature of this condition is the failure of the brain to release the neuro-transmitter dopamine. Dopamine agonist treatments are in common use, but the causal sequence is more complex than the need for simple replacement therapy (as in diabetes). Some habituation effects are seen, requiring increasing dosage levels, but with concomitant side effects. Dopamine agonists are commonly prescribed and reduce motor complications (compared to levodopa). However, there are important side effects (nausea, somnolence, constipation) and, overall, symptom control is variable, with noteworthy dropout rates due to adverse events; significantly higher than with other, less potent medicines. More long-term trials with a quality-of-life

dimension added in are needed (for a systematic review, see Stowe et al., 2008).

Thus, pharmaceutical treatment for Parkinson's disease or its symptoms, as elsewhere in dementia, is still a careful trade-off of some limited but possibly worthwhile benefits, versus some hard to tolerate side effects. In early Parkinson's this trade-off suggests that levodopa is the best treatment option to date, but that COMT inhibitors such as entacapone can be used in combination and may improve scores on Activities of Daily Living assessments.

Psychological approaches

There is some general support for the use of CBT in helping carers cope with the stresses of their role (see Secker & Brown, 2005 for a trial). More research has been conducted on helping patients who are depressed and have Parkinson's (or perhaps *because* they have it). The CBT needs to be adapted to the cognitive level at which patients are functioning, but the results on depression scores at three-month follow-up are good.

We are frequently in a situation where the presence or absence of psychological problems is quite well understood and medications are targeted at these, but with modest effect and some adverse effects to weigh in the balance (see Rolinski et al., 2012).

In earlier systematic reviews of cholinesterase inhibitors for dementia with Lewy bodies (circa 15–25% of cases) where outcomes were very well and broadly assessed, the conclusion was that there were *no* significant differences between experimental and control patients (a few small improvements over placebo, but not enough to survive an Intention to Treat analysis of all included patients). There were a few individual benefits on neuro-psychiatric symptoms.

There is also a noteworthy association with depression. Whether this is due to an alteration in basic brain functions or is a reaction to increasing loss of control and diminished functions in the face of it, is not clear. Between 20% and 60% (a hopelessly broad span, but the data are equivocal) develop dementia, but even though the disorder *can* have an early onset, most associated dementias cluster in the older age groups.

Other dementias

The other dementias are much rarer, but produce even more disturbing symptoms. I have space here only for a short summary.

Huntington's disease is a very strongly inherited (50% – a toss-of-a-coin risk, if you carry the genetic defect), progressive condition that can affect all age groups, but usually manifests itself in late middle to old age in its

severest form. The symptoms are tremor and lack of motor control – 'St Vitus' dance', as it was once known – plus very severe cognitive impairment and negative personality changes. There is a diagnostic test, but many potential sufferers choose not to take it, since they would rather not know. Disruption to family life is almost universal, and this disorder requires very intensive care arrangements to be in place, with particular attention being paid to the needs of carers. Most patients quickly end up in nursing homes and hospitals, however. The genes here too are not so much selfish as psychopathic, in that the illness typically appears just after childbearing is complete.

Creutzfeldt–Jakob disease or CJD, again statistically rare, but devastating to individuals and families when it affects them, is typically contracted between the ages of 40 and 65. The brain develops 'spongiform' lesions due to the effects of slow-acting, tiny, virus-like prions. The expected epidemic of variant CJD from bovine spongiform encephalopathy (BSE) has, mercifully, not manifested itself as feared, but some cases involving older people are turning up in nursing homes and hospices. They are associated with very distressing symptoms such as chronic fatigue, immune system damage, anxiety, sleep disorders, rapid memory loss and severe physical incapacity. In chronic cases, where symptoms persist into older age, only palliative care and medication to relieve symptoms are possible at present.

Dementia linked to HIV/AIDS

Most of the dementia conditions described in this chapter are differentiated less by their physical, psychological or social effects than by what is known about their aetiological origins. Thus, dementia as a result of HIV infection is designated so by a specific test – but the consequences for the patient/client, partners and relatives are roughly the same. The symptoms can be apathy, social disconnection and, of course, a ready vulnerability to infections, since this virus parasitises the immune system. One might add that on top of these physical problems comes another one of prejudice against sufferers, particularly against homosexual people and those who have used drugs (although this infection is by no means confined to these groups). Nevertheless, people are still seen to have 'brought it on themselves'.

Social workers' support for carers and partners needs to be informed by knowledge of such prejudices; sufferers certainly know about them and are well aware what the socio-political factors are. However, all is not as bleak as it once was, as anti-viral medication, now used in new combinations, can delay secondary infections and later brain disorders

for years. We should still expect such problems to turn up in the elderly population quite soon.

Substance-induced dementia

The old hippy saying 'If you can remember the sixties you weren't there' sums up a cultural ambivalence to substance abuse. In novels and biographies, and in histories of popular music, it may be seen as 'cool' and allegedly necessary for the release of creative impulses, but at the same time it also has dangerous personal and social consequences. Alcohol and drug misuse are known major factors in criminality, child abuse, domestic violence, physical (cirrhosis of the liver) and psychiatric illness. The cultural ambivalence was never better described than in this extract from a 1952 speech by Noah 'Soggy' Sweat, state representative for Mississippi, who was trying to face down a bill on the prohibition of alcohol:

> You have asked me how I feel about whiskey. All right, here is how I feel about whiskey. If when you say 'whiskey' you mean the devil's brew, the poison scourge . . . that . . . literally takes the bread from the mouths of little children . . . then certainly I am against it. But if when you say 'whiskey' you mean the oil of conversation, the philosophic wine, the ale that is consumed when good fellows get together, that puts a song in their hearts and laughter on their lips . . . that puts the spring in the old gentleman's step on a frosty, crispy morning . . . which enables a man to magnify his joy, and his happiness . . . then certainly I am for it. This is my stand. I will not retreat from it. (Goodwin, 1981: 2)

The point is that however much society enjoys and in some ways condones a level of alcohol misuse, *serious* substance abuse can lead to dementia-like conditions very similar to Alzheimer's or Parkinson's disease, in other words brain damage, which tends to manifest its worst effects in old age.

Dementia due to other medical conditions

Dementia can also be caused by a range of other physiological conditions, notably arteriosclerosis (furring of the arteries, reducing the blood supply to the brain, leading to infarction or dead tissue). Brain tumours and severe head injuries can also mimic dementia-like states, and severe, or multiple mini strokes can produce the symptoms of degenerative disorders. In the latter case, the message from research is clear: specialist

physicians, backed up by specialist nurses, physiotherapists, occupational therapists and social workers in a rehabilitative role, improve recovery rates.

Interventions in cases of dementia

Most cases of suspected and developing dementia go up the primary care and specialist services ladder, then down the community support services and residential care, to nursing home snake. This is not an invariable pattern, just an average progression, but one with many opportunities for creatively designed combinations of treatment and support at each stage. The problem standing in the way of such an optimistic reading of the research literature is the artificially high and, if we are honest, cost-containing, 'intervene only if you must' thresholds in social services (more money is often spent as a result, but later on, or on someone else's budget). Let us now summarise our knowledge of effective interventions in cases of dementia.

Pharmaceutical treatments

One can well understand the desire on the part of carers and, in the early stages, of patients themselves for a medical – that is, pharmaceutical – solution to the signs of cognitive dysfunction, inexplicable anxiety, social disconnection and reduced standards of self-care. Indeed, early intervention with appropriate medications can slow down the progress of such symptoms *a little*. The danger is (and here is where social care staff come in) that environmental causes of dysfunction, for example chronic loneliness, which can in some cases lead on to depression and self-neglect, are seen as secondary *symptoms*, not as secondary *causes* involved in the whole. Therefore, our best option is for pharmacological treatments to be put in place alongside psycho-social support. Multi-disciplinary case reviews have proved effective in helping to make this more than a theoretical aspiration (see Reilly et al., 2013).

The problem with dementia for those caring for patients is that there is not only increasing cognitive impairment and memory loss to contend with, but also, sometimes, 'psychotic' symptoms and aggression. As in the case of accompanying depression, the advice in guidelines is to treat these expressions separately, but the picture is less than clear regarding overall benefit versus risk. A Cochrane systematic review of atypical antipsychotics (risperidone, olanzapine) showed the following:

☐ Both were useful in reducing aggression.
☐ Risperidone reduces psychotic symptoms.

☐ However, there was a significant dropout rate due to side effects in experimental group patients.

☐ The experimental group had a significant increase in serious cardio-vascular events inducing strokes, extra-pyramidal events (part of the original disease too) and other adverse outcomes.

The authors concluded that, given other reviews and meta-analyses with similar findings and increases in mortality, neither medication should be used routinely to treat dementia patients who show aggression or psychotic behaviour, unless there is a risk of severe harm, or the presence of severe distress among those caring for them (see Ballard et al., 2006).

Symptomatic treatments

As we have seen, the dementias, particularly in advanced cases, can cause very considerable stress to sufferers and to their carers, who have to view the condition through the lens of the past, and so contrast the present state of their loved one with how they once were – loving mother or father, calm and competent relative, someone with a sense of humour, now agitated and anxious in a way that barely relates to their environmental circumstances. Memory loss plays a major role in these cases as reassurances and explanations are quickly forgotten. There is thus an argument for medication such as anti-anxiety drugs – 'tranquillisers' – to be prescribed. These can make a useful difference to perceived well-being, but were used in nursing and residential homes in the past to quieten clients as much for the comfort of the staff as for their charges. Nevertheless, carefully prescribed medication, regularly reviewed as a result of feedback from nurses and social care staff, can make a substantial difference to the welfare of these troubled clients and should not be casually opposed on spurious ideological grounds from a safe distance.

The reason for this pharmaceutical interlude is because carers – who are the vital element in stable living conditions and well-being – have, to their credit, got organised and gone on the internet to find out what medical treatments might improve the lives of their relatives and friends and, in consequence, their own. Thus, basic familiarity with current treatments should help staff to hold their own in these conversations, since the National Institute for Health and Care Excellence (NICE) is raising (quite valid) questions about the cost-effectiveness of some medications, decisions that often outrage hard-pressed carers. However, one person's valued but clinically inconsequential treatment is another person's denial of something that might definitely help them.

Psycho-social interventions

Psycho-social approaches are known through good-quality research to make *some* measurable and worthwhile differences in cases of dementia, but mainly in respect of helping to slow down mental, social and physical decline, and through support for carers (see Palmer, 1999 for an early systematic review).

The first point to recognise is that the majority of clients with early/mid-course dementia are now living at home, which, client opinion research constantly tells us, is where they wish to remain for as long as possible. In order that this can happen (and remember that 25 years or so ago people with even quite moderate dementia were routinely tidied away into residential settings 'for their own good'), the need is for well-organised, timely assistance to be given to clients. That includes help with cleaning, meals on wheels, advice on benefits, housing repairs and regarding the, to them threatening, letters from official bodies. Simple, practical social work should therefore be our first priority, for without it nothing else will have a chance of succeeding. Also, we must always remember that the people who do most of the day-to-day, year-on-year caring are not from the statutory social services, but are relatives – most often daughters.

Carers also have their own lives, children going through an increasingly demanding educational system and jobs of their own, where necessary days off at times of crisis are often seen as a 'lack of commitment'. Again, if there was ever a case for 'joined-up' governmental policy, it is here.

These general points aside, the available research evidence on the effectiveness of psycho-social interventions can be summarised as follows. First, whether provided at home, in sheltered accommodation, in residential units or in nursing homes, the most powerful effect on the well-being of clients comes from patient, mildly stimulating, non-condescending, practical care, which supports the individuality and dignity of the person and recognises their past and present achievements. That is easy to say, but the approach requires great attention to detail, considerable logistical prowess on the part of management, well-adapted physical facilities and, in the face of demanding symptoms, considerable personal commitment and stamina from helpers. Where these elements of good care can be brought together, they probably account for the high levels of satisfaction reported in client opinion research. The Care Standards Act (2000, plus revisions) set out what is required, but then such initiatives come 'flat-packed' and staff have

to assemble them as best they can, being emotionally engaged with clients in a controlled way. The benefit of instruction booklets aside, such guidelines are a tall order for care staff on low pay rates, with too many people to look after and sometimes endless 'must-do' lists. These circumstances can lead to the pressures that result in emotional disconnection or, unforgivably, to abuse. Age Concern estimates that circa 10% of elderly people within the care system suffer physical abuse and bullying during their stay; they become de-individualised; they become 'the job'. Good leadership, staff support, respite breaks when necessary and good training are our only hopes in this regard. Yet all this is pious in the face of high staff turnover – changing faces and having to start all over again are stubborn problems in empirical research on standards (see Bauld et al., 2000).

Given the damage done particularly to short-term memory by dementias, a perfectly reasonable proposition is that we try to amplify and simplify the environmental cues as to time, place, identity and what to expect next. Reality reorientation programmes based on this principle were tested in trials conducted from the 1980s onwards (see Palmer, 1999). Measurable improvements were recorded on cognition, behaviour and apparent sense of connectedness to circumstances (see Bandolier, 1998). However, there are two problems with the approach: it is very labour intensive and therefore expensive; and it carries the risk of producing the sort of high expressed emotion overstimulation effects discussed previously. This is because the intensity and range of prompts, reminders and visual clues amount to more pressure to think, remember and decide than patients with these levels of memory loss can bear. Therefore, the interventions *can* lead to more, not less agitation, and to parroting what staff want to hear, without much understanding. The best solution appears to be to incorporate non-threatening, not overly direct, not endlessly repetitive prompts and reminders into social contacts that are as natural as possible. Beyond this, with severely demented people a good standard of personal care and general reassurance perhaps need to be accompanied by an acceptance that there are worse things than 'going gently into that good night'. Ask any hospice worker.

Another plausible idea to hold back the psycho-social effects of dementia is to exploit the fact that short-term memory goes first, and that longer-term memory remains more intact until the final stages. Reminiscence therapy attempts to bolster a sense of identify by helping clients to recall what they can – about their schooldays, about their marriage, about their children when they were young and so on. Clients who have the opportunity to discuss these reminiscences with staff tend

to retain cognitive and social skills for longer. The systematic review by Woods et al. (2005) is encouraging, showing worthwhile cognitive and behavioural improvement in 85% of clients thus treated, compared with control groups.

The effectiveness of *applied behavioural analysis* (see Sheldon, 2011) has been established by a very large research literature across a wide range of problems, but the techniques have only recently been used successfully with those suffering from dementia. This approach is based on identifying the cues for agitated behaviour (remember that in advanced cases we do not always have the option of sitting down for a rational discussion about what is wrong), then looking at the reinforcement contingencies – what pays off for the person? That does not have to look rewarding to us, but can still be reinforcing. This is the ABC approach: antecedents, behaviour, consequences. Case study 6.2 is an example.

Case study 6.2

Mrs B, a widow, was only 74 years old but had rapidly advancing Alzheimer's disease that had robbed her of most of her short-term memory. She had spent a year in sheltered, warden-controlled accommodation, but often pressed alarm bells when she was in an agitated state and wandered off on several occasions, once being picked up by police near a railway line in her dressing gown, shouting the name of her dead husband. Medication was prescribed, but due to another slightly paranoid view of hers that people were trying to poison her, she would usually resist taking it.

Many textbooks would take a well-intended, but rather romantic view of this troubled lady. Why not sit her down and explain that her husband had died four years earlier and so searching for him was in vain? Why not take her to his grave in a nearby churchyard? Why not get the remaining family to come in to explain matters to her, rather than simply seeking a solution via mood-altering pills? Well, *all* of these things were done, but they made only very short-term differences because Mrs B had no memory of what had passed between herself and these kindly relatives and would-be helpers an hour later.

An analysis of Mrs B's behaviour showed that for circa 50% of her day she was not agitated or upset. The reaction of staff to these quiet periods was to leave her alone, and to tiptoe around her. A simple reversal of these reinforcement contingencies produced

useful results for two years. The scheme ran as follows. Staff were persuaded to talk briefly to Mrs B at roughly ten-minute intervals when she was *not* in an agitated state, and to go through family photo albums with her for longer periods. They talked about her husband and her life with him, knowing that these encounters would not be short and not without the need continually to prompt – indeed to recover – pleasant memories. The serendipitous inclusion in this scheme of a school student doing a history project greatly helped and provided more extended social contact, which Mrs B seemed to find enjoyable. Persistent attention-seeking behaviour quickly dropped by two-thirds once she learned that reassuring contact would come to her without her having to make it happen.

Source: Sheldon & Macdonald, 2009: ch. 8.

Respite for carers

Much of the burden of care for dementia sufferers falls (usually but not exclusively) on female spouses and other relatives. In serious cases that are as yet outside residential or nursing home care, most of the practical and emotional burden is carried by those fully awake to the impact of the disease. Therefore, respite care is a good, humane intervention, but with what effects? A recent Cochrane systematic review (Maayan et al., 2014) found no significant differences, but neither did it identify any harms for caregivers in the effects of respite care versus none. It is, surprisingly, not alone in reaching such a conclusion. This is a little alarming to those of us who have seen carers near the end of their tether, considering residential care, but after a break putting it off and reporting a measure of regained stamina. This is how it goes with trials and reviews (where control groups improve too). However, there may be problems with the research that we need to consider:

☐ Researchers are required to report on 'concrete' outcomes, such as delays to institutionalisation (welcome or frustrating?), community tenure, the *cost*-effectiveness of preventative interventions. Is it reasonable that a week's planned holiday with your sister will affect such factors in the face of others, such as physical exhaustion, coping with increasing aggression and so on?

☐ The research is quite sparse given the overall impact of dementia on carers, and the quality of the original trials is less than ideal, so that many tend to get dropped from modern systematic reviews.

☐ There may be psychological effects that are not being considered; that is, the effect on *carers* of respite schemes. Sometimes it is only when we *stop* doing something onerous that we take the time to think about giving it up.

☐ Stress and anxiety are themselves measurable, as are other aspects of quality of life. There are good standardised measures (see Fischer & Corcoran, 2004) and these may be more appropriate outcomes to look for. Or we could just *ask* the carers.

☐ Respite care varies in studies, both in duration and extent. We would never compare wildly different dosages of medication in this way.

☐ What do poor, cash-starved carers *do* with their time off? Much more, and better, research is needed, no magic bullets so far.

Occupation and exercise

A number of reviews of studies examining the influence of controlled stimulation (see Godfrey et al., 2000) point to the established benefits of non-regimented, small-scale occupation and moderate exercise, factors that appear not only to have physical benefits but psychological ones too. One study looked at the simple effects of patients of being put in charge of a pot plant or a small section of the home's garden, and found improvements in cognitive ability and sense of well-being. In short, anything connected with the scheduling of pleasant events and the reinforcement of retained competence and control appears to do well. The problem in accepting these regular findings is largely due to the fact that they require patient, encouraging, hands-on support to individuals or small groups, whereas typical staffing ratios encourage more general schemes with an (understandable) emphasis on the tidy management of spaces and timescales. However, some care and nursing homes have found ways to square this circle, and the effects are encouraging. Some even swallow their health and safety concerns and allow cats and dogs in. The more normal and homely the environment, the more normal the behaviour within it, is close to a psychological fact. Personally, I would rather keep the Labrador and risk the unlikely trip over him.

The design of care and nursing homes

The danger with the pervasive cognitive, social and behavioural difficulties associated with advanced dementia is that all distress and adverse

behaviour is attributed to the condition, rather than the circumstances in which the illness is being managed. However, American Psychiatric Association (APA) guidelines provide a cogent summary of both the physical and psychological conditions known to influence a sense of well-being, reduce behavioural problems and help retain social and cognitive capacities. Putting these findings together with other research (e.g. the cogent 'evidence-based briefing' of Claire Palmer, 1999), we arrive at the following principal findings:

☐ Sensible health and safety policies need to be in place, although modern, somewhat overzealous interpretations can easily lead to organisational paralysis (hence the word 'sensible'). There are indeed real and appreciable risks to clients themselves and to staff, such as wandering out of the home and aggression towards carers. But then, a pragmatic trade-off needs to be arrived at by management; this is what managers are for.

☐ The physical environment of care and nursing homes should be as familiar and home-like as possible, rather than stripped down and clinically neat for the ease of staff. 'No go' areas for clients should be kept to a minimum, since they add to the frustrations. Collaborative projects between architects and care staff have shown that clients benefit from being able to open doors to other spaces (even if the doors are not functionally necessary), having access to gardens, and having bold colour coding that directs them to recreational areas, or toilets, whereas staff area doors can be painted the same colours as the walls and so become more anonymous.

☐ The facility should ideally contain enhanced visual clues as to identity, function, time, place and so forth. This includes large, easily read clocks and different-coloured lines on the floor leading to washrooms, recreational areas or the outside. Free space is also important, in that one of the symptoms of Alzheimer's disease is pent-up frustration leading to pacing. So if these driven feelings can be worked off in safe, uncluttered areas, all to the good.

☐ Family, carers and friends are vital to a sense of well-being in clients/patients even if they have to be prompted as to who exactly these people are. But then, the burden of dementia is very considerable on carers themselves, and good facilities provide a quiet and separate space for *their* needs to be considered and advised on.

☐ Visual activities and tactile stimulation (think what it might be like to be touched only rarely) helps to retain a sense of individuality and worth and keeps clients in tune with their intact emotions.

Therefore, pictures, music and ordinary familiar social activities are an important cognitive 'buoyancy aid'. We have come a long way from near-compulsory bingo and sing-songs, but best-practice examples show how far there is yet to go. An 88-year-old relative of mine, who can only vaguely remember what day it is and what he had for lunch, was recently taken hunting for fossils in Dorset by care staff (imagine the risks: cliffs, sharp tools, the seashore). He is still talking animatedly about the experience. A little imagination goes a long way.

☐ Support for staff in this most demanding of jobs is vital. Not only are residents not always open to rational discussion or even reassurance, such clients' conditions can provide a *memento mori* to staff and there are personal costs to this work.

☐ Dementia patients, who often have the same physical ailments as other old people, are, understandably, bad reporters of pain (see Hall et al., 2011) and doctors dealing with dementia patients are often bad prescribers of painkillers, in that even when these patients suffer injury or have other conditions, they are prescribed for less often than non-dementia patients. Also, vascular dementia can bring its own sources of 'central pain' over and above peripheral conditions. Better safe than sorry, and worry about possible addictions later or not at all, might be a more humane approach. The same could be said about the independent treatment of depression and agitation, otherwise everything is attributed to the dementia state, as if patients were not allowed to have more than one illness at a time.

Of course, not all the elderly clients who come our way have the disabilities discussed here. Indeed, the majority have suffered an acute physical illness and need to be rehabilitated. It is to this process that we now turn our attention.

Rehabilitation services for elderly people

The word 'rehabilitation' gives us some trouble, since it so resembles 'habitation' or 'habito', from the Latin for 'I dwell', but it implies more than to be returned home. Here is a definition from *Webster's International Dictionary*:

> *Rehabilitation*: the act of reinstating in a former rank, standing or capacity; restoration to former rights; restoration to or re-establishment in the esteem of others.

Nocon and Baldwin's cogent policy review (1998) pointed to an emerging consensus on the purposes of rehabilitation work, and their framework still seems a good one to use:

> The primary objective of rehabilitation invites restoration (to the maximum degree possible) either of function (physical or mental) or of role.

Note that the word *restoration* occurs throughout dictionary definitions and research papers on this subject. This is because, although rehabilitation services sometimes have to be put in place following a slow decline in functions, more often they are needed to cope with the aftermath of a crisis, for instance the break-up of reliable family care, a stroke or a disabling cardiac condition, bereavement and associated depression. where one partner has been dependent on the other for care. a bad fall, the increasingly acute effects of diabetes, increasing physical disability, and so on. Therefore, rehabilitation work is often a form of post-medical and/or personal crisis intervention requiring a considerable sense of urgency and considerable logistical coordination by professional staff.
   Secondly:

> Rehabilitation will usually require a mixture of clinical, therapeutic and social interventions that also address issues relevant to a person's physical and social environment. The process is unlikely to look after itself. (Nocon and Baldwin, 1998; see also Sheldon & Macdonald, 2009: ch. 15)

Governmental attempts to unite and integrate the different disciplines in this and other similar policies have been only partially successful, which must be a surprise to civil service flow-chart designers who have forgotten that an earlier set of policies equally forcefully demanded their separation so as to encourage specialisation. Thus, the medical social work service with its venerable tradition was all but disbanded and an essential corridor between patients in hospital, the medical and nursing teams and social workers in the community, was closed off. However, conversely, it is fair to criticise community social services staff for spending too little time in face-to-face dialogue with hospital staff. In many cases, the first these teams hear of an imminent discharge is by email or telephone call: 'over to you' being the main message. There are, thankfully, best-practice recipes and experiences to report on wherein

multidisciplinary staff have been involved early in the process of discharge, and regularly meet and report back on the progress of services so that lessons can be learned for the next series (see Trappes-Lomax et al., 2002).

Governmental targets, intended to strengthen the resolve of staff and managers, can lead to 'pass the parcel' services in rehabilitation. When these are revealed via research studies or by scandalous cases discussed in the media, they cause government departments, somewhat disingenuously, to complain that they never *intended* these perverse distortions and hoped that professional judgement would iron out any wrinkles. But then, professional judgement is the last thing catered for in the rules and legislation. Perhaps it will emerge in time that the sign of a good, competent middle manager will be an ability to argue for his or her content expertise in this field (and others) and to demonstrate to staff a capacity to shoulder considered risks in the interests of clients' individual needs and wishes.

Thirdly:

> Effective rehabilitation needs to be tailored to service-users' needs and wishes, be purposeful, and involve a number of agencies and disciplines, and be available when required. (Nocon and Baldwin, 1998)

There is perhaps a danger that given our urgent need for more experimental trials, we neglect the rich legacy of client opinion studies in the research literature, including those featuring testimony as to what it is like to be on the receiving end of rehabilitative services (see Trappes-Lomax et al., 2003; Momsen et al., 2012). We need *both* approaches, of course, not one or the other. In these qualitative studies we see regularly recurring themes that, sadly, we are rather better at knowingly debating than doing something about. Here is a short list of prominent findings:

☐ When clients are sent home prematurely from hospital at short notice, without an opportunity for convalescence after treatment and with a scramble to put basic care services in place, they know it, and feel emotionally affected by it. Even short-term prospective planning is better than 'bed-clearing' targets.

☐ Outcomes (satisfaction with community services, lower readmission rates and so on) tend to be better where a multidisciplinary team provides the services required. That means district nurses (a sadly depleted service nowadays, but there is hope of a renewed interest)

checking on medical conditions and the progress of treatment; occupational therapists assessing the home environment and what physical adaptations might assist the patient to remain there; speech therapy services for recovering stroke patients; social workers to reconnect and coordinate the contribution of family carers, friends and neighbours; help for clients to deal with the daunting volume of complicated forms that come with a change in benefit entitlement (a highly valued contribution, incidentally); and the coordination of community services such as warden schemes, contact with GPs, housing issues and so forth.

☐ The part played by a good, comprehensive assessment of needs cannot be overestimated. Assessments are very difficult to organise at short notice. Often 'first aid' measures take priority; if they help, the need for a more thorough, wider-ranging audit of needs and social assistance can be forgotten. Assessments, particularly if based on standardised measures, tend to improve service delivery and cooperation. We have these in abundance, but we seem to be wary of using them (see Fischer & Corcoran, 2011: vol. II), even though they are much more reliable than unstructured interviews and departmental checklists.

☐ Rehabilitation depends, not absolutely but very substantially, on relatives and friends willing to share the tasks, to provide support for morale, and to maintain connections with the state and voluntary services. Where familiar people who constitute important social assets are included routinely alongside service users themselves in the development of care plans, the results are significantly better, as is self-perceived quality of life and sense of independence.

☐ Clients greatly value regular home visits that happen as planned (they often do not) and advocacy when the information being discussed is delivered. They also value consistency of staffing and the ability to get to know and form a relationship with those who care for them. This is difficult to pull off, given the high staff turnover in social services, and the 'outsourcing' of services to different private or voluntary services and to locum GP services for out-of-hours visits. This is not a matter merely of the technical efficiency of services, but of a reassuring familiarity with those who provide them. This, remember, was a generation who were often taught by the teachers who taught their parents, and who would expect to see the same GP throughout most of their lives.

☐ The reader will here see that, in this list of findings, we have steadily moved from physical provision to psychological and emotional

factors. For me, it is essential that we consider both. Key to the success of effective rehabilitation schemes is attention to such less readily visible influences such as *a sense of well-being*. Sometimes services are concentrated primarily on the home as the site of service delivery, almost as targeted risk-management schemes. There are a few examples, however, of approaches where efforts are made by staff to engage with local voluntary schemes, such as 'good neighbour' schemes, which aim to support the idea of going *out* to receive support and being visited by groups of people with no statutory role. Knowledge of such groups and engagement with them should be a key element of rehabilitative social care.

☐ Motivation emerges in rehabilitation research at every turn. Physical recovery is one thing, but a state of dependency and fearfulness about the future quite another. Such factors rarely appear on assessment checklists, but work is needed to urge clients sympathetically towards small, restorative, optimistic steps. Low mood and depression are strongly associated with physical illness and loss of capacity in elderly people, and in turn influence recovery in a vicious circle. The evidence is that small, carefully selected tasks, accompanied by reassurance and support – not things done *for* people, but *with* them – make the most tangible differences. Then there is the question of a clash of timescales. The Trappes-Lomax et al. study (2003) contains many testimonies from elderly people who feel that they want to settle back a little more slowly and recover in their own time. Whose need is it anyway?

Home care

Not all elderly clients are in need because of acute illness; some are just very old, are experiencing steadily increasing frailty, are bereaved and feel somewhat lost, or are unable for a range of reasons to carry out the daily tasks necessary for a halfway decent life at home: attention to nutrition, links with the health service, personal hygiene, financial support and so on. We have a good systematic review of outcome research in this field (drawing on a range of international research, featuring feedback from service users and carers) in the work of Godfrey et al. (2000). The main messages, well supported by primary research elsewhere, are as follows:

☐ Well-organised, reliable home-care schemes, based on comprehensive – that is, not professionally split up – assessments of

comprehensive needs lead to longer lives; to increased quality of life as measured by standardised instruments; and to a greater sense of independence and personal control.

☐ Home-care services work best when they are targeted on those at some risk of residential care. Families who are burdened by their caring duties often see a comfortable home as the best solution for everyone, but clients themselves almost unanimously wish to have support to stay at home and live as independently as possible, if necessary with a little help from outside.

☐ The logistical challenges of multidisciplinary home care are daunting: thousands of clients requiring tens of different services, but still expecting individual care and treatment. This is a task for managers if there ever was one, and where it comes off, as when there is close multidisciplinary collaboration and where day centres, community services and voluntary schemes are incorporated into the care plan, it works well.

☐ The problem is that standards of home care vary greatly across the UK, as both this research concludes and annual figures from the Care Quality Commission regularly show.

So, a better focus on pre-designated needs, regularly reviewed, now means that individuals get better, more reliable help – but, one hopes, not at the expense of a pleasant, encouraging conversation here and there or at the expense of common sense. For example, the outhouses of many frail elderly people are treasure troves of high-tech aids and gadgets that the grateful recipients have never been shown how to use properly or one just too much trouble for them.

Carers, whether family members or others, are vital to the system of community care. However, since they would never withdraw their labour, they have limited political clout. So much so that the Care Act 2014 allocates £33 million to local councils for 'support services', but this is mainly funding for training courses and (another) national helpline. This amounts to £4.16 per carer at present figures.

To paraphrase American poet Robert Frost, we still have 'miles to go and promises to keep', but we do have increasingly reliable maps to guide us. Also, carers are increasingly organising themselves into local and internet pressure groups; apart from their practical successes in urging changes to local and national policy, they also sit on the board of trusts and advise on new projects. Books on the experience of carers, written by themselves or by members of the family of a person with dementia, some by members of quite famous families, underline the fact

that this can happen to *anybody*, whatever their previous accomplishments and whatever their circumstances, and that you are not alone in finding it hard to bear:

> It felt to us at the time like a slippage of moorings. I imagined you as a small boat bobbing away inexorably towards the grey mist. (Magnusson, 2014)

A la recherche du temps perdu

Why nature should develop an organism such as the human body, equip it with the most complex organ in the known universe (the brain), fill this with the means of storing and transmitting knowledge and experience, the capacity for love and disinterested altruism, the ability to produce art and culture, and then kill it off and start all over again, is hard for us to comprehend – particularly in later life, when the 'off' switch comes starkly into view. There are two schools of thought about this:

☐ The 'active' theory posits a 'clock of death', its mechanism controlled largely by the genes – as with salmon, which are programmed to spawn and die. The question is: What is the evolutionary advantage here? It cannot simply be the need to declutter the planet and make way for a new crop, since genetic pressures operate almost entirely on individuals, not on group welfare. There might of course be a *genetic indifference* factor, in that when we die most of us will have passed on our genes anyway, so why waste further repair and maintenance resources?

☐ The passive theory gives pride of place to these problems of wear and tear, cell deterioration and the need to control cancerous changes. Then there is the ever-present force of gravity (why brains and mushrooms are the folded over shape they are), which literally has to be stood up against, the effects of cosmic ray bombardment, and those of mounting errors in cell-replacement: decay.

Unicellular animals (amoeba) proportionately devote enormous resources to cell repair. But after our reproduction phase, 'enough to get by for a while, enough older people to pass on survival techniques', about describes the human physiological trade-off (see Draaisma, 2004). We wear out, then, but only humankind is fully aware of the fact and

able to monitor the decline. Elderly people are particularly aware of this process – not necessarily morbidly, but it preoccupies more in later life. Most fear not so much extinction, but the losses that go with it, and the loss of control that usually accompanies it. Death may well turn out to feel just like the day before you were conceived, but often it is getting safely and comfortably to oblivion that is most feared, plus what happens to those left behind. This is all the more so because of the counterintuitive phenomenon of time appearing to pass more quickly at the stage when we are doing less. Old videotapes provide an apt analogy: when winding them, the end point comes faster and faster.

We can even test these perceptions in the psychological laboratory (see Mangan, 1996). Volunteers of mixed ages, 80 in total, were asked to signal when a three-minute interval was up. The young people in the sample were typically accurate to 3 seconds; the middle-aged subjects were late by circa 16 seconds; the elderly subjects late by circa 40 seconds. However, if a distracting task (e.g. object sorting) was introduced then underestimations were 46 seconds, 63 seconds and 106 seconds, respectively.

We are of course discussing subjective perceptions of time passing. Any student who attends lectures of varying quality and interest will have first-hand knowledge of this 'psychological time' effect. Physiological time, on the other hand, slows down with the onset of old age. Things that were once automatic now require more planning and calculation.

We tend to compare rates of the passage of time with memories from childhood, when, with years and years to spare, we were nevertheless prone to extract the maximum interest out of each then novel set of sensory stimuli. I have never been able to replicate the fascinated fixation brought on by seeing the re-emergence (although it seemed like the *invention*) of colour after the grey years of the 1940s; or been able to recreate the heady, delicious smell of school dinner stew on a winter's morning.

Memory and the size of the memory store are probably the answer to time speeding up in late life (see Draaisma, 2004). Most things are familiar; incoming stimuli bounce around the memory until we decide what they mean. Interestingly, old memories are usually the last to go, whether people can recall what they had for breakfast or not: a *telescopic* effect, where things at a distance seem larger.

What can we who work with older people do with this knowledge of how different the world may seem to them?

☐ The first suggestion is meaningful occupation and gentle stimulation towards new tasks. Occupational therapist colleagues have a growing body of research as to the effectiveness of these (see CEBSS/COT, 2003), if we can integrate and augment their skills across a team into which they are integrated and not just brought in for short sessions. However, remember that occupation is an *option*; there is nothing wrong with quiet contemplation of one's life and loves. Gentle encouragement to join in activities that may well be good for one is different from an institutional expectation that all will do so for their own 'good'.

☐ Research typically shows that cognitive capacities and mobility improve even more where social contact is used as a control for something more specialised.

☐ Tailored exercise programmes produce cognitive gains, increased mobility and improvements in mood.

☐ Reminiscence therapy – tapping into the long-term memories of patients/clients with genuine interest – can create a better sense of identity, time and place, and can improve cognitive performance. Making it genuine and of interest, and not merely a method to keep older people awake, is the challenge (for a systematic review see Woods et al., 2005; on occupational therapy outcomes and deployment, see NICE & SCIE, 2006).

Standing in the way of implementing such research-derived advice are the somewhat artificial barriers of time and money. They are artificial, because we find them for sports injuries, and no one gets a *little bit* of heart surgery for now. Discrimination may not be *intended*, but it is implicitly present in both health and social care policies and service provision. We had better root this out of our expectations and routines, because the number in this group of clients/patients is rising steadily (see p. 233) and, remember, *will* contain us one day – 'nothing more certain, nothing more sure', as Larkin put it.

Sometimes the answers to problems that may stir us in the short-term – such as the abuse of old people – are simple but inconvenient. Screen care staff better, pay them more, train them more, provide better shift patterns, give breaks more often, employ more staff so that work that (political correctness aside) *can* be boring and frustrating is more than a routine to be got through. Above all, accept the psychological fact that human beings do not do well in closed-off circumstances when they have, effectively, near-total power over another group of dependants (see Haney et al., 1973 for the classic psychological experiment). I leave

you to choose as a taxpayer what you would be willing to forgo now to achieve something much better later: the marshmallow experiment on a grander scale.

Grief, mourning, loss and death

Old age is punctuated by loss: of dynamism, of people, of capacity, of independence and, unless we work hard to prevent it, of dignity (see Stroebe et al., 2012). Sisters and brothers, who are an important link with the past, go, not always in proper sequence. Then there is the loss of the person closest to you, first to contemplate, and then to survive. It is all monstrously unfair, often impossible to imagine adjusting to, and the 'good innings' model lets us down. It is *now*, not in the distant future, not even in the near future, but *now*. If God has a plan for us, drawn up with love, then he has a funny way of showing it, is an angry reaction that is common in grief.

Around 10 in 1000 of the population die each year, but it is an end-stage from which we in our fast, youthful culture have averted our eyes. Death has become the last stage of clinical care, not a familiar, natural rite of passage. Surveys show that most people would prefer to die at home, while in fact most of us die in hospital, more or less reliant on strangers (us, or colleagues of ours).

Thus a good death is something that (awkwardly) has to be thought about in advance. This has to be done in the face of robust reactions from relatives – 'Nonsense! You'll be up and about in no time' – and even sometimes from professionals, who cannot handle *memento mori* or to whom death is an insult to their clinical competence.

What does psychological and social research have to tell us about how best to help people cope with the deaths of others or manage their own? This research is difficult to undertake in the usual way (think of what could be put into the control group). We therefore have more theories about this than secure, empirical information:

☐ If clients/patients pick up that you cannot really handle the subject, they usually clam up and so are left alone with their fears. There are ways of encouraging conversations about death (hospice workers do it all the time). They can even be gently initiated: 'What's at the top of your list of worries now?' Sometimes the answer is physical discomfort, or practical arrangements regarding relatives. Most of us (except Dylan Thomas perhaps – and he didn't) wish to die a tidy death, particularly in respect of those left behind. Professionals

should not back away from questions of death, nor should they institutionalise it. I have serious misgivings about 'care pathways', because the end part of them might amount to a watch-checking, self-fulfilling prophecy. I am also against the withholding of fluids and nutrition in terminal cases where there can be no ongoing informed consent.

☐ Philip Larkin was right: the worst fear of almost all of us is the loss of *everything*. Kenneth Fearing's poem 'Dirge', on the disappointments of middle and old age, ends: 'Awk, big dipper; bop, summer rain' (Fearing, 2004). However, in the end, a wish to get rid of serious, continuing pain usually trumps existential concerns.

☐ Pain control in chronic conditions and in end-of-life care is quite well researched (see Miller et al., 2001). There remains, outside specialist centres, a slightly 'anal' attitude to the use of drugs. What exactly is feared? Satiation, or loss of prescribing control if the regime is flexible and controlled somewhat by the patient him- or herself? It is well established that when patients have direct control of pain relief, they use *less* medication. Addiction? Medically connived-at suicide? Surely such illogical concerns must take second place to the moral imperatives of a peaceful end and of 'not striv[ing] officiously to keep alive' (Arthur Hugh Clough, 'The Latest Decalogue').

☐ The best practices of hospice care are a good guide to pain control, particularly their routine use of diagnostic pain scales and their holistic bio-psycho-social approach. Some work has also been done using cognitive-behavioural approaches to chronic pain. The aim here is to help patients to reattribute it. The brain registers pain as suffering and as damage. Panicky responses to it make it worse. Stress control, relaxation methods and reattribution in a regime that emphasises patient control make it more bearable. Such approaches are a useful *adjunct* to good, regularly reviewed pharmacology and help most with the interfering psychological reactions to serious discomfort ('That sense of ruin, which is worse than pain', as Cardinal Newman put it in his libretto for Elgar's *The Dream of Gerontius*).

☐ Fantasies about recovery, either by patients or relatives, should not be confronted, but nor should they be reinforced. Comfort, control and problem solving via advocacy are the remaining tasks. Warmth, genuineness and empathy with an absence of special therapeutic voices show up in research as how clients prefer to be treated (see Sheldon & Macdonald, 2009: ch. 6). Advocacy regarding loved ones and their future well-being is particularly valued as a source of peace of mind.

☐ Some clients/patients have, or rediscover ('there are no atheists in foxholes'), a spiritual dimension to their lives, and having someone appropriate with whom to discuss hopes and fears can provide great comfort. In multicultural Britain some thought may need to be given to what 'appropriate' actually means, although chaplains usually have the necessary knowledge.

In terminal cases one is not only trying to help the client/patient to be at peace, but relatives too. While grief and mourning are normal, they are uniquely painful to most people. It is where the reaction does *not* occur that complications set in. There is, again understandably, more theoretical writing than comparative research, but observational and clinical studies, and surveys conducted with support groups, are still useful. Here are the consensus findings from what we have:

☐ Clients/patients benefit from believable reassurance that their pain and desperation are *normal* reactions, and that they will reduce over time. Talking about the deceased, his/her personality and achievements, although it can lead to temporary upset, aids the process of coming to terms with loss.
☐ Studies, largely based on practice research, suggest that mourning proceeds through stages (see Murray Parkes & Prigerson, 2010; Kübler-Ross & Kessler, 2005). The only problem is that these may not proceed in the given order, and that clients/patients can get stuck at a given point and may need help to move on. The usual stages are denial, anger, bargaining, depression and acceptance (see Table 6.1).

Table 6.1   Stages in mourning

Stage	Characteristics
Denial	'This can't be true, it's a mistake' feelings. Refusing to move belongings, expecting the deceased to reappear. Feeling his/her presence in the house.
Anger	Feelings of abandonment by the loved one. 'Alright for him, he's out of it, but what about me? *Why* didn't he sort out his affairs rather than leaving me to do it?' Guilt-provoking thoughts that the deceased has been 'selfish' somehow.
Bargaining	Particularly in *anticipatory* bereavement, where deals with God, promises to make amends for past difficulties, almost obsessive behaviour is seen, 'shrines', rituals – anything that lessens the pain of loss.

Table 6.1   (Continued)

Stage	Characteristics
Depression	Lowered mood, in severe cases feelings of unworthiness, contemplation of suicide, lack of energy, self-neglect, loss of appetite. Where this is lasting, clinical checks and referral may be necessary.
Acceptance	Slow realisation that some aspects of life are still worth living, happier remembrances of past life together, and that the price you pay for loving is (usually) worth it.

Again, practical help (advocacy) with financial and housing arrange-ments, pensions and so on always show up in client opinion studies as more than the sum of its parts.

☐ 'Being brave lets no one off the grave', observed Philip Larkin in 'Aubade', but the acceptance of death, since there is nothing that one can do about it anyway, eventually, usually, marks the stage of acceptance. Getting to this is greatly helped by having understanding, non-fearful, practically minded, helpers around to harness what support is available from friends, relatives and spiritual advisers.

Given all the different aspects of dying and bereavement, this is a time, the *end of development*, when some knowledge, skill and compassion can make a big difference, and when we need to be at our non-tribal, multidisciplinary best. The rest, sadly, each of us has to do on our own.

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