IMPROVING CHILD SAFETY

DELIBERATION, JUDGEMENT

AND EMPIRICAL RESEARCH

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INTRODUCTION

INTRODUCTION

If you are working in child protection or child welfare making decisions that affect children, young people and their families, or deciding how to organise the local child welfare system, or what programmes to provide in your area, this book is intended for you. It aims to help you deliberate about what you should do to predict more reliably the outcomes of interventions you might be considering and to recognise what evidence you will need for these tasks and how judgement is central to doing them well. Our discussion grows out of systematic research and scholarship but this is no scholarly tome. It aims to be of help to real practitioners and managers making real decisions about real children and young people and wanting to think about how to do this better.

"Evidence" in general usage, including in welfare services, means information that is used to provide support for a conclusion. When social workers form judgements on children's safety, they draw on a wide range of evidence as they think and reflect on what to do. This may include some information from research but this forms – and *should* form – only a small part of the total evidence. They may also draw on what they themselves have seen and heard, on their local knowledge, on theories, on observations that others, including family members, have reported to them and on the opinions of others. All of these become "evidence" when used to support a conclusion. Consider a court report prepared on a

family: it will cite many types of information to justify its decisions about which course of action is in the best interests of the child and, in this context, all of these types of information operate as evidence.

Whether it is evidence is not an *intrinsic* property of any piece of information. It only becomes "evidence" when someone decides that it is relevant to their deliberations. Researchers have found that folic acid reduces the incidence of spina bifida, but this is not evidence if you are arguing for anger management classes for abusive men.

Therefore, the notion that there can be an "evidence bank" – a neutral body of evidence sitting in folders in computers or on websites – is misguided. There can be resources that capture a body of research that those making the selection have deemed might be relevant to policy makers and practitioners in children's services. But any of these studies only become "evidence" when a user judges them relevant to their purposes.

This discussion of what constitutes evidence and where it can come from offers a radically different picture from that seen in current accounts of Evidence-based Policy and Practice (EBPP). This movement is now receiving strong political support for its efforts to increase the role of research in policy-making and practice. In the UK, for example, the Government has established several What Works Centres to collate and disseminate research deemed relevant to different policy areas such as early

intervention in children's lives, education and criminal justice, and a new centre is now planned for research relevant to social work. In the US, federal government funding is given to interventions that have qualified to be called "evidenced". In EBPP, the term "evidence" is typically reserved for describing the findings of empirical research and they are given the label as if it described an intrinsic, enduring quality. This misuse of the term takes the EBPP movement onto a narrow path that distances it from the reality in which practitioners and policy-makers in child welfare make decisions on what to do. We shall offer a better understanding of the role of research within the practical context of deciding and acting, showing how it can play an important, yet minor, role in the whole context in which people are working.

People turn to empirical research because they see the rigour of scientific methods as contributing more reliable knowledge for welfare services. Nothing in this book should be read as disagreeing with this view. The disagreement lies in the size and the nature of the contribution that science can make. Indeed, the EBPP literature seems to have an even narrower focus than empirical research. It has become mainly interested in evaluative studies – "Did this intervention have a causal impact?" – and in how to appraise the reliability and validity of their findings. Many accept a "hierarchy of evidence" where some methods are deemed to produce more reliable findings, giving high value to randomised controlled trials (RCTs) (where the results for the experimental group are compared with those of a randomly created control group who have not received the service being tested). The top

place in the hierarchy is typically given to systematic reviews of RCTs.

This focus on evaluation distracts attention from the many other types of research questions that are of interest to people in child welfare services, including "What tends to happen to people who experience this problem?" (the natural history of social problems) or "What is it like to receive this intervention?" (understanding the experience of the users of services).

How should research be used?

Another preoccupation of the EBPP movement is with how to persuade policy-makers and practitioners to use the studies they have judged sound to inform their decisions on what to do. But, we think, insufficient attention is given to the questions "How should policy-makers and practitioners use research?" and "How can research help them make better decisions?" Rather than starting from the position of researchers trying to convince others of the value of their contribution, we seek to put ourselves in the position of those who make decisions and take actions to promote the safety and welfare of children. What role should research play for them?

The EBPP movement aims to make the task of using research easier by providing appraisals of the quality of studies (and hence of the confidence we can have in their findings) and by disseminating findings that may be of interest to others. Much of

the work can be seen as attempting to simplify the process of using research findings. Simplification is an admirable aim if it is achievable without loss but the efforts of EBPP may promise more than the research results can provide alone. The dangers are twofold. First, a failure to deal with the complexity of causality increases the risk of exposing families to ineffective and potentially harmful interventions as well as increasing the risk of wasting money. Second, insufficient attention gets paid to the crucial role of deliberation in making judgements and decisions. This risks deliberation being undervalued so that time and support for it is given low priority in busy professional lives, which in turn leads to poor quality practice.

Let us first consider the complexity of the causal processes at work in children's safety and well-being. Families are not machines and intervening in their lives has numerous repercussions, both good and bad, intended and unintended. Therefore, there is no simple way to use research to make predictions about what will happen nor a simple way of administering a social intervention. We think that, sadly, making predictions about what will happen in a specific family or group of families requires far more work from policy-makers and practitioners than the current EBPP narrative suggests. They need to do their own research: gather facts about their case and use them to make well-grounded conjectures about what is going on and what might happen under various courses of action. They will also need to find a way to grapple with the complex and open causal processes that will determine what happens.

This reasoning can be done in better or worse ways but it cannot be done by formula or by rote. It requires deliberation.

The role of deliberation

EBPP does acknowledge that there is a role for deliberation in that the "best evidence" from research is seen as just one variable for the decision maker to use. It needs to be combined with the professional's local knowledge and the user's preferences in the deliberative process (Sackett, 1996). However, we argue that its role is bigger than this. The issue is not just that you cannot decide to take a well-evidenced policy or practice off the shelf and apply it to a family based on the research evidence alone: you cannot take it off the shelf and assume that it will work for you. To put it differently, you cannot be certain that when it interacts with other factors in your context it will have the desired effects – no matter how well evidenced it is that the policy has worked sometimes.

Much of the EBPP literature appears to assume a simple, linear view of causal processes, leading to the assumption that if research has shown that "it" works in an RCT then it will work elsewhere, or at least this is the default position failing good reasons to the contrary. Hence the popularity of titles *What works in* .... A closer look at the nature of causality shows that this assumption must be rejected. External validity – whether the results of the study will apply elsewhere – is generally

acknowledged as a problem but most of the discussion of this is too restricted. You are often told that you will need to judge that your context is sufficiently like the one of the RCT. "Sufficiently like" is, however, a challenging judgement to make when working in the social world. Let us list some of the complications.

First, many of the key terms in social research are socially constructed and so vary over time and between contexts. So judgement needs to be made about whether the language of the RCT is sufficiently like your own. Does "mother", for example, have the same connotations? To cite one real-life example, a good post hoc evaluation showed that educating mothers about the nutritional value of food led to improved diet of children in Tamil Nadu. Expecting this result to hold elsewhere relies on the hidden assumption that mothers buy the food or influence what is bought and how it is distributed in the family, which may be true in Tamil Nadu but does not hold true in all cultures as was shown when the intervention was used unsuccessfully in Bangladesh. (For further discussion of this case see Cartwright and Hardie, 2012).

Second, researchers need to hypothesize about how to describe the "it" that they are studying. Considering all the details of what was done in providing a service or implementing a policy, what needs to be written down as relevant and what can be omitted? This cannot be done by simple observation. It requires conjectures about which aspects of what is done have causal significance. Manuals can capture much of the process of providing an intervention but they omit numerous aspects of the work that was

actually done in the RCT. They might, for instance, choose not to mention the day of the week the family was seen in a family therapy intervention because they did not consider it significant. However, this detail can be significant. It seems that it does matter if reporting an intervention to reduce recidivism among prisoners released from jail. Those who are released on Fridays tend to get into trouble at once over the weekend if the support systems are not available, so the day of contact then matters.

Third, there is a limit to how much can be described and prescribed in a manual. Work with families is influenced by factors in the individual workers and family members. While there is a dispute about the strength of the influence, there is general agreement that therapist characteristics have an impact on the effectiveness of any intervention. Equally, there is general agreement that families vary in their willingness or ability to engage with an intervention. So when reading the research, attention has to be given to the features of these groups. And social workers must decide whether, if they were to use the intervention, they would be able to replicate them. The more information the research teams give about which features they think are causally relevant, the easier the task for the users.

The fourth and final type of complication that causal processes create relates to using an intervention in a new context: any new policy or practice, once implemented, interacts with other features of the environment and this can lead to unexpected and unwanted consequences. 'Social interventions are complex systems thrust

into complex systems' (Pawson, 2006 p.35). *The Munro Review of Child Protection* (Munro, 2011), for example, showed how intelligently designed reforms that were sensible solutions to specific problems interacted to produce over time a system that was more and more driven by a blame and compliance culture, an outcome that was both unintended and undesirable.

The way the intervention interacts with the features of a new context creates a challenge for the concept of *fidelity to the model*. Much EBPP literature urges this: do just what was done in the test and don't deviate. There are good reasons for that. First, it is only *that* intervention, done just *that* way, that has been rigorously tested. Second, there is always the temptation to deviate from the model – to take short cuts in various ways, to save money and effort, to hurry for more immediate outcomes, to use less experienced workers – and this can severely jeopardise success. But there is also a very good reason against fidelity: contexts differ and interventions have to be responsive to this. Very often interventions that might well work in a new setting with adjustments to local circumstances will fail miserably if implemented just as they were in the trial.

A complex view of causality fits with the uneven and inconsistent results that are found in evaluations of policy and practice. The headline findings generally report average results but behind the average are a range of results for individuals and families, with some showing little improvement and some actually getting worse. Multisystemic therapy, for instance, has been tested in several

RCTs in many countries and not only has differing results in the overall conclusion of whether it was better than other interventions but also, within the studies reporting effectiveness, there is no consistent set of variables on which progress is found (Littell, 2006).

The first chapter of this book explores these complicated issues about causality and provides some guidance on how to make more reliable predictions about what will work for the family you are working with. It will also stress that even doing it as well as you can and with the best use of research evidence possible, predicting what will happen when you intervene is a dicey matter so it is crucial to monitor for when things are not going as hoped for. The discussion in Chapter 1 highlights the importance of reasoning processes – of how we deliberate, which forms the second key theme of this book.

Deliberation is a core skill in life and professional practice, yet nowadays it gets little explicit attention in discussions of reasoning skills in professional practice or in discussions of EBPP. This was not always the case*.* It has been a major preoccupation of philosophers since the ancient Greeks. Discussion of "deliberation" goes back to Aristotle, who uses βούλευσις (*bouleusis*) to refer to the process which we are setting out here. Both the English and the Greek term are very broad. They refer to the process of thinking about, reflecting on, whatever it is that you need to consider if you are to make a good decision. The process is far reaching and open-ended, drawing on a variety of skills and a

variety of kinds of evidence and other considerations. Many working in child welfare will see that we are talking about a process that is familiar to them although the way we talk about it may be novel. Indeed, talking about it explicitly may be novel.

The relationship between deliberation and deciding and acting is what perhaps most closely defines deliberation and contrasts it with general thinking. Deliberation is thinking that addresses a decision or action. Although deliberation is directed towards deciding, it is not solely to do with what has come to be called "decision-making", nor with following the rules and protocols that control much professional practice in child welfare and elsewhere. Deliberation ends with decisions about what to do. But the character of this sort of decision-making is open-textured, it is not *logical* in the sense of having a formal procedure leading to one "correct" answer. But, as we shall attempt to show, it is not therefore all over the place. It is not true that in deliberating, anything goes because it has no formal logic.

Even when conclusions have been reached about the likely causal impact of an intervention, deliberation is needed to consider whether the intervention *ought* to be implemented since there is always a moral dimension to intervening in others' lives. And attention should be given to the views and preferences of the families receiving the intervention. Welfare services deal disproportionately with the poorest and least powerful members of society and practitioners generally want to avoid adding to their oppression. So deliberation is needed to weigh their contribution in

the balance with the contributions from research and the practitioner or policy-maker's own local knowledge.

Thus the two key themes of this book are *understanding causal processes* and *how to deliberate* to improve the quality of help provided to children, young people and their families.

Can we really do without deliberation?

Our interest in the role of deliberation and professional judgement is, in many ways, out of step with the times. The defensive and compliance culture that was identified in the *Munro Review* has contributed to a culture that seeks to reform practice in child welfare by providing rules and decision aids and by diminishing the role of individual expertise and reasoning as much as possible. In child protection services, this is very well illustrated by the way that reviews into child deaths tend to conclude that human error was to blame and then make recommendations that seek to reduce the role of human judgement (Munro, 2005). Rose and Barnes (2008), in their report of serious case reviews, note the priority given to procedures as the mechanism for improving practice:

> What was marked was the emphasis in the recommendations on reviewing or strengthening existing procedures or developing new procedures. This was supported by the views of some of the respondents that the systems were adequate but the problem was one of staff compliance. There was less

emphasis than might have been expected on issues of
management, supervision, staffing resources and staff
knowledge, skills and experience. The organisational context,
which in some agencies at the time was undergoing major
change, resulting in disruption and discontinuity in staffing,
also rarely featured in issues to be addressed (2008, 88).

Another example of the current trend of limiting or undervaluing
the role of individual reasoning can be seen in EBPP itself. Its
original formulation, based on Evidence-based Medicine, saw
individual professionals drawing on best evidence from research as
one strand in their reasoning leading to a decision on what action
to take. However, increasingly, the term "evidence-based" is being
attached to specific interventions that have shown some positive
findings in one or more RCTs and, often, a practice is called
"evidence-based" if it uses one of these interventions. This
conveys the misleading impression that research can make the
biggest decisions for you about what to do to help children: you
can just consult one of the resources that will list "what works" for
the problem that concerns you.

Replacing individual judgement with rules is a sensible strategy if
you are dealing with an area of work where there is one clear,
uncontroversial way to achieve your goals that can be spelled out
in an instruction manual. If you are trying to mend a washing
machine, then the rule "Put this replacement motor in to solve
problem X" may work very well. However, in child welfare we are
dealing with a very different context. The causal processes

between what the professional does and the impact on the child are very complex, so attention has to be given to the specific circumstances of the situation in deciding what to do. For example, consider the general principle "Seek to understand the child's point of view." This rule is formulated at a high level of abstraction. Because the abilities and needs of children are so varied, following the rule in practice requires a professional to draw on skills and knowledge to decide how best to achieve this with a particular child.

One motivation in writing this book is a concern that those encouraging the use of research may repeat the mistake seen in numerous reforms of child welfare services: over-estimating how much policy and practice can be rule-based and proceduralised and thus under-estimating the importance of the individual's skill in deciding how to use findings from research. The simplicity of having a set of rules to follow is beguiling but judgement, i.e. thinking that goes beyond mere rule-following, is needed in deciding how to use research just as it is needed in practice generally. We are dealing with complicated scenarios where rules cannot capture all that has to be taken into account.

Outline

Our book consists of two main chapters. Chapter 1 looks at the reasoning involved in deciding whether a tested intervention will work for you. It examines the implications a non-linear view of

causality has for deciding which research findings are useful to you, in what ways they can be useful and some of the other things you need to know in order to use them effectively. If causality is complex, then there are serious limits to our ability to predict future human behaviour and hence to our ability to know what will happen if we choose one course of action over another. This limited predictability is disconcerting to those who are hoping to find "what works" so that they can do the same. It is also disconcerting to those who think that sensible use of research results can provide a high level of certainty.

But this limitation should not be taken as a reason for despair: we are able to make some tentative predictions that some options are a better bet. Moreover, understanding the interacting causal processes that will affect the outcomes of our actions encourages us to ask more questions of research. The research websites can tell you that an intervention worked in one or more places where it was evaluated, but the potential user needs to ask a number of critical questions to put this information to use: if it works there, in the study population, will it work here? If it will, what will it take to get it to work here and how can we find out what it will take? If we have reason to think it won't, are there still useful lessons for us to be drawn from the research? How do we find other kinds of well-accredited information that can help us?

This issue is familiar to many in child welfare who are aware that you cannot simply transport research findings about a policy or practice from one place to another. The problem is noticeable in

terms of using findings from the US, where the majority of current RCTs have been conducted, in other countries with very different welfare systems and cultures. One remedy is to repeat evaluative studies on the policy in your own service area but this is expensive and time-consuming. Even if you know the results of a good study in your own area, it will still only tell you average results which is not enough to help you figure out if this policy is likely to work with some particular family. We shall provide strategies that help you form an estimate of whether the policy or practice is likely to work for you. These strategies also have implications for researchers because they highlight the kinds of information that users need that research is currently not directed to investigating.

This view of causality also has implications for how interventions are implemented. If we cannot be confident that our actions will have clear, predictable effects then more attention needs to be given to the ongoing study of what is happening and of how the intervention is functioning in the local context. Agencies are required to collect extensive performance management data for audit and inspection purposes but these are often more concerned with processes than with the impact the service is having on the children and young people it is intended to help. As we shall argue, it is this kind of information about what is happening to the families and children that is necessary to judge whether well-intentioned efforts are in fact having the desired beneficial effects.

The aim of Chapter 1 is to help you judge how to use research and how to implement an intervention. In deliberating about what to

do to help children, young people and their families, of course, much more has to be considered besides causal factors, e.g. morals, rights, resources. But our aim in Chapter 1 is to help you predict if a policy will work in your context and also help you to use research to understand the causal processes that unfold as the policy is developed in practice, so that you can learn and adapt as you monitor effectiveness. While this first chapter on causality will illustrate the central importance of deliberation in practice, Chapter 2 will explore what we know about how to deliberate well and offer advice on how deliberation can be improved.

Chapter 2 addresses the question "If the world is not simple and rules are not enough, then what more is needed?" The key aims here are to explain what is involved in deliberating, to show why it is essential and is not just a poor relation of analytic thinking we must tolerate until we find a way to eradicate it, how it can be done in better or worse ways and how it can be improved. We will begin by discussing the nature of human reasoning in general. Current understanding values both our intuitive and analytic skills and ascribes them complementary roles. While scientific methods rely heavily on our analytic skills, both sets of skills are needed in the total process of drawing on research and providing effective help to children and young people.

In child welfare, professionals need to engage with family members who have agency. They are not passive recipients of a policy or intervention. They react to what is said or done to them and this, in turn, influences what the practitioner says and does.

Research has shown how influential the personal skills of a practitioner can be regardless of the specific intervention used. Their skills (or lack thereof) in engaging, showing warmth, and understanding the family's point of view all can have an impact on the degree of change achieved. These skills require very fast micro decisions during an interview, regarding e.g. what to say or how to move, and hence require the speed of intuition. They can be improved through training and experience but cannot be fully written out in a manual, which implies that manuals for interventions cannot include all the variables that may influence the outcomes of interest. This has implications when discussing to what extent "fidelity to the model" will guarantee the desired outcomes.

This second chapter will explore the nature of deliberation and offer some guidance on the features of "good" deliberation. The topic is familiar to practitioners who are well used to the task of putting together the evidence to argue for a particular assessment and plan for a child's protection and support. It seems to us, however, that the skills involved in such tasks have received too little attention in recent years, with procedures, decision aids and research being presented as the key drivers of improved practice.

In the Conclusion, we consider the implications of the points we have made. What do users of research need from researchers in order to help them deliberate? What questions must researchers answer to help users decide whether studies are relevant to them? How much can we expect research to contribute to the overall

process of working with families and what other skills and knowledge are needed?

Some may argue that we are making the process of using research too complicated for busy professionals to manage. We agree that we are making big demands of you but there are both technical and moral arguments for this. If we want those using services to benefit from the rigour found in scientific research, then we cannot allow some steps in the process of using this research to be simplified to the point where rigour is lost. A chain is only as strong as its weakest link.

CHAPTER ONE: CAUSALITY

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Introduction

As a child welfare practitioner or manager you need actively to
expect complications. A lot of these have to do with what's
causing, or might cause, what. There is an ever present and
bewildering variety of factors that might be causing the problem
you are concerned with. Changes in family circumstances
(independent of any intervention by you) can affect the child's
welfare, create new problems or alleviate existing ones. And any of
your possible interventions may have a similar range of effects;
something may work for one family in one setting but not for
others or in different settings. In child welfare work you are not
just concerned with predicting the consequences of *your* actions
but also what is likely to happen in the family anyway, particularly
whether the child will experience good enough care or suffer
maltreatment.

We aim here to offer some ways of thinking about the complicated
processes that affect the welfare of the child and the success of
your interventions, some ways of understanding and categorising
them so you have a better chance of helping. A great deal of what
we say will be familiar to you. What we hope to do is to make
explicit a lot of your own intuitive knowledge, to bring it together

and to provide a system that brings it together in a way that can help you manage it better.

Box 1.1 summarizes how the multiplicity of these causal factors makes your task complicated.

Box 1.1 The multiplicity of causal factors

Even if you are fairly confident that you have identified the sole or dominant problem you wish to relieve, why you want to relieve it and what would count as success, there will be many factors that contribute to or detract from success, and they are hard to identify.

What you need to do

When you are deliberating about the welfare of a child and the family, you need first to form some understanding of what the problems are. Then you have to figure out as best you can what the causes of these problems are and what is likely to happen if you do nothing. Then you must propose some possible courses of action and consider what would happen under any of these alternatives. Finally, you have to evaluate the upsides and downsides and make a decision (Box 1.2).

Thinking through all the items in Box 1.2 is part of deliberation, which is the topic of Chapter 2. Here we focus solely on that part

of deliberation concerned with the second and third items on the list in Box 1.2 – a better understanding of the causes of the problems and what will happen if you do nothing. Among other topics, we will discuss how a particular kind of research – evaluative studies of interventions – can help you with some of these steps. The best known kind of evaluative study is the use of RCTs to show what difference an intervention, such as the Family Nurse Partnership, has made in study populations to achieving what we are interested in. That has been the focus of the information produced by the many websites that now offer guidance on research for policy-makers and professionals, which we discuss below. There are, however, many other kinds of research that can help – for example, psychological studies that attempt to clarify the impact of child abuse – and other kinds of evaluative studies – for example, longitudinal studies (where a cohort of individuals or families are followed up over many years so that changes and patterns can be seen) and econometric studies (sifting through large sets of data to identify patterns). And there are many other kinds of intervention than those prescribed by programmes. Helping a neglectful family get a garden gate mended so the toddler can't wander into the road is certainly an intervention, because you do something to make the world different, however modestly. Good practice is full of low-level interventions of this kind.

Box 1.2 Making your decision

Working out what will help the family and child you are dealing with requires some understanding of the causes of success or failure of an intervention. You need to

- know where your family and child's problems lie
- work out as best you can what the causes of these problems are
- predict what is likely to happen if you do nothing
- propose some courses of action
- think through
    - ᵒ what would happen under these alternatives
    - ᵒ what the costs and benefits would be
        - ‹› for whom
- then decide the best course of action.

The first, but long and difficult, step is to draw on your causal understanding of the family's problems and on how any proposed intervention will work. In the evaluation literature, this is often called your "logic model" or "theory of change". We prefer the term "causal narrative" because it reminds you that this is the kind of thing you do all the time in everyday life, for instance in deciding whether do the shopping before or after you pick up the children from school. "Logic model' and "theory of change" suggest that the narrative is some kind of formal result that can be achieved by following rules, like a proof. We think it is nothing of

the kind. There are rules of thumb and strategies that can help. But they are just that: strategies. You must do your best to gather as much information from different sources as possible, to consult with others and to weave what you learn into the most coherent account of what is going on with the family and children that you can, and what you expect to happen if you intervene – or not – in various ways. But there are no set procedures to follow in doing so to ensure you get it right. That is why continuing monitoring and review are so important.

We can help you get it right more often in two ways. First, we offer ways of thinking about the complicated causal processes that may be responsible for the problems you identify and the complicated causal processes that may occur when you set an intervention in train. We do this through the use of "causal narratives", which typically involve drawing up "causal maps". And we outline a number of strategies for helping you fill in the details of causal maps so that you can make decisions about what to do.

Suppose that you have identified a problem and are trying to understand the causes of it. You need to produce a causal narrative: a story about what may be happening with the family and the child in his or her environment that is affecting the child, and a story about what will happen once an intervention is implemented, both what follows from what you do and what follows from the actions of others. The rest of this chapter is about a process that can be followed to help you to produce such narratives. It involves using causal maps. These are prompts to

help you focus on the different categories of information that you need to construct a causal narrative about how the problems are being brought about, what might happen when you intervene and what might be the effects for the welfare of the child of changes in family and environmental circumstances that might happen in the future. For concreteness, we will focus on the second stage: thinking about interventions and how they will work. But the strategies we offer for thinking about what will happen if an intervention is implemented can equally be turned to analysing what are the sources of the problems to begin with.

Drawing up causal maps and thinking about how sure you can be about them will help you estimate as you go along how confident you can be in your explanations, predictions and interventions and what the dangers are that they will be wrong. It is unlikely that your assessment will or can take the form of a systematic analysis, with probabilities, of these uncertainties. But as you or you and your colleagues have thought about the problem, you will have become aware of the dangers that this or that step or link may be unreliable, how much it may matter if you have got it wrong, how and whether you can provide a contingency plan against such a failure, and how, as you follow what is happening after you have intervened, you may be able to spot that things are going wrong and why.

Focusing specifically on interventions, and how you can go about thinking through what might result if they are adopted, one thing (but not the only thing) you definitely want to do is to take into

account whatever research evidence is available. There are now a number of good websites that vet and distil one kind of information for you about evaluative studies of interventions. We provide a list of these in Appendix 1.

Our focus is on evaluative studies of interventions not because that kind of research, that kind of intervention or those methods of evaluation are all that matter. Rather, we use these studies as an example to draw out what we see as the central task you have to perform, whether you are a case officer deciding how to deal with this child in this family or the Head of Children's Services trying to decide whether a particular programme will work for enough families in your district to try setting it up there.

Three things you need to figure out

Suppose, as the Head of Children's Services, you have consulted one of these sites because you are considering making a new intervention available in your area. Or, as a practitioner working with a family, you have looked to these sites for more information about the array of locally-funded services that offer specific types of interventions (e.g. positive parenting courses at a Children's Centre or psychoeducation and support courses about violent relationships for domestic violence victims through a local charity) in deliberating what might best help this family. You note that a particular intervention has been shown to have produced in some other settings results of the kind you aim for in your setting. That

is a starting point for your thinking – but just a starting point. We all know that the fact that an intervention has worked in some settings does not mean that it will do so in yours. If it is to help in your setting, either widely with many families or with a specific child and family in a specific environment, there are three things, which we shall explain, that must be true, which you probably already recognize though perhaps not set out in this direct way:

- The intervention must be *capable* of helping to produce the targeted result in your setting.
- The *support factors* necessary for it to do so are there, or you can arrange to get them there.
- Nothing will happen in the setting to *derail* the intervention.

The websites may help a little with this. But they tend to focus more on the evidence that the interventions they review work somewhere, than on these three specific kinds of information which you need to judge if the intervention is likely to work here, for this family. So you and your co-workers will need to think hard about these yourselves. Even where more information is supplied, which many sources are striving to do, putting all the information together and evaluating what it all amounts to for this family will require drawing heavily on your professional and practitioner experience.

Is the intervention capable of helping in your setting?

Interventions don't produce results by miracle, nor by accident. When they work, it is for a reason: because they do something. So the intervention should have some theory behind it. It needn't be a deep theory. For instance, sending fathers to parenting classes might be intended to reduce their beating the child by teaching them other ways to affect the child's behaviour. But the theory *can* be deeper. It may draw on behavioural learning theory to explain why the fathers are responding to certain behaviours in their children (like crying or shouting) with violence, the intervention being aimed at altering this conditioned response. The job here is to understand why the intervention is supposed to work, and the clue is with the word *by*: it works *by* doing x. It is because the intervention can do *that* – for instance, teach fathers to respond in a less violent way when they hear the child crying – that the intervention can help produce the result you want. Let's call this the *role* the intervention is supposed to play.

It is important to identify this role because the very same intervention does not always play the same role in different circumstances. In some cultures, sending fathers to parenting classes may indeed fill the role of teaching them better methods to affect the child's behaviour. But there may be other cultures in which being forced to attend parenting classes is a humiliation. The fathers go but don't take in what they are being taught, they feel publicly belittled and they go home and beat the child. Without substantial cultural change, sending fathers to parenting

classes cannot play the role it is supposed to in this kind of setting. It is not capable of helping to produce the desired result there.

Box 1.4 Step one: Identify the causal role

Is the intervention *capable* of producing the effect in view? To answer that, you will need to understand *how* it is supposed to produce this effect: it does so by doing what? Once you know how it is supposed to work, you need to decide: can it work that way here for this child and this family in this setting?

What support factors are needed?

Suppose your intervention can play the right role in your setting so it is capable of producing the right result. You might recognise this because it has been producing good results on average in families that seem a lot like the one you are concerned about. But that is just an average result. You know it has worked with some of those families and not with others. What can be responsible for the differences? One thing to keep centrally in focus is that even if an intervention *can* work with your family – say, sending the fathers to parenting classes works by teaching them less harmful ways to respond to the child's crying and there is no reason to think this father will not listen and try to take up some of the suggestions if

he attends – still it may not actually do so because some of the other factors are missing that are necessary for the intervention to work as it should – you send the father but he can't get there for the simple reason that the buses no longer run by the time he gets home from work.

The interventions available in child welfare are seldom enough on their own to produce results. They need help, what we call *support factors*. Striking a match is a good way to get a flame. But not if it is sopping wet or there is no oxygen in the room. It is just the same with causes in child welfare, or anywhere else for that matter. The one you concentrate on is almost never sufficient by itself to produce the targeted result. There's always a whole team of support factors needed as well. If you don't have these in your setting, or can't arrange for them to be there, your intervention will not produce the intended result even if it is in principle capable of doing so in this case.

For example, the first Sure Start centres set up in England in the late 1990s aimed to improve the development of children from disadvantaged socio-economic backgrounds. Services were provided as universally available within the locality with the hope of reducing stigma, but in practice this was found to lead to more affluent families using the centres and the most disadvantaged staying away. One of the support factors for this and most interventions is that the relevant people attend to receive the intervention.

Or, consider parenting classes again. One mother we know of had been referred to six different parenting programmes, each one of which had approximately six sessions apiece, and she diligently attended all of them. Yet the problematic behaviours of her child persisted. She hadn't taken in the lessons or changed her own behaviour. One reason for lack of uptake like this can be the parents' beliefs about the cause of the problems. Some parents think that when a child presents behaviour problems – like temper tantrums – the child needs diagnosis and treatment. It is not uncommon to hear parents insist 'Someone needs to fix him'. But generally social services take a different attitude failing evidence to the contrary: a broken child is a symptom of broken parenting. Hence the parents are sent to parenting classes. But the parenting classes won't work without the support of the parents' belief that what they do is central in affecting the child's behaviour. And this is the kind of support factor that you can sometimes get into place, for instance by serious discussions with the parents about the relationship between a child's behavioural problems and the behaviour of the adults who interact regularly with the child.

This highlights the importance in general of the practitioner checking out a parent's understandings and expectations of an intervention, including how it's "supposed" to work, rather than simply prescribing the intervention, which is something that newly qualified workers sometimes do, skipping the explanation and checking-out steps as if the intervention is self-explanatory. This is an essential support factor in almost any intervention's success.

The organisational context is also a major influence on how the intervention is implemented, with local factors sometimes hampering the way people can act. *The Signs of Safety* (Turnell, A. & Murphy T. 2015) approach requires practitioners to spend more time with families than has been the norm in England so that they can engage better with them and motivate them to work to solve problems. Is the organisation able to create different priorities and resources so that this requirement can be met? A failure to scrutinise the wider context in deciding whether and how to implement a new intervention is a common factor in innovations that fail. After reviewing the poor success record in everyday practice of welfare and education reforms that had some research evidence of working, Lisbeth Schorr (1998) commented:

> We failed to see that you can't grow roses in concrete. Human service reformers and educators alike thought the challenge was to develop new ideas, not to change institutions. They assumed an innovation or a 'good product' would become part of a mainstream system because of its merit, unconstrained by the system's funding, rule making, standard setting and accountability requirements – all of which are likely to be inconsistent with the innovation.

Cake diagrams, our first type of causal map, are helpful for representing the support factors that interventions need. Figure 1.1 is an example of such a diagram.

Intervention: Parenting classes
Desired outcome: Better response to temper tantrums
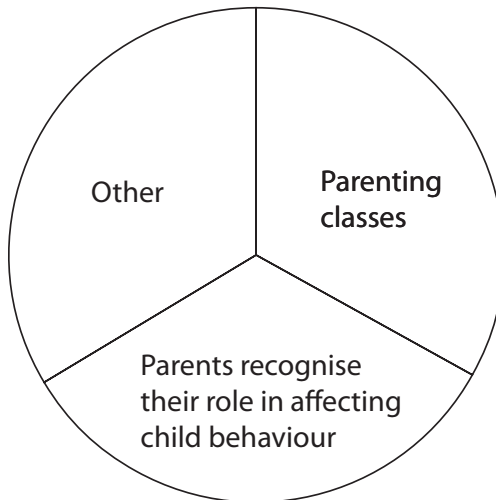
Figure 1.1: An example of a cake map (Causal map type 1)

The central point of these cake diagrams is to get you to focus on the need for support factors. But it is important to recognise that no matter how knowledgeable we are, we will seldom be able to fill in a cake with enough factors to ensure the outcome: that is why you see the large slice marked "other". At best we can hope to understand what is making, or will make, an outcome more likely. The importance of identifying what support factors you need is not then that the set you chart is likely to be sufficient for the outcome – you will almost always miss out some so what you chart will almost never be enough to ensure it will happen. But rather, these factors are necessary. If one is missing and you cannot find a good substitute to put in its place, the intervention won't produce the

outcome you expect. So when you are considering an intervention, make sure all the support factors will be in place at the time, otherwise you won't see the results you want (see Box 1.5).

The same way of thinking can also be helpful earlier, when you ask not whether an intervention will produce the envisaged outcomes but rather ask what is causing the problem in the first place. If you think a particular cause is partly at fault for a problem you have identified, you can check to see if the requisite support factors are there since, if they are missing, it cannot be this cause that is producing the effect after all. If the requisite support factors are not there, look elsewhere for the causes.

Box 1.5 Step two: Identify the support factors

The cause you focus on (the "salient" cause) is seldom enough to produce the result on its own. It generally needs a whole team of support factors to work with it to produce the desired result. So if the desired result is to be achieved you need to identify what the requisite support factors are in your case and ensure they will be in place.

Here are a few important things to keep in mind in using cake diagrams. Many of the things we say here, as throughout the

book, will be familiar. That is true of our approach generally. We want you to use the familiar knowledge you already have from your experience, more richly. The first is that the same salient factor – the same intervention or the same possible cause of a problem – can figure in more than one cake: there is more than one set of factors that can couple with the intervention or cause to produce the same effect. For instance, there are surely a large number of different sets of factors that can couple with substance misuse to make child abuse more likely. So too with interventions.

This is helpful to keep in mind since sometimes a support factor you have identified is missing for an intervention that you might like to try. Yet maybe there is a substitute that you can get into place that will do the same job in supporting the work of the intervention. For example, one support factor for an intervention might be communicating in English with the service user. This may not work with some people, so providing interpreters can be an alternative way of achieving the goal of communicating.

Second, there are more ways than one to skin a cat. More generally, there are almost always more ways than one to produce a given result – more than one set of factors that working together makes the effect likely. Using our cake metaphor: there generally are more cakes than one, each with different ingredients that can produce the same outcome. This is all too familiar in child welfare work, where many individuals will suffer more than one set of factors, each by itself enough to create the problem you are concerned with. This is illustrated by the multiple pathways by

which someone may, as an adult, become a child abuser (example borrowed from Munro, Taylor and Bradbury-Jones 2013).

Consider Person A, who was abused as a child. In this *particular* context, for this *particular* person (Person A), all the factors depicted in Figure 1.2 are necessary to bring about the outcome of becoming an adult perpetrator of abuse. A history of child abuse is by itself insufficient in Person A to cause the effect. It requires all the other factors to be present at the same time in order to lead Person A to perpetrate abuse on a child. This may explain why
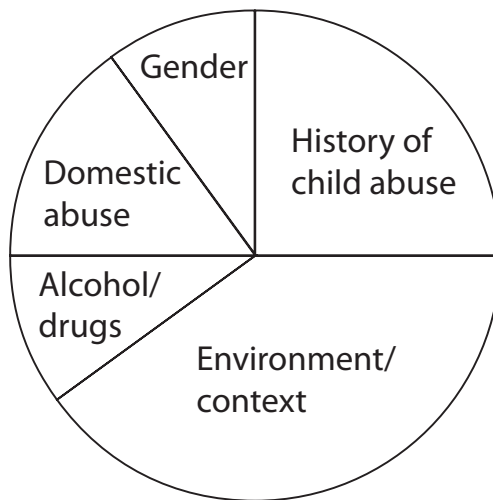
Figure 1.2: A cake diagram for Person A (Abused as a child)

some people go through periods of abusing children in their care and not abusing, because at certain times, some support factors will be missing or present. However, we are not proposing that the

factors that are present for Person A are applicable to all. The conditions vary between individuals, as demonstrated in Person B (Figure 1.3). With Person B a different set of *insufficient but necessary* factors combine to lead to adult perpetration. For Person B, a completely different set of factors is associated with being a perpetrator of abuse. Person B was not abused as a child, but a number of factors combine to create an environment for perpetration of abuse to occur in this particular person's life.

Depression   Learned behaviour

Gender

Environment/ context

Domestic abuse

Alcohol/drugs
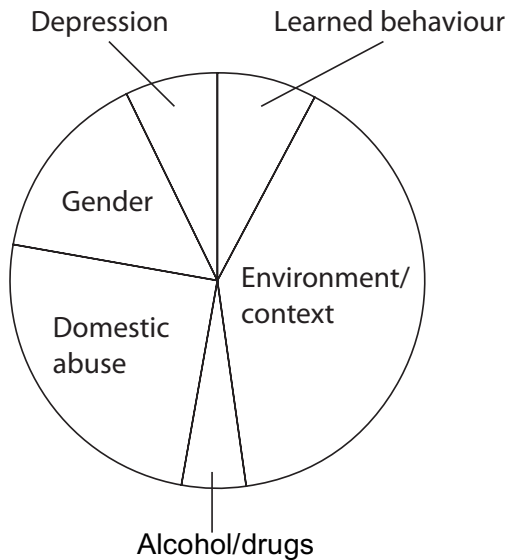
Figure 1.3: A cake diagram for Person B (Not abused as a child)

As depicted in Figure 1.4, Person C, like Person A, has undergone a history of child abuse, but Person C differs from Person A in that other factors never combined with this history. They are separated

out in the cake diagram. For this particular person, adulthood does not include perpetration of abuse upon children. Although some of the same necessary conditions are present, they are insufficient unless combined with others. A whole set of supporting factors need to come together to make the outcome likely.
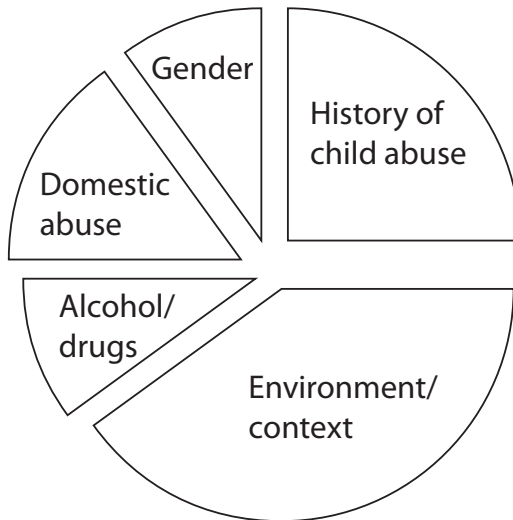
Figure 1.4: A cake diagram for Person C
(Abused as a child: conditions not combined)

However, all of the above are *unnecessary* in the sense that another cluster of factors may be responsible for abuse in another person. So the six factors associated with Person A, for instance, are only *necessary* for that particular person and only necessary for that person when all combined together.

The good news is that the same generally holds for interventions. There is often more than one thing you can do to relieve a problem, supposing of course that all the support factors are in place for each of these. This is familiar but sometimes we can lose sight of it when we are frustrated that a particular intervention we would like to use is not available or, irritatingly, that the intervention is available but not all the required support factors are there. This is one way you can make use of the resources that those intervention effectiveness websites offer. They can alert you to other interventions that might be able to do the same job. And, as always, talking to your colleagues can help you think of something you might have overlooked.

One warning about multiple cakes: suppose there are multiple cakes for the same cause all operating together in the same situation. We may be tempted to think that their influence is in a sense "additive": with two sets of causes each for the same effect, you may expect to get double the effect. But that is often not so. Sometimes two different sets of factors (represented in two different cakes) can interact in a way that heightens or lessens the effects of each. Or they may together have no effect, or even an effect opposite to the one each set would have on its own, a phenomenon known as a "reversal of effect direction".

This is something to keep in mind when you want to predict the effects of interventions. The reversal of effect direction can happen, for example, when several services become involved in providing different types of help to a family with a cumulative

impact not of strengthening the family as intended but of disempowering the parents to the point that they fail to make progress in learning how to provide adequate care themselves or confusing them because they don't know what is most useful or effective to focus on first, as different demands or recommendations from different agencies are not always well-coordinated. (Within Children's Services in England, Team Around the Child or Child in Need meetings are supposed to help with this potential confusion.) It is fairly typical for the overall effect of two interventions deployed together to be considerably less than the sum of what each can be expected to produce on its own. For instance, if the Health Visitor and the Housing Support Worker both provide a supportive intervention, they may play more or less the same role, so that introducing one when the other is already in place may not produce much added value. (An exception might be a deliberate combined approach, e.g. offering a Positive Parenting course combined with training and support to parents in maintaining a strong emotional connection with a child who has learning difficulties.)

This often matters when you think of using in the UK interventions that have had good success in a variety of US settings. In a great many areas of concern, the general level of provision of care for families already in place in the UK, including the wider scope of welfare benefits, programmes through Children's Centres and input from Children's Social Care teams, is greater than in the US, in which case adding the new intervention in your setting in the UK

may not produce anything like the same level of results as it did in the US.

A third thing to note in these cakes is how large the slice marked "other" generally is. Sometimes we can identify a number of the factors that need to be in place if the salient cause is to do its job. For instance, findings on the types of parental problems that reduce the effectiveness of parenting classes give some guidance on which parents are likely to benefit – those, for example, who do not suffer social isolation, maternal depression or extra-familial conflict (Macdonald 2001). Still, even in rare cases like this where we have a good understanding of the causal processes involved, there are very few effects in the field of child welfare where we can fill in the cake well enough to ensure that the outcome is highly probable given that those support factors are present. There is just far too much individual variation.

This is something that we all recognise when it comes to the causes of child abuse. Substance misuse may be conducive to child abuse or neglect but is far from sufficient on its own to lead to maltreatment. Most who misuse substances do not become child abusers. Even when substance misuse is coupled with known risk factors – what we are calling "support factors" within the causal cake – such as mental ill health and poverty, they are far from sufficient and many with this combination will not harm the children in their care (although the issue of significant harm here may be strongly linked to how old the affected children are, and

whether they have enough autonomy to be able to ask for help without the intervention of the abusing parent).

We can easily forget the full force of the lesson when we think about interventions. It applies to thinking about interventions to stop, prevent or diminish child abuse just as it did in thinking about the causes of child abuse. Even when implemented as well as possible with all the support factors we know about in place, they will generally be far from sufficient to produce the result aimed for in all cases. Perhaps the language often used makes this lesson easy to forget: we talk of "causes" of child abuse and of "what works" to prevent it. It is better to remember that good interventions may be conducive to the results you want but that even the best, most effective interventions may fail much of the time. The results are often reported in terms of comparing the average impact in the experimental group with that of the control group and this obscures a wide variation from some who fared much better than the average to those who fared much worse. This is why, in this book, we talk only about interventions "helping to produce targeted results". For example, David Olds' first evaluation of the Family-Nurse Partnership reported effectiveness overall, but that covered significant improvement for low-income families and no significant improvement for wealthier families (Olds 2006).

Fourth, even the phrase "helping to produce targeted results" may be over-optimistic. An intervention that is helpful or neutral for most people may, for some, contribute to a worsening of their

problems. This means that there are support factors that couple with the intervention to produce beneficial results and there are support factors that couple with it to produce negative results, and very often we don't know what either of these are. We are all familiar with the diversity of people's responses to drugs with some having very adverse (even life-threatening) reactions to a chemical mix that is beneficial for most people. The same diversity of response occurs in social and psychological interventions. For instance, in many clinical trials a percentage – 5 to 10% according to Lambert and Ogles (2004) – of those individuals given the "successful" treatment leave the trial worse off than when they came in and in subsequent general use of the treatment these figures can be worse. Another study they cite reports that in the child psychotherapy community mental health settings it reviewed, the numbers harmed were 24% and in managed care settings, the numbers harmed were 14%.

Will your intervention get derailed?

It is clear that however conscientiously you analyse your problem, using for example our cake diagrams, you may not get the result you want. This can happen in several ways.

- *Interruption.* The process may be interrupted, as in our step-by-step diagram (Figure 1.5). Things may be progressing just as hoped when, unexpectedly, something happens to put a stop to it. For instance, the mother's violent ex-boyfriend shows up out of

nowhere and moves back in. But we shouldn't always think in terms of interruptions as intrusions that drop in from outside to block the route to improvement. Sometimes what happens is that a support factor, which you had rightly identified as a slice in a good cake, and reasonably identified as likely to be present, and indeed present at the start, disappears. The grandmother who was giving the children breakfast and getting them off to school quarrels with the mother and stops coming. Interruptions can thus look more like Figure 1.6 than like Figure 1.5. Of course, there is no firm distinction between these two modes of interruption. But they may provide different spurs to the imagination for you.

a.

You recommend parenting classes → Mother enrols → Mother attends → Mother takes in the lessons → Mother attempts to implement lessons → Mother responds better to child's behaviour

b.

You recommend parenting classes → Mother enrols → Mother attends → Mother takes in the lessons → Mother attempts to implement lessons → Mother responds better to child's behaviour
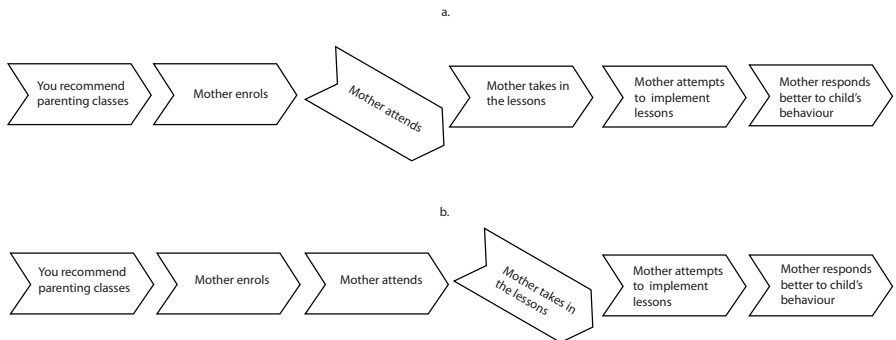
Figure 1.5: An interruption in a step-by-step diagram for better parenting
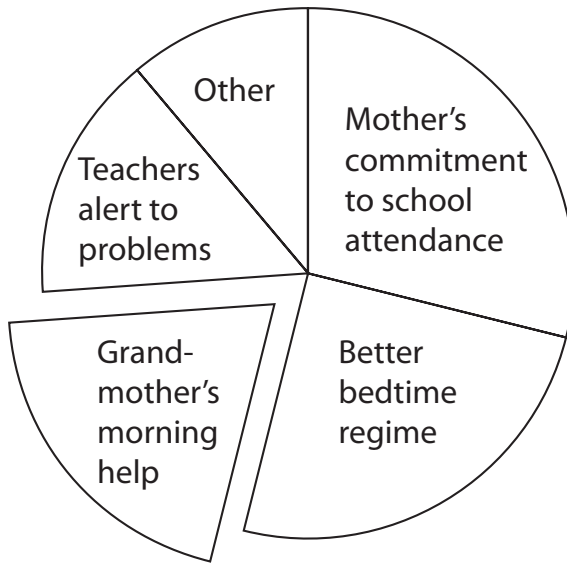
Figure 1.6: An interruption in cake diagram for better school attendance

- *Offsetting.* The beneficial effect of your intervention on the achievement of your target may be offset, overwhelmed even, by bad effects on that same target from other sets of causes which you had not foreseen. Your intervention is indeed a member of a good cake which works (for example, all the support factors are present), and indeed in a sense it does work, but the positive results are not visible because other factors have been present with an even stronger negative impact. You may have achieved a kind of "counterfactual" success: matters would have been even worse had your intervention not been at work. On the other hand,

if an intervention is too weak in the face of the negative effects, it may not be worth implementing. Put your efforts into looking for some alternatives.

• *Self-defeat.* Your intervention may have good results by one route but negative effects on the very same target by another route. For instance, many of the things you do to help parents can at the same time make them feel dependent and unable to act for themselves. So the intervention itself produces a negative effect as well as a good one. And of course you must always watch out for bad side effects of what you do. You may improve the targeted outcome but the situation gets worse overall because of the negative side effects of your intervention. For example, a mother attending a parenting class may make friends with another mother who introduces her to a new illegal drug supplier.

This is of the greatest importance in child welfare. It is too easy to concentrate on the good that an intervention may achieve in the area of the child's needs which are the focus of attention and neglect the risk that that same intervention may do serious harm in an area which you have forgotten to concentrate on. This is another obvious point but it can be lost sight of when the focus is on what works. The danger is not just that your intervention may fail, costing not only lost resources but also dashed hopes. It is also that it may do genuine harm. Removing a child from the birth family may offer the best opportunities of meeting the child's needs but, on rare occasions, he or she may suffer severe maltreatment in the alternative care. An example of this is that in

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Rotherham girls were sent to residential care because it was hoped that they would be looked after better there, but that same intervention led to sexual exploitation in their new homes (Jay 2014).

We need to make clear that these recommendations, and those which follow, cannot guarantee success, nor even guarantee that what you do achieves the best possible chance of success. It is a commonplace in the statistical literature and practical guides which use those insights that we cannot expect certainty and that any interventions we propose will have uncertain outcomes. It is often suggested that this uncertainty can usefully be represented in terms of probabilities. So if an intervention requires the presence of three support factors, then we can attach probabilities to the presence of each of these, and hence calculate the odds that the intervention will succeed. This way of thinking aims to achieve a precise measure of the uncertainty we face.

But we think that the problem of uncertainty is worse than this, and that fact has to be faced. It is not just that we find it hard to attach probabilities to the presence of the support factors. More serious, we don't fully understand how to answer the two key questions about causal roles and their required support. We are always in danger of misunderstanding how things work and how they will work if we intervene, and of not taking into account events which we simply failed to anticipate and see the future significance of. These uncertainties, doubts, or imaginative failures cannot be summarized in a single number for the probability of

success. Two most likely consequences of over-estimating our ability to predict what will work in child welfare are that time and money will be spent on services that have disappointing results and that policy-makers and professionals will become too confident and assertive in telling families that they know what is best for them, thus further disempowering many who already have low status in society.

This is not a counsel of despair. Certainly you can often decide to intervene with a good chance of success. But you must also expect failure, and so monitor progress and plan in advance how to deal with failure if that is what you get. And equally important, you must not expect our suggestions, let alone techniques such as decision trees or cost-benefit analysis, to provide the certainty which you would like. In difficult cases that certainty is not available, nor even clarity about probabilities. This is particularly important in child protection settings where you face the serious contextual problem that professional "failures" are not readily tolerated, which can very much restrict your perspective of the process. When risks are increasing, then tolerance for "failures" (either family failures to produce beneficial change, or professional failures to pick up on signs of increased concern) wanes quickly, and options narrow. Sadly, our advice cannot solve this problem beyond the obvious: monitor, watch for warning signs, have fall-back plans in place and keep discussing with your colleagues to get a range of perspectives.

Strategies for delivering the three steps

So to evaluate the chances that an intervention you are considering will produce a specific result you are aiming for, you need to carry out three steps. The first deals with causal roles, the second with support factors, the third with factors that can derail the process.

Step One

1. Identify the causal role the intervention is supposed to play
AND
2. Evaluate if it is capable of playing that role in your setting.

Step Two

1. Identify what support factors will be necessary for it to work in your setting
AND
2. Evaluate whether those support factors are there in the setting, or you can arrange to get them there.

Step Three

1. Identify what might derail your intervention
AND
2. Evaluate what to do to mitigate the danger of derailment, including choosing another intervention where the one you are considering may be self-defeating.

How do you do all that? There is no formula, no magic bullet. We can, though, describe some strategies that can help. But it is important to emphasise that they are no more than suggestions or hints. None is guaranteed to give you the insights you need, and people will differ in which strategy they find useful for what purpose. Their selection and use therefore exemplify the need for imagination and judgement as an essential feature of the deliberation process needed to deal with hard problems, on which we say more in Chapter 2. And the need for professional and practitioner judgement based on experience.

We shall focus on guidance for helping you see what you need to know when you are trying to predict if your intervention will produce the improvements you are aiming for. But the same lessons help with diagnosis and risk assessment: trying to figure out what is producing the bad outcomes in the first place and what, independent of your intervention, might produce undesirable outcomes in the future.

Here then is the list. All these strategies are designed to help with the steps we have identified. And in each case, the aim is to create a causal narrative by means of a causal map.

- *Consider alternative accounts.* It would be nice if we could in every or even in most or even in the typical case draw a causal map which was plainly the best available, meaning that it dealt better with each of the steps listed above than any of the alternatives. Part of the problem, however, is that the solution, the

causal map, is underdetermined, that is, the evidence available is insufficient to identify beyond argument which conclusion we should reach. In trying to understand why a mother is neglecting the emotional needs of her child, it may be possible to identify some salient factors in her background – e.g. depression, substance misuse – but they are not the total possible explanation. There may be other factors that are causally important – e.g. a new partner unknown to the practitioners who is absorbing her attention.

A general piece of advice is to consult others when trying to think of alternative accounts. Do not rely on your own imaginative policing of your thinking but get other views. This is particularly valuable in child welfare where people can have different background information about both the family and the environment. In the example above, for instance, the health visitor may be aware of the new partner or the child's teacher may have a greater understanding of the family's culture and how this may influence their participation in any intervention. The multi-agency meetings that are a standard feature in children's services can be good places for generating alternative accounts.

Disputes often arise in child welfare discussions where there are rival accounts. For example, in the enquiry into the death of Victoria Climbié it is reported that hospital nurses thought that Victoria showed fear when her aunt visited while the social worker thought she showed the respect that was the norm in her African culture (Laming 2003).

In such discussions, the dynamics of the group is a key factor in how well this strategy works. In many instances, the culture of the group inhibits people from offering alternatives, fearing that they will be seen as troublesome or ill-mannered, so that the account offered first or by the most senior person present goes unchallenged. It is important to avoid premature closure of critical discussion but this may be a difficult task to achieve.

One tip is simple. When you are trying to complete the three steps, revisit your conclusions or your hypotheses as much as time and circumstances allow. And do that not only by thinking it all out by yourself – What might I have missed? Could this fact point in quite another direction? Continue to consult other people.

- *Crystal ball method.* The crystal ball method offers one good way to think about whether your intervention can play the right role and you have the right support factors in place. You ask your team to pretend that a crystal ball shows that in a few weeks or months your new venture will have failed. The team members then write down all the reasons they can think of for why it failed. This method will not identify all the flaws, but it helps us to prepare ourselves and our teams by anticipating some of the problems. This idea was made popular by Gary Klein, who has done a lot of research on how professionals make decisions and act. It offers one very good way to decide if your intervention can play the right role and you have the right support factors in place (Klein 2009).

Setting yourselves the crystal ball task helps to bring out the factors that are needed in the causal map, a more detailed account of *how* the intervention is expected to produce the desired results. It also sharpens people's thinking about the support factors that need to be in place for the intervention to work. One of the strengths of using this method in a group is that it gives a clear message that it is all right to mention risks, to discuss the possibility of the plan going wrong. It encourages people to use their creativity, to look for difficulties, and to be rewarded for finding them. After people have individually made some notes, you go around the room asking for feedback. By starting with the person who is in charge of the proposal, it sets up a clear dynamic of critical appraisal of the plan. This contrasts with a typical scenario where an enthusiastic boss presents the plan to the group and asks if anyone has any criticisms or concerns. People are then frequently reluctant to mention weaknesses that they can see in the proposals for fear of being considered troublemakers or of going against the consensus of the group.

Here is an example of using the crystal ball method. Suppose a team is considering implementing the Signs of Safety (SofS) practice framework in an English children's social care department and there is strong backing for this from the workforce who have seen examples of this way of working. Conducting a crystal ball session, they imagine that one year later the implementation is faltering, with many having been trained but little evidence of change in the direct work with families, although there should have been radical reforms in what was done, in what tools were

used to inform the work, in outcomes for children and in families' reactions to this new way of working. What problems might they think had contributed to this?

As we mentioned earlier, the context in which the intervention is being used is very influential. Signs of Safety is a way of working that requires more time with families, and especially with children, than is typically available in the present system. What might lead to this support factor not being present? A discussion in an agency considering implementing Signs of Safety produced the following possible scenarios:

➢ All the existing demands on social workers' time were maintained at their old level so that working in this more intensive way was something they were expected to achieve in their own time.

➢ Signs of Safety brought additional recording tasks that did not fit with the existing system and so much recording had to be duplicated, thereby increasing further what was demanded of social workers.

➢ Support was half-hearted so that the approach was only partially implemented and this was experienced as unsatisfactory, leading to demoralisation and further reduction in support.

➢ Senior managers failed to value the improved quality of direct work, because of their continued focus on compliance with performance indicators which score outputs, excluding direct work. This diminished social workers' enthusiasm.

Improving child safety

➤ Signs of Safety required a higher level of sharing thinking about a case among the social workers. The current policy of "hot desking" made it hard to create supportive groups of colleagues and there was no systemic model in place, for instance one where everyone within a Unit participates in the weekly review of all cases held by that Unit, to ensure more shared thinking and talking about each case.

➤ Other agencies mistakenly saw Signs of Safety as simply looking at families' strengths and thought it was dangerously prone to overlook danger to children so social workers felt scared to use it in case a tragedy occurred and they were blamed.

Signs of Safety uses tools for recording information when with the family, for example the Three Houses tool is used to find out what children are experiencing and thinking, so Safety Plans are drawn up as a joint venture. This means that social workers need to record information not just when in front of the computer in the office. What might lead to this support factor not being present? Possible scenarios identified are:

➤ Social workers might feel too unskilled to be able to work in such a novel and creative way on their own in people's homes.

➤ The tools are not available. But actually in this case everything is in place for plans to be drafted in the meeting with the family, typed up back in the office, and then taken back to the

family to be signed as a more formal agreement. So this is deemed not to be a risk.

➢ The completed information cannot be uploaded to the child's electronic file except as an attachment which is likely to be overlooked by subsequent readers of the file.

If a crystal ball exercise is carried out in this way, each of these possible hindrances to the effective implementation of Signs of Safety can be examined and thought can be given to how the risk might be mitigated so that the final plan of implementation has a higher probability of success.

Note how ordinary and practical these difficulties are. Particularly when the intervention fails, they are often referred to as difficulties in implementation, suggesting that there was nothing really wrong with the intervention but that it was just not put into effect correctly. We say that the identification of the relevance and presence of the relevant support factors is integral to the intervention and that it is just as important as the grander task of clarifying its causal role. And it is professional and practitioner experience that is particularly good at deliberating about such identification.

- *Thinking step-by-step and thinking backwards.* To estimate whether your intervention is likely to work, you need to set out the support factors. Recall: these are the conditions that have to be met if the intervention is to work here. The members of the list need not be set out in any particular order. It could,

without loss, be randomly. The crystal ball method just discussed involves no particular ordering of the factors. Nor do our cake maps. The factors are not listed in any order, nor do they reflect any order in the process by which your intervention is supposed to produce your desired outcome, and we did not impose any order on them in our thinking. But in this section we suggest that time ordering can help a great deal with evaluating if the intervention will produce the results you hope for, in particular it can help you unearth the support factors necessary for it to work.

One way of thinking about support factors and contributions is analogous to how you describe the workings of a machine, such as an internal combustion engine. In describing the cycles of an Otto four-stroke gasoline engine, you talk about the Intake stroke, which has to precede the Compression stroke, which is succeeded by the Power stroke, and finally by the Exhaust stroke. Each of these is not only necessary for the result, but each has to happen as part of that sequence. It is no good just listing the four strokes in any old order.

Now, we are not saying that Society is a Machine. What we take from this description is that when talking about how to identify support factors it is helpful to think in this step-by-step way through the process that you expect to happen, starting with the introduction of the intervention and ending with the targeted outcome. Drawing on your understanding of *how* it will work can help you think of the different steps that need to take place if the desired outcome is to occur: the mother has to agree to attend,

she has to turn up, qualified staff must be available, etc. Nor do we say that all relevant factors will form part of a sequence. In some cases, it will not matter at all in what order things happen. Sometimes it will matter a lot that this happens before that. So, as with all the strategies here, the step-by-step strategy is offered as no more than one technique that may serve to show what conditions have to be satisfied, and when, for a positive contribution to be made.

The technique is to think through how the intervention leads to the desired outcome. Just what should happen, one step after another, starting with the intervention and ending where you want to be? You can picture this in our second type of causal map, the familiar step-by-step process diagram, depicted in Figure 1.7.
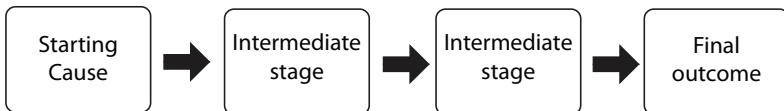
Figure 1.7: A generic step-by-step map (Causal map type 2)

Things can go wrong at every step. And in just the ways we have been discussing. The salient factor at step 2 may not play the right role in your setting to produce what is necessary at step 3 in order to go on to step 4, and so on, or, maybe it can play the right role but the requisite support factors may not obtain then. Focusing on each step, one at a time, can help you to identify what needs to happen, and when, for the next step to follow. Gathering all these

conditions together tells you what you need if the whole process is going to carry off successfully.

You can do this either starting at the beginning with the intervention implementation and ending with the targeted outcome, or by thinking backwards, from the outcome to the intervention. It is often hard to think through the whole process. So sometimes it is a good idea to start at both ends and work toward the middle, hoping to get far enough to meet yourself there.

- *Quick exit decision trees.* Decision trees are a familiar device for helping with figuring out what to do. *Working Together to Safeguard Children (2009),* the statutory guidance on case management in England, has used them in the flow charts on how to manage cases. A "quick exit" decision tree allows you to eliminate some options quickly and so simplify the reasoning task you face. The trees start off with a fork at which a question is asked. Two branches lead off from the fork, one branch of which leads to NO, the other to YES. The NO is a dead end. Suppose the first question is "Have we got the money to do this?" If the answer is NO, you stop. If it is YES, you go on down the branch to the next question. And so on.

If the answer is NO, some decision trees, not ours, lead into another question, such as "Could we get consent?" and then into further alternatives. If one of those generates a YES, then you could be led back to the end of the YES branch of the first fork.

And so on. There is no end to the complexity of decision trees, as the wide variety of software available to guide decision-making shows. But the quick exit decision tree is simple.

Thinking like this, and using this simple quick exit decision tree structure, makes you concentrate on identifying which conditions are not fulfilled, which forks lead to a NO. This makes these trees a good tool early in deliberation when you still have a lot of interventions under consideration. You only need one NO to reject an intervention and move on to consider the next proposal. The quick exit structure encourages you to look for, and identify early, necessary conditions that will appear in many, or maybe all, cakes where your intervention variable appears. It is no good thinking through all the factors needed to make a parenting intervention work if all new interventions need money, and at a time of cuts there is no money for new interventions. You don't have to undertake the daunting task of getting all the necessary factors listed before you look to see whether the intervention will work. Nor do you have to consider factors in any special order. As soon as you hit a necessary factor that won't be there for you (or that you won't be able to obtain), you know the intervention is unlikely to work. That's the beauty of thinking in terms of necessary factors.

For example, suppose you are working in the UK with a family where the children are missing a lot of school and show general signs of neglect. You have noted that the mother is depressed and she and the father quarrel constantly. You suspect this is a major

contributor to the neglect of the children. So you consider urging them to attend couples therapy, which you know is one of the five kinds of therapy approved for treatment of depression in the NHS. But you wonder if this is the best strategy given the other options and the limited willingness and ability of the parents to take on much new. You think of constructing some causal maps for different options to help you decide. It may be best to try a few quick exit trees before getting sunk into the complicated process of comparing options.

Consider a couple of immediate questions. Is the mother depressed? YES, she has been diagnosed to be depressed and there is much evidence of this affecting her interactions with the children. So on to the next. Is the treatment available? All five depression therapies may not be offered in the local area where the family lives, and couples therapy in particular is in short supply. So, Is couples therapy available in the family's area? NO! Okay then, you don't need to think further about that option, you don't need to worry about other factors that might affect the outcomes of couples therapy for the parents: this option is a no-go. (A quick exit tree for this example is illustrated in Figure 1.8.)

| Couples therapy? | Depression? | Availability? |

Figure 1.8. A quick exit decision tree

There is, of course, a more positive use of these quick exit trees. If you have carried on long enough and have covered all the conditions necessary for your intervention to work, with YES at every node, and you can be reasonably confident that you have done so, then you have good reason to believe your intervention will work here in your circumstances.

The quick exit decision tree has the following characteristics:

➢ If fully completed, it provides an unequivocal answer to the question, "Will this intervention be effective here?"

➢ To do that, it sets out all the conditions that have to be fulfilled for the intervention to make the contribution you want, both those about causal roles and those about support factors.

➢ These conditions are set out by asking a question at each fork – is this condition met? – with two only branches: YES/NO.

➢ If the answer is NO, you go no further. The question has been answered. The intervention won't work. A necessary condition has not been met.

• *Negative effects and feedback loops.* Interventions, even good ones, can figure in negative cakes, right alongside the positive ones. The negative cakes will certainly diminish the good effects of the intervention, and can even, if they are prevalent enough or strong enough, outweigh the good effects. You can sometimes unearth the negative effects by thinking through the causal process from beginning to end, step-by-step. This can be particularly important if any of the causal stages in between are

self-reinforcing, so that the outcomes, negative or positive, escalate over time. One good example of where worries about negative cakes and self-reinforcement have arisen was cited in *The Munro Review of Child Protection* (Munro 2011) and is shown in Figure 1.9, which is an example of yet another kind of causal map, a causal loop diagram.
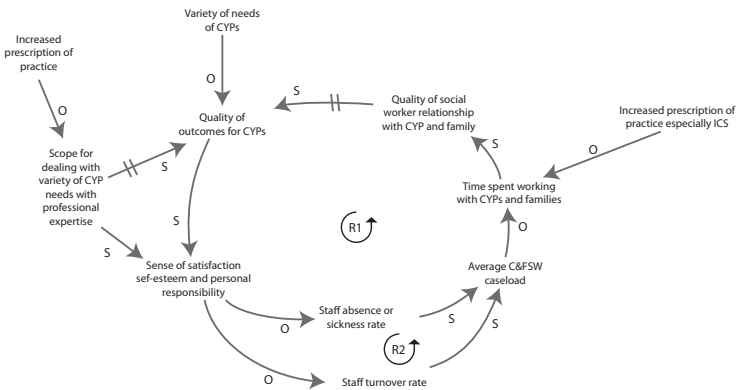
Figure 1.9. A causal loop diagram (Causal map type 3).
Developed in collaboration with Professor David Lane
(Henley Business School)

The original interventions of increasing rules and guidance plus case management software were intended to improve the quality of help received by children, young people and their families by providing stricter guidelines for what social workers must do in dealing with children and families and by better monitoring of what they are doing. This involved ensuring that specific mandated facts about the family and the child were ascertained and recorded and

that various required meetings took place by a set time. But these interventions themselves, the *Review* argues, can have serious negative effects on child outcomes alongside the intended positive effects. How so? Through feedback loops that were positively reinforcing unwanted effects – vicious circles.

If you increase substantially the amount of prescription that you impose on social workers, you reduce their ability to respond to the unique features of each child's life. This, inter alia, can reduce their sense of satisfaction in their work. In the lower chains in the diagram, this increases staff sickness, absence rates and staff turnover rates. These effects can easily result in an increase in average social worker caseload, which then leads to social workers spending less time with the children and young people and their families. This in turn reduces the quality of the social workers' relationships with the children and the families, which then reduces the quality of the outcomes. So the intervention may produce bad unintended consequences. Worse, these negative effects can become amplified via the feedback loops. When the outcomes are regularly too unsatisfactory, this reduces social workers' sense of self-esteem and personal responsibility, and the vicious circle is set in motion again.

The causal loop diagram shows you another of the benefits of thinking through the intervention process step-by-step: you may discover causal loops that will magnify the outcomes over time. Drawing the picture does not tell you whether it is the right picture. Nor does even a very accurate picture of this form tell you

what the support factors are for each stage to lead to the next, nor whether they are present, nor how to find that out. It tells you what the salient factor is at each step that is expected to play a causal role in producing the next step. And it contains no quantities, only the direction of effect. Its big advantage is that it reminds you of the possibility of negative effects alongside the positive ones, and it reminds you that the causal process may not be linear. Feedback loops may unexpectedly enhance the outcome, either for the good or for the bad.

Causal maps: a review and a caution

So far we have introduced three different kinds of causal maps. Let's review what they are and what they are for. Causal maps are our chosen way of constructing causal narratives. On the account we give here, causal narratives can be seen to help with a number of interlinked questions.

1. Is this child suffering significant harm and by whom (as in the case of Daniel Pelka who was abused by the mother and violent partner (Wonnacot & Watts 2014))?
2. If yes, what intervention will provide best outcomes for the child and what might stand in the way of success?
3. Given current circumstances, is significant harm likely to occur in future? (Mother has chucked out the violent partner, so does this reduce the probability of harm or is she likely to acquire another violent partner?)

4. If yes, what intervention will best stop the predicted harm?

5. Are there reasonably possible changes in circumstances that, despite the intervention, might result in significant harm (violent partner might move back)?

6. If yes, what if anything needs to be done to guard against the child thus being harmed?

Causal maps, and the account of their functions which we have provided, help also to clarify what it is to identify a present harm (1. above), and how that differs from identifying a probable source of future harm that exists in the present family arrangements (3. above) or a risk (5. above). If you see a bad result, even before you try to understand how it is coming about, before you start to construct a causal map, you have identified a harm. But if you have observed a number of facts (including maybe that the boyfriend has moved out, but that may not be the end of the problems) and are trying to figure out what the result of them will be, you are trying to identify a possible future harm that exists in the present circumstances, even though there is no harmful result to observe, and for that you have to have a causal map. So too in the case of identifying a risk, meaning the case where your causal map tells you that if one of the facts changes (the boyfriend moves back in), the intervention may turn out to have failed to prevent the harm.

In all these cases, your assessment will be deficient. These deficiencies may be most acute in the third case, of risk, for which the production of good enough causal maps requires even more

imagination. Causal maps come in a variety of different forms, highlighting different kinds of issues. You already have seen three examples of causal maps: cake diagrams, step-by-step graphs and causal loop diagrams. In drawing causal maps, you will of course only be doing your best. The causal processes are so complicated and your understanding of them is so limited and speculative that even if in the end you think your analysis is good enough, and hence so too your choice of intervention, and so too your prediction of its outcome, there will be gaps, uncertainties, guesses, in your assessment. This is why constant monitoring – keeping careful watch – that things are happening as you expect is crucial.

So, as we indicated at the start, drawing up causal maps and thinking about how sure you can be about them will help you estimate as you go along how confident you can be in your explanations, predictions and interventions and what the dangers are that they will be wrong. It is unlikely that your assessment will or can take the form of a systematic analysis, with probabilities, of these uncertainties. But as you or you and your colleagues have thought about the problem, you will have become aware of the dangers that this or that step or link may be unreliable, how much it may matter if you have got it wrong, how and whether you can contingency plan against such a failure, and how, as you follow what is happening after you have intervened, you may be able to spot that things are going wrong and why.

Getting more sophisticated

The kinds of causal maps we have described so far are only a sample of ones you might find useful. Different kinds of causal maps highlight different features of the causal processes responsible for the outcomes you ultimately see. It is difficult to illustrate everything you might want to think about in one single map. The more different kinds of features one wants to treat, the more complicated the maps become and the harder they are to read. But sometimes you will want something more sophisticated than you have seen so far here. Appendix 2 provides some further exemplars, especially of maps that combine different considerations discussed here. Do have a look there to see what kinds of things are available when you need them.

What you can learn from "What Works" websites

We have been providing strategies to help you think through what is happening to produce problems for the family and children and what might be the outcomes of actions you consider taking or that others may take in the future. There are various resource centres that can help in thinking about what interventions might help. In Appendix 1 we list a number of sites around the world that provide this service. This information can be very useful but, as we have already said, it is only a starting point, it cannot replace the need for thinking through the causal narrative of what is happening to the family and the child, what might happen in the future and

what would happen were one or another of these interventions adopted.

Just what can you learn from websites on research evaluating intervention effectiveness like those in Appendix 1? The important thing to note about the studies vetted in these sites is that the results that are established with high degrees of confidence are *averages:* the average effect of the treatment across individuals. This matters to you in two different ways, the first of which is familiar, the second may be less so.

Suppose, first, that you are thinking about an individual child or an individual family. You know that where there is an average, there is often a lot of variation that goes into that average. For some individuals who make up the average the results will be very good; for some, much less good; and for others still, the intervention may make matters worse. So you know you can't just assume that the results for the child or the family you are dealing with will be close to the average.

What is responsible for this variation? Whether you are considering interventions or causes of harm, one thing that certainly matters for the outcome for an individual child and his or her family is which of the support factors for that intervention or that cause are in place for that child and family and to what degree. And it can easily be shown that in any given population, the average outcome from a cause will depend on variations in the presence or strength of the support factors across the individuals in that population.

This is why it is so important for you to think through what you know of the support factors necessary for getting the effect in question and to map out how they stand with the specific child and family you are dealing with.

Second, suppose you are thinking about a particular population of children and families. Maybe for instance you are considering making an intervention available in your district, such as the Triple P Parenting Programme for helping parents provide good care to their babies. Can you expect the same average in your population as in the study?

What a study can establish is an average over the individuals in the study. Even if it is a very large study and very well conducted, the average is still only for the study population, in the circumstances in which the study was conducted.

To think about the import of this it helps to recall what we said just, that the average treatment effect of an intervention in a study population is a function of the distribution in that population of the support factors that cooperate with the intervention to produce the outcome there – the other ingredients in the causal cake. And similarly, whatever average you will get in your population depends on the distribution of support factors that you have in your population. Both these claims are provable. But once you think about support factors these results are obvious. Some combinations of support factors help to improve the outcome far more than others and some may make it worse. The average

outcome must depend on how these are distributed. And you cannot expect the same average in your population as in the study if your population has a different distribution of support factors than the study population has.

You might think matters become easier if a number of studies have been done. But how? If they are done on very different kinds of populations and all have roughly the same result, this can be grounds for thinking the distribution of support factors is much the same across populations. This is the ideal case that those who design interventions aim for: they try to build into the protocol so many of the requisite support factors that the intervention is likely to work the same anywhere it is carried out according to the protocol. But this is very unusual. Generally, the results are different, and often very different.

There are some statistical strategies that could be followed to deal with differences in studies on different populations. Perhaps one of the What Works sites has made available the results of a meta-analysis across the studies. What that will essentially have done is to take the average of the averages. Or it may have been possible to construct some kind of curve for the distribution of the averages, in which case you might be advised to suppose that your population is a random draw from that curve. Should you adopt either of these strategies? That depends on what you know about what it takes to get the intervention to work, which depends in part on what you know about how it works. It also depends on what you know about your population and about how the support

factors it takes to get the intervention to work are distributed in your population. Perhaps if you know nothing at all, "take the average of the averages" or "do the random draw" is the best you can do. But then you should not be very confident in your predictions about what the average will look like in your population.

If where your family will fit in the distribution of results – how near or far from the average and on which side – depends on support factors, what research results can help you identify these? Before considering that, let us remind you that scientific research is not all you need, and for some support factors you do not need it at all. Some of the support factors for a cause are obvious, so obvious in fact that it is easy to overlook them. As we have pointed out before, if parenting classes are in the evening some distance away and the buses don't run there after 6 p.m., parents without cars may well have poor attendance. That's why we try to focus your attention on the big slice in the cakes marked "other" – to remind you to think about these simple obvious but often overlooked factors. Other factors that matter for families like yours may have been noticed by other social workers working with similar families.

When it comes to using research results, consulting the "logic model" or "theory of change" for an intervention, where it has been made available, can be helpful. The logic model for the intervention is supposed to do much of the work for you of constructing a causal narrative for what should happen if the

intervention is to be successful. It is supposed to lay out step-by-step how the intervention is expected to produce its result. Thinking seriously about that process can help you figure out some of the things that your family and its environment would need to have in place if that process is to carry through properly.

Increasingly you may also be able to turn to the What Works sites themselves. The Campbell Collaboration, for example, now have the more challenging motto not about "what works" but about 'what works, what harms, for whom, under what circumstances' This is the kind of information that will help you make better decisions. We urge you to take it into account in your deliberations whenever it is available. And when it is not, press the What Works sites and research boards to put more effort into producing it.

What we have not discussed here

Dealing with the multiplicity of causal factors, as set out in Box 1.1 in this chapter, is a central part of deciding what to do. But there are a number of problems that have to be dealt with before you get to this point that we are not discussing in this chapter. Here are five.

• *Comorbidity.* Children and families in which there are concerns about the quality of the parenting often suffer from a variety of mutually reinforcing problems. It is rare to find in child welfare the paradigm case often believed to be met in medicine –

of a single problem that can be treated by a single intervention in isolation, without feedback and interaction with other problems and other interventions. So easy identification of a sole problem is not the norm.

- *Multiplicity of values and objectives, typically incommensurable.* Particularly where there are multiple stakeholders, but not only then, what is to be achieved, what counts as success, is contestable. For example, parents and social workers may disagree on acceptable parenting styles. Again, the default medical case – where curing the disease is the readily agreed objective – is in child welfare a special or limiting case. So easy identification that we want to relieve this particular problem and of what would constitute success is not the norm.

- *Multiple participants.* The child's problem may be part a family problem, a community problem, a school problem. Each of these participants may matter as part of the causal structure of the problem and as a stakeholder whose interests have to be taken into account. So easy identification of, for example, the child as the sole stakeholder is not the norm.

- *Unintended consequences and side effects.* Most policies and interventions will have these, some beneficial, many deleterious. And you need to think about them. The kinds of "causal maps" we introduced you to provide a framework for laying these out. But our hints and strategies may not be of much

help in filling in the maps. That's because our strategies are most useful for thinking about a particular identified effect and very often we have little idea what the side effects might be in order to start thinking about issues like what support factors enable their production.

- *Often the problems you confront are composed of a number of effects with possibly overlapping sets of causes.* Some of the factors that contribute to them will be shared and others not. Don't let our causal maps mislead you into thinking about single effects one at a time. Addressing causes that figure in multiple effects can be an efficient strategy for improving matters. On the other hand, these may not be the most accessible factors, nor the ones most open to change.

The strategies we describe in this chapter are of most use when you are reasonably confident what problem you want to relieve and you are trying to think through the causes of it or evaluate different strategies to deal with it. It is much harder to evaluate, let alone think up, strategies to deal with comorbidity, multiple participants and multiplicity of values. Indeed, the last two are scarcely to do with causal principles. We discuss in greater detail in Chapter 2 on deliberation some of the consequences of these and other complications for the process of deciding what to do.

Conclusion

In child welfare, you are dealing with complicated causal processes and this, we have argued, means that you cannot simply assume that an intervention that produced positive results in a study setting will work in the setting you might use it in. Although the task of using research findings is more challenging than many would like, we have offered guidance on how to handle the challenge. We have proposed a number of strategies for helping users create causal maps that bring out what factors are needed to make an intervention likely to succeed in the new setting. One recurrent theme in the strategies is the value of doing this as a group exercise, of seeking the views and insights of others. The strategies also underline that researchers need to provide a great deal more information about the context in which their study was conducted.

The arguments of this chapter lead to an important conclusion about what we ought to expect from research, and the gap between that and what we get. The Campbell Collaboration's aim to provide research on 'what works, what harms, for whom, under what circumstances' requires that professionals and practitioners be provided with relevant facts based on research about among other things the causal roles and supporting factors on which this chapter has concentrated. What we say in Chapter 2 on deliberation widens still further what we need from research if we are to make good decisions. It is plain that EBPP research at the moment by, for example, focusing heavily on RCT results, has a

much narrower focus than that you need to carry out your work. It is important that professionals and practitioners be more assertive in making clear what research should do to provide evidence for practical use.

CHAPTER TWO: DELIBERATION

CHAPTER TWO: DELIBERATION

Introduction

Chapter 1 talked about how to deliberate about what effects to expect from different courses of action. It was only about causation. Here we are going to talk about what good deliberation looks like more generally.

To anticipate, the process of deliberation is more than just plain thinking. It is to do with reflectively and purposefully turning something over in your mind by making use of the insights provided not only by analysis but by intuition, emotion, experience, as well as the strategies and heuristics mentioned in Chapter 1. We do not limit our definition of deliberation solely to analytic procedures.

Nowadays deliberation is sometimes associated with "abduction", that type of practical reasoning by which conclusions are inferred on the basis of information which is limited but the selection of which is not restricted by codified rules as to what is required for the inference to be valid. Despite sounding like "deduction" and "induction", abduction is significantly different from either of them. With deduction and induction there are rules about what moves are acceptable. To challenge a deductive inference one can either question whether the premises are true or whether the rules of

inference have been followed properly. However, if neither of the two above are disputed, then it would be irrational to reject the conclusion of a deduction. In inductive reasoning, the premises are offered as support, not absolute proof, for the claim made in the conclusion, so the strength of the support they provide makes the conclusion more or less probable by familiar schemes of inference, many of which are taught in elementary statistics courses.

Following such rules of inference has the seeming advantage that we know what to do: we draw the conclusion indicated by such rules. However, it has a closely associated drawback: rules of inference dictate not only what the outputs should be, but also what kinds of inputs to use. They say: from information like this draw this conclusion. So they necessarily limit the scope of what you consider. By contrast, when we deliberate abductively we do not restrict ourselves to pre-set inference schemes which, by their very nature, restrict the kinds of information we draw on. The idea is to put all the information we have together in the best way possible to make as coherent an account as possible, that is to create a *credible narrative* in the light of which a conclusion will become plausible. The causal narratives of Chapter 1 are an example.

In the ideal, a narrative would make sense of all the facts we know in a coherent and reasonable way. In practice, we will almost always have to make do with one that is fairly consistent, covers most of the relevant information and is plausible (that is, which hangs together and portrays the human characters in a coherent,

believable manner). What matters is to recognise that a narrative should at least confront all the facts we can come by, of whatever kind, and that it can neither be constructed nor evaluated by rule.

This, for example, is what professionals do when they try to decide how to deal with a referral alleging that a child is being maltreated. After gathering information about how the family is functioning, they will deliberate about how well the known facts support this allegation. What facts tell against it? What alternative explanation might fit all the known facts better? What facts that we don't know might make a difference and how can we find them out?

As with abduction, there are many aspects of deliberation that cause discomfort: its lack of precision, our inability to provide a set of rules to deliberate well, the fact that we can judge the plausibility of the final narrative that is constructed but cannot guarantee its truth. This means that no matter how careful we are, we can never predict the future with even near a hundred percent accuracy and thus will not be able to guarantee the safety of all children.

Some see deliberation as a poor imitation of deduction and induction, a second-best that we have to use until we manage to find formal methods of reasoning that fit our particular problem area. However, we argue that deliberation is inescapable when dealing with the complexity of the social world. This is a point that will be readily acceptable to those involved in front-line practice in

child welfare services. Theorists and managers generally need to simplify the world to formulate precise theories or policies. However, those tasked with putting these theories or policies into action are more aware of, and have to take account of, the diversity of the real world and the complex interdependencies of human affairs. A policy may, for example, set out clear criteria for a potential user to be eligible for a service. However, few – if any – service users will match those criteria precisely and all will have other features that, to the front-line social worker, may make their need for the service more or less compelling. It would be wrong to exclude such features just because they are not covered by the pre-set criteria.

To understand better the process of deliberation, we shall first give a brief summary of some current neuropsychological and neurophysiological theory about how human beings process information, that is, how we reason. This will provide a useful background for discussing how professionals interact with families and with each other, how they deliberate in professional practice, how this practice can be improved and its accuracy appraised.

How humans reason

It is broadly accepted that we reason in two distinct ways: intuitive and analytic. However, recent research in neuropsychology and neurophysiology gives us a greater understanding of how these

two kinds of reasoning function and helps overturn some of our deep-seated assumptions about rationality.

We do indeed have two ways of processing information and hence of making sense of the world around us. Humans have two distinct minds within their brains: one intuitive and the other reflective.

The intuitive mind is old, evolved early, and shares many of its features with animal cognition. It is the source of emotion and intuitions, and reflects both the habits acquired in our lifetime and the adaptive behaviours evolved by ancient ancestors.

The reflective mind, by contrast, is recently evolved and distinctively human. It enables us to think in abstract and hypothetical ways about the world around us and to calculate the future consequences of our actions (Evans 2010).

In practice, most cognitive tasks involve aspects of both our analytic and intuitive reasoning skills and, rather than viewing them as a dichotomy, it is more appropriate to think of a cognitive continuum, with different tasks using a different combination of each type (Hammond 1996). Intuition is sometimes presented as a mysterious process but its physical location and the features of the process are increasingly understood. It is only mysterious in the sense that it is generally an unconscious process that occurs automatically in response to perceptions, drawing upon memory and integrating a wide range of data to produce a judgement in a relatively effortless way. With developing expertise an individual

can draw upon an increasingly rich body of wisdom gleaned from experience.

So, for example, the experienced professional recognises that the atmosphere in a family is cold and critical on the basis of experience and the unconscious observation of a number of cues. Intuition need not remain unconscious but can often be articulated to some degree, and it can often be improved with practice. Supervision of casework typically involves helping professionals draw out their reasoning so it can be shared and reviewed. Indeed, one of the features of professional practice in the helping professions is the need to explain and justify your reasoning to those receiving the service and to those who, on behalf of society, are checking your work, for example inspectors, judges and magistrates. This scrutiny has intensified since the 1980s as, for a variety of reasons, society has less trust in professionals (Power 2007). Therefore, professionals cannot operate only at the level of intuitive understanding but need to be as explicit as they can.

Analytic thinking, in contrast, is conscious and controlled. It uses data and rules to deliberate and compute a conclusion. It is restricted by memory and by its own processing capacity. It is time-consuming and effortful. It develops with age and is vulnerable to the ageing process.

The dual processing capacity of the brain means that how we reason is not an "either-or" question. Emerging evidence supports the view that the intuitive system that provides quick, holistic

judgements is always in operation, and that these judgements are then 'supplemented - or sometimes overridden - by the output of the more deliberate, serial and rule-based system' (Gilovich, Griffin and Kahneman 2008). Kahneman, in his excellent summary of current thinking on this topic, points out how much this account of human reasoning differs from the general view in Western culture:

> In the unlikely event of this book being made into a film, System 2 [analytic thinking] would be a supporting character who believes herself to be the hero. The defining feature of System 2, in this story, is that its operations are effortful, and one of its main characteristics is laziness, a reluctance to invest more effort than is strictly necessary. As a consequence, the thoughts and actions that System 2 believes it has chosen are often guided by the figure at the center of the story, System 1 [intuitive reasoning] (Kahneman 2011).

The differences between the two modes of reasoning are summarized in table 2.1.

The importance of emotions

Those working in the helping professions have always been aware of the importance of emotions in practice, but it is not so obvious what that importance amounts to, and whether and how emotion should enter into deliberation.

Intuitive reasoning	Analytic reasoning
• Unconscious and automatic • Large processing capacity • Draws on wealth of wisdom about the social world (including prejudices and discriminatory assumptions) and on expert knowledge • Looks for patterns • Emotion-laden • Fast: uses shortcuts/heuristics • Biased: because uses shortcuts/heuristics • Acquisition by biology, exposure and personal experience	• Conscious and deliberate • Effortful • Slow • Limited capacity • Logical, linear thinking • Built on intuitive reasoning • Draws on formal knowledge • Can be readily made public • Acquisition by cultural and formal tuition

Table 2.1 Differences between intuitive and analytic reasoning

First, there is the easy point that the emotions of a family member – the anger of the mother or the depression of the father – may be a relevant fact that deliberation has to take account of in coming to a decision. It may be that anger must be controlled or depression treated if the family is to function better. The presence of certain emotions may also make the practitioner wonder what is going on in some circumstances. Why is the mother so angry? What is it about the behaviour of the child that is so intolerable?

Answering these questions may not be easy, but taking all these aspects into account should be uncontroversial: they should not be dismissed just because they concern emotions.

However, what is more controversial is that the emotions of the practitioner deserve respect. Western culture has tended to see emotions as a nuisance, something that interferes with the operation of pure reason. However, much current thought in neuropsychology is now challenging this view and accepts that emotions are necessary for good reasoning (see, e.g., Damasio 2008). Emotions prepare us for action. They help us to categorize the world and simplify the task of making sense of whatever we are dealing with.

Emotions are different from feelings. A feeling is the private, mental experience of an emotion. According to Damasio, emotions are

> complicated collections of chemical and neural responses, forming a pattern; all emotions have some kind of regulatory role to play, […] emotions are about the life of an organism, its body to be precise, and their role is to assist the organism in maintaining life (Damasio 2008).

A simple example of how emotions help us decide well is the fear that makes us recoil without thinking from the sight of a snake in our path. More generally, Damasio's theory of emotions as "somatic markers" proposes that, when faced with a decision with

many options, emotions "mark" certain avenues as worth exploring, thereby directing attention and reducing the complexity of the task to a manageable size. The experienced professional, for instance, when considering how to intervene in a family, will select some options instantly as feeling more likely to be useful and so focus their attention on determining whether to use them.

So if you feel disgust or anxiety, you should not dismiss such emotions as irrational. Rather, these emotions may be telling you something about what is going on, and you have to ask what it may be. That process can be conscious and maybe even systematic, but as it takes place, your emotions will remain in play – you may for example become more anxious as you get to see what produced your response, or you may become calmer as you realize that you misunderstood what the child said. Anyway, your emotions will continue to matter, and the task is not to explain them away but to see what information they are conveying to you.

Certainly, emotions should not be ignored, but they should not be treated as authoritative either. It is not enough to assert that you know what you feel, what your instinct is. You have to check as best as you can whether the somatic marker is marking the right thing. Even in the apparently unequivocal case of the snake you must remember that it may be a stick.

A third area in which emotions matter in deliberation is that of so called emotional intelligence. This is employed in listening and building empathy, understanding the effects of non-verbal

communications and of reaching self-awareness of how the work may affect you emotionally:

> It is increasingly clear that the most troubling and intractable situations exist when performance difficulties occur in the context of staff who lack accurate empathy, self-awareness and self-management skills… In the worst cases, these become almost 'toxic' in such a way that whole teams or even agencies can become enmeshed in the distorting dynamics surrounding the individual staff member (Morrison 2007).

Similarly, emotions are *automatic* bodily responses. We do not *choose* to feel frightened if a service user threatens us. Our body reacts and this impinges on our thinking, whether we like it or not. If we do not acknowledge our fear, there is a danger that our intuitive reasoning will unconsciously target options that lead us to avoid seeing that person again, even if this is actually necessary for the safety of others.

These points take up in a more constructive way the suspicion that emotions may indeed lead us astray. It is risky to make a decision when you are angry with a service user or resentful of a colleague, just as it is risky if you are tired or jetlagged. Box 2.1 summarizes the role of emotions in child welfare deliberation.

Box 2.1 The role of emotions in child welfare deliberation

Emotions are an automatic response to cues in the environment, so we cannot simply advise people to have no emotional responses.

Child protection work entails strong emotional reactions in practitioners and family members. Seeing a scared, unhappy child being threatened by a parent, or being a parent threatened with the possibility of losing their child, trigger powerful emotional responses.

The potential for emotions influencing reasoning has long been recognised in the helping professions. Our emotional responses to a family can be a source of evidence about how it functions: if feelings of despair or helplessness are triggered in an interview, this may be telling us about the mental state of the interviewee. They can also be harmful: feeling compassion for the mother making valiant attempts to solve problems regarding her child can prevent the professional from seeing that the quality of child care is still unacceptable.

The considerable literature on working with emotions in professional practice echoes a point we have made before: share your responses with others and use them as a sounding board or challenger to minimize the chances that your emotions will distort your reasoning.

Common biases

Analytic reasoning is slow and effortful while reasoning involving intuition and emotions is fast. This is possible because of the use of heuristics to simplify the calculations. These are rules of thumb that are very accurate but sometimes wrong. The "gut feeling" we can have when we make an intuitive judgement about a situation or person is worth paying serious attention to but should not be treated as infallible.

There are a number of predictable ways in which professionals may err in child welfare work and there are also a number of strategies that can detect and reduce the incidence of such biases (Munro 1999). The most common biases found in child welfare are listed in Box 2.2.

Individuals cannot stop themselves from having these biases in their reasoning but they can know that they occur and so can take steps to try and detect them. Box 2.3 lists some of the strategies one can employ to mitigate the common biases listed in Box 2.2. We shall return to the issue of bias when discussing how skill in deliberation is or can be developed.

Box 2.2 Common biases in child welfare

• *Confirmation bias*: holding on to beliefs despite new information that tells against it

• *First impression bias*: the first impression of a family can shape the future interpretation of information about them

• *Availability bias*: being selective about what information to consider, with most attention being given to information that is vivid, concrete, emotion-laden or recent

• *The fundamental attribution error*: the tendency to explain other people's behaviour as due to internal personality traits with insufficient attention paid to the context in which they act

• *The hindsight error*: once it is known what happened, there is a tendency to overestimate how obvious it was – or should have been – to people beforehand

How professionals and family members interact

Empirical research can be seen as fitting the analytic mode of reasoning: it aims to be explicit and logical. However, to use its findings in direct work with families involves having a relationship with family members. Talk of "relationships" in the helping professions is often linked in people's minds with

psychotherapeutic methods of helping. We are, by contrast, using it in the much broader sense of an interaction between a family member and a practitioner. In this sense, having a relationship is not an option – a choice of how to interact – but an unavoidable

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Box 2.3 Common biases and deliberation

Knowing that biases can occur does not stop you being vulnerable to them. All attempts at reducing them seek to notice and counter them rather than prevent them from happening. Most of the strategies involve trying to consider alternative perspectives or explanations and this is best achieved with help from others.

• The *confirmation bias* pervades human reasoning and strategies to counter it typically take the form of requiring others, sometimes a designated "devil's advocate", to challenge a conclusion or argue for the opposite conclusion.

• The *availability bias* can be reduced by asking professionals to consult checklists that help to capture the items they have overlooked.

• The *fundamental attribution bias* can be lessened by thinking about what *you* might do in similar circumstances.

• The *hindsight error* can be countered by seeking to understand what the world looked like at the time to the people taking the course of action that, with hindsight, seems so misguided.

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dimension of working with other human beings. Children, young people and parents or carers are not inanimate objects on which we can have a one-way influence, but dynamic people who will *interact* with any practitioner, bringing their own interpretations and responses to the practitioner's behaviour and words. Moreover, the type of changes sought in children's services ultimately come down to family members altering their behaviour – to a mother, for instance, showing more responsiveness to her child's emotional needs or a father learning to control his temper. Hence the work inevitably involves "working with", not "doing to", families to co-create the outcome. So the findings of research must be combined with the practitioner's skills in interacting with, engaging, motivating and making sense of the material they are learning from a family.

All solutions, however, have limited success. Intuitive reasoning produces a strong sense of confidence in our judgements; they "feel right" and this is hard to eradicate.

The importance of the interaction between practitioner and family is widely accepted and indeed woven into most formal intervention methods. There is an extensive body of studies on several different kinds of populations that have concluded that outcomes in those populations depended heavily, possibly most heavily, on characteristics of the therapists (Lambert 2013).

Being able to reach goal consensus with the service user seems to be a key ingredient of an effective working alliance: agreeing on

what change they wish to see, agreeing on what to do to get there and capturing the user's buy-in to the plan.

The importance of the service user as an active learner and problem solver has implications when using specific interventions. A persistent finding in research on user variables is that people vary considerably: in what they respond to positively, in how much effort they put in and in how quickly they respond to help. This strengthens our argument that complexity pervades child welfare work and that rules and procedures have only a limited contribution to make.

The variability in responses creates a dilemma for EBPP: how much does the practitioner need to be responsive to the specific user he or she is working with, and how much responsiveness is possible, without moving so far from the intervention method that "fidelity to model" is lost? This is another area where deliberation, rather than some formal decision making process, is required.

Deliberation in professional practice

The above account illustrates the variety of factors that influence the way information is processed, that is, the way humans have evolved to have the capacity to integrate a large array of environmental indicators. The case study below taken from (Munro 2008), describes a social worker's account of how she dealt with a referral. It illustrates the rich and varied way in which she used both analytic and intuitive reasoning and shows how she navigated

the cognitive continuum as she handled different aspects of the case, moving from an initial referral for a step-parent adoption to an assessment that the children were suffering maltreatment.

A case study

A couple, Doris (aged 44) and Ron (aged 49), had married two years previously and were now applying for a step-parent adoption of Doris's two daughters by a previous marriage, Mary (aged 10) and Pamela (aged 6). The social worker, who was experienced in this type of referral, first made some standard background checks that revealed no adverse information and then made a home visit (italicized passages below are direct quotations from the social worker's report. See (Munro 2008) for the references mentioned in these quotations):

> *Even before I entered their home, it was apparent that orderliness was important to the family. The porch, windows and high perimeter fence were so new that the latter was still dripping with preservative. It occurred to me that these barriers might be to keep the world out as much as the family in. When I was only allowed to enter the home once I removed my shoes, and the adults talked proudly about the substantial refurbishments they had undertaken, it seemed that cleanliness was vitally important too.*

> *Ron was neat and tidy, wearing a cardigan and slippers, a slim, mild mannered, grey haired man with a cultured*

speaking voice. He seemed eclipsed by the size and forcefulness of his wife – an articulate, middle-aged lady of heavy build. She was opinionated and forthright, talking of her dissatisfaction with 'The Authorities' and her pride in complaining. To reinforce this, she said she had transferred her children to another school when discipline was too lax; she changed her doctor when he would not prescribe medication she demanded. Although not directly stated, I received a clear warning about having to conform to Doris' expectations.

The couple then went on to speak vehemently about the need to discipline children and then told the social worker of the problems they were having with the younger daughter, Pamela, who was vomiting and soiling herself frequently, eating like an animal and displaying behavioural problems at school.

Throughout, Doris talked aggressively and negatively about Pamela, describing her as 'a beast, a hateful child, a horrible little brat'.

The child was heard arguing with her sister and was summoned into the room by her mother:

She had a rather waxen, pale complexion and dark shadows under her eyes and she cowered, hanging her head whilst her mother proceeded to criticise, harangue and shame her.

The way the couple spoke of, and to, the girl was so unusual in a step-parent adoption case that the social worker felt very

suspicious and, after completing the initial interview, proceeded to make a thorough investigation of the family's history and functioning. In doing this, she faced strong resistance from the mother:

> *When asked, Doris was overtly hostile about providing details of family history and the references that are legally required for an adoption application. Conversations with her were like being drawn into a verbal maze, leading to dead ends where she looked blandly at me and asked 'How can you expect me to remember after all this time?' I was very careful not to enter into a confrontation with her, recognising that she was trying to set up a battle with me but eventually Doris responded to my request and produced amended police reference forms.*

With this basic factual information to guide her search, the social worker was able to make contact with several professionals who had had contact with the mother: social workers, teachers, general practitioners, adult and child psychiatrists, and police officers. She pieced together that the mother had a history of drug abuse and depression and had been diagnosed as having a 'psychopathic personality disorder'. Also, two adult children had been removed permanently from her care in childhood because of physical and emotional abuse. Pamela's schoolteachers were very concerned about her, regarding her as an unhappy, friendless little girl with behavioural and learning difficulties.

With this range of information, the social worker began to consider that Pamela might be the victim of emotional abuse but, first, discussed the difficulty of diagnosing emotional abuse:

> *Authors generally agree that there is no one definition of emotional abuse. Gabarino et al. (1986) suggest that particular patterns of behaviour used by parents or primary caregivers cause emotional abuse and include rejecting or isolating behaviour, terrorising the child, ignoring him or her, corrupting or mis-socialising the child. Iwaniec (1995) offers the definition: emotional abuse can be overtly rejecting behaviour of carers or passive neglect. Carers who persistently criticise, shame, rebuke, threaten, ridicule, humiliate, put down, induce fear and anxiety, who are never satisfied with the child's behaviour and performance (and do so deliberately to hurt the child) are emotionally abusive and cruel. Equally those who knowingly distance themselves from the child by ignoring signals of distress, pleas for help, attention, comfort, reassurance, encouragement and acceptance are emotionally abusive and neglectful. Research by Benoit et al. (1989) shows that 96 per cent of emotionally abused children have interactional problems with their mothers. Iwaniec's own study (1983) suggested that children subject to emotional abuse have serious attachment problems.*
>
> *Pamela's early years had been problematic. She had been conceived after her mother's first marriage had ended. The*

> *father deserted Doris in the early stages of the pregnancy. Doris said she had never bonded with her daughter.*
>
> *In considering the prerequisites for healthy psychological development, Bowlby (1984) states the need for secure attachment. Similarly, Erikson et al. (1989) reiterate that unless a child receives appropriate love and positive encouragement from infancy onwards it is impossible to make the necessary psychological progress from one developmental stage to another, which ultimately results in a 'whole' personality. Both Skuse (in Meadows 1997) and Adcock (1995) suggest that a repeated cumulative pattern of persistent verbal abuse in a low warmth/high criticism environment is more damaging than an isolated, injurious incident. I was beginning to form a picture of Pamela living in such circumstances.*

The mother's history of conflict with professionals suggested that she would not work in partnership with the local authority. It was feared that a precipitous move into a formal child abuse investigation might antagonise her to the extent that she might refuse further contact, making it harder to collect sufficient evidence to warrant coercive intervention. The social worker therefore continued contact on the basis of pursuing the step-parent adoption, asking to interview the two girls without the parents present, as would be usual in such a case:

Although Pamela had not been advised of my visit she readily engaged with me. Both girls were serious and earnest. We talked minimally about adoption – I deliberately played this down – and primarily about the children's day-to-day life. They confided that they get into trouble at home where punishments are severe. Both described how each, but Pamela especially, is excluded 'for weeks at a time' to her bedroom. They said they exasperated their mother and the adults responded by hitting them with a stick, leaving red welts on their palms. The girls agreed that Pamela got the worst of it, sometimes beaten on her bottom too. I was bothered that the children told a complete stranger about this so soon after meeting them, and wondered aloud what they thought might happen if the adults knew of this conversation. The girls were uncertain but explicit that they wanted me to know although they did not expect me to do anything about it.

I weighed up how I might deal with this situation. Would confronting the adults result in a greater risk of physical abuse to the children after I had left the home? I decided it could do so, so instead queried the level of 'chastisement' that the adults use, without being more specific. They said the worst punishment they use, after withholding of privileges, is sending the girls to their bedrooms.

The social worker concludes that the children are experiencing a significant level of physical and emotional abuse. She weighs up the risk of this abuse continuing or escalating, using Greenland's

(1987) and Browne and Saqi's (1988) lists of risk factors, and judges that the mother, Doris, poses a very high risk as an abuser. She also notes the history of this family and how similar the current picture is to twenty years ago, when Doris's eldest son was removed from her because of abuse. Her decision that the case needs to be dealt with as a child protection investigation means the end of her involvement, the case being transferred to a child protection team, who will have to decide whether to try and preserve the family. Is there any therapeutic option that can be offered with a significant chance of success or should the decision be to repeat history and remove the girls?

The social worker concludes her case study by considering the parents' motivation. She is puzzled that they sought an adoption order and thus exposed themselves to scrutiny, particularly in light of the mother's previous, hostile contact with Social Services in relation to her older children. She speculates that the diagnosis of "psychopathic personality disorder" may be relevant:

> *My understanding of psychopathic personalities is not only that they are antisocial but that true psychopathic personalities are unable to appreciate or anticipate the consequences of their actions. Consequently, I speculated that maybe Ron did not know all the history and that Doris had not realised the impact this history would have on the application. Alternatively, perhaps this couple are so exasperated with Pamela that they cannot tolerate living with her but to request her removal from their home would not sit easily with their*

religious beliefs. Is their hidden agenda for the local authority to remove her ostensibly against their wishes?

What we might learn from this case study

This account of a case reveals the complexity of making sense of what is happening in a family and deciding what to do. Formal, explicit knowledge plays a significant role. The social worker was operating within a formal framework of law and procedures that shaped her duties and powers. She was using formal theories of child development and adult mental disorder. She cites empirical evidence on the impact of particular forms of parenting behaviour on children. She uses research on risk factors to help her weigh up the level of danger for the children. Intuitive reasoning is also apparent. As the social worker approaches the house, she notes the pattern of evidence presented about the importance of cleanliness, comparing this house with some standard of the average level of tidiness. In interviewing the parents, particularly the mother, she is making swift, intuitive judgements of what is going on and adapting her own behaviour accordingly. In talking to the children she draws on her expertise in communicating with youngsters and in talking about sensitive issues. The social worker is open about her emotional reactions to the work: she finds the mother threatening and aggressive, the younger girl is sad and arouses her compassion. The case also clearly illustrates how the social worker's mode of reasoning changed as she moved from direct contact with the family – where the speed and richness of

intuition were most needed – to the later stages of reflecting on her assessment and making decisions, when analytic skills become more dominant.

Research on professionals' reasoning suggests that this social worker is fairly typical in her use of both analytic and intuitive reasoning and of explicit and implicit knowledge. If anything, she is more able than average to formulate her use of theory and the steps in her reasoning (Secker 1993, Walker et al. 1995, Marsh and Triseliotis 1996).

This account is very lengthy but length is necessary to illustrate the detailed reasoning that is involved. The analysis is discursive and unsystematic. It is personal – what the professional sees from using her eyes and ears when faced with the people she has to decide about. It is heavily contextual – she is the person on the spot who has to identify and assess the facts that she needs to respect to make a decision, and she and only she can make that good, whatever hints and help she may get from policy recommendations, best practice or professional standards.

Here is a partial list of what she takes into account:

• Nothing wrong with the background checks
• Very clean and orderly house
• Opinionated and forthright mother
• Noisy arguing
• Feeling suspicious

• Avoiding confrontation
• A picture of Pamela living in such circumstances.

It is easy to extend this by taking more from the detail of the case study, but even this partial list gives some indication of both the number and the variety of types of pieces of information that are used in deliberation. It involves making sense of a large amount of material.

That very material should also include what are often referred to as values or moral considerations. Because deliberation is about everything that should be taken into account, what is right and wrong should certainly matter and is not to be excluded on the grounds that it is "subjective". Whether, for example, an intervention in a family is too compromising of their autonomy is certainly something that deliberation, in our sense of reflection among a group of professional people, should encompass. Questions such as whether it is morally wrong to ignore the results of research in making a decision about an intervention also matter here.

It is important though that there are *some* limits to what material should be included in the full exercise of deliberation. The process is indeed open-ended in that there are no clear rules which tell you beforehand what may turn out to be relevant. Nevertheless, practitioners will not take into consideration, for example, the predictions of astrology. Deliberation is, among other things, about

what is relevant. It is therefore as much about excluding material as letting it in.

The visit reported in this account does not of itself result in a final decision about what action to take – that is for later discussion in the child protection team. Yet it includes a variety of conclusions, each of which requires a decision that this is what is happening and that it should be characterised in this way – in the end, that *the children are experiencing a significant level of physical and emotional abuse.* So deliberation is directed towards a final decision – what intervention we favour – but it also includes, as a necessary preliminary to that decision, a multiplicity of decisions which result from deliberation. Box 2.5 describes what deliberation is then like.

For comparison, look at an example of tight reasoning taken from (Munro 2008) – a decision tree for making a child welfare decision (Figure 2.1). This decision making tool requires the practitioner to set out systematically what interventions are available for helping a boy named Nat, to identify what the possible outcomes of each such intervention are, to estimate how likely each outcome is and to give a number from 1 to 12 to indicate the utility (value) of each outcome. That done, the arithmetic calculates the overall score for the end of each branch – the final outcome – by combining the probability of an outcome with its value. They can then be ranked in terms of preference. In this case, *Residential unit* wins with 5.93, followed closely by *Secure unit* with 5.38, so that the decision is to use the former.

Box 2.5 What deliberation is like

It contains a variety of heterogeneous facts and opinions, arrived at by a variety of routes including factual**,** instinctive, imaginative, speculative and research or check-list informed.

The process of composing a list of relevant details is open-ended. There are no rules to tell you which facts are relevant, nor how you are to assess their truth.

The absence of rules means that there is no sure way of putting the choice of relevant facts and of the methods used to arrive at them beyond controversy.

The absence of proof does not mean the absence of good reason and good reasoning.

Since there are no established procedures for deliberating against which a particular decision can be judged, ex post audits of a decision, such as take place when the decision was wrong, find it easy to see arbitrariness and lack of objectivity in the process.

Deliberation is about a particular decision, in a particular context. The context does more than provide the facts which are relevant to applying the code. The context is what you have to inspect to decide what facts are relevant and true.

This comparison reveals a stark difference between the two examples of reasoning. When compared with the tight and formulaic decision tree, it is not surprising that many find the example of deliberation problematic, so that the advice that we should deliberate rather than use formal decision making techniques causes anxiety. By contrast, the decision tree is reassuring. It purports to tell you, by use of systematic analysis and quantification, what the best intervention is. It is indeed true that if those were the utilities, and those the probabilities, and those the only interventions available, it would make no sense to say that, for example, leaving Nat with his family is better than putting him in a residential home. The result has therefore been arrived at impersonally – it does not matter who does the calculation. We thus seem, by the use of this tool, to have achieved objectivity, proved what is the optimum, eliminated uncertainty and forced consensus. However, this prize can be gained only when most of the hard work has already been done by deliberation. What the alternative courses of action are has to be thought through before you draw up the tree. You have to estimate the probabilities. Above all, you have to attach utilities to the outcomes. Notice that *Residential unit* scores more than *Secure unit* mainly because in that case *Successful move* scores 8, whereas *Successful move* scores only 7 in a *Secure unit*. That is no doubt because the law and our respect for autonomy count a good result achieved with less coercion as better. That may be right, but there is nothing impersonal, objective or beyond doubt about it. Similarly, the outcome with the highest score is *Satisfactory care*
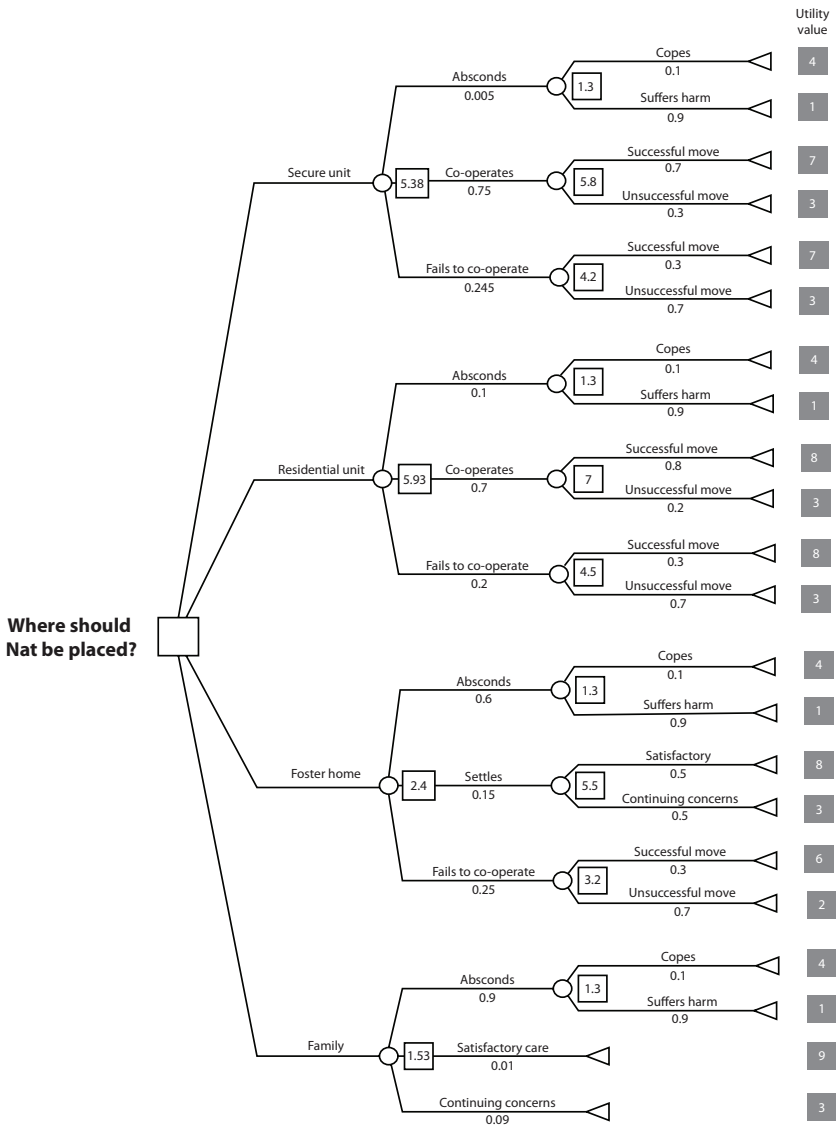
Figure 2.1: A decision tree for making a child welfare decision

with the family. Deciding that that has the highest utility is not simply a matter of calculation nor of analysis but of values about the importance of birth family bonds.

A familiar word to describe the skill which people are using when they decide that the family solution is the best but cannot justify their decision by analysis of a proof-like, incontrovertible kind, is "judgement". If deliberation requires sorting through a myriad of possibly relevant alternatives, the facts that may be relevant to their success or value, all being heterogeneous in their nature and requiring different kinds of support, it is good judgement that you need in order to deliberate well. Put like that, the word "deliberation" is defined solely in terms of what it is not – it is not analysis, etc. However, it does point to an important distinction.

Take probabilities. A favourite pedagogic device for explaining the notion of Decision Trees is to take two urns, both containing a mixture of black and red balls, and specify what reward you get for picking a red and for picking a black from the first urn, and what reward you get from the second urn. You have to decide which urn to pick from. The decision tree in Figure 2.2 tells you what to do.

This looks just like, only simpler than, any one of the sections in the Nat decision tree attached to each of the alternative interventions. It has probabilities (the top one is 0.6) and a payoff or utility (the top one is £100). So too, in the Nat case, the top outcome has a probability (0.1) and a payoff (4). These similarities are deceptive. To insert the probabilities into the urn tree you just
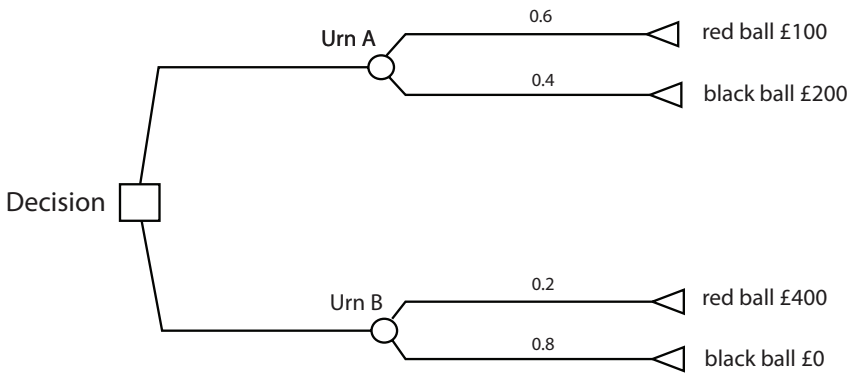
Figure 2.2: A decision tree for picking balls out of an urn

have to know how the game has been set up. That is all you need to know to get the payoffs. You do not have to *decide* what to put in, except in the most impoverished sense. On the contrary, in the case of deciding what is best for Nat you have to do all the work. You have to think, speculate about, guess, reflect on, discuss, even calculate, and in a word deliberate about, and then decide what numbers to put in. Research can help you here with some statistics – for example, how many children abscond from residential care – but you still need to move from that average to estimating a probability for the specific child Nat. There are no rules of the game, or if there are, we don't know them in advance. You do that by exercising judgement, meaning only that you have to decide on a figure without just going to the rules of the game or any other guide to how to work it out. In this case, you really do have to decide what to put in.

Because the rules of the two-urns game have been set up before you start, you have no work to do and, in games like this, the rules about how it works are univocal. Therefore, it is of course true that deciding which urn to go for has all the attractive qualities of certainty and rule-following that we set out. The use of this tool has achieved objectivity, proved what is the optimum, eliminated uncertainty about the result (through the availability of clear probabilities) and forced consensus.

The Nat tree cannot give you that. It can give you a systematic way of getting you to consider all the possible options, their pros and cons, how they are meant to work, the facts you need to bet that they will, how you get and verify those facts, before you fill in the decision tree. Doing all that we call "deliberating", and it requires using all the tools and insights we have set out in this book. Each of those tools often or typically requires the exercise of judgement, meaning deciding what is relevant or true (or whatever else you have to decide as you deliberate) without rules or procedures which provide certainty, nor even clear probabilities. The result of the urn tree is not to be doubted. You should choose urn A. Not to do so is, in terms of the game as set up, incomprehensible. That is the same as with deduction. Take the classic syllogism:

> All men are mortal.
> Socrates is a man.
> Therefore, Socrates is mortal.

Given that the deduction game is set up as it is, it is also incomprehensible that you should not agree that Socrates is mortal, once you agree that both premises are true. Less compellingly, when reasoning inductively, it is hard to understand why you should not believe that the sun will rise tomorrow and why you don't think that the fact that it always has done so is a good or convincing reason for thinking that it will.

The philosopher David Hume had doubts about the logic of induction. But his doubts are nothing compared with the flaws in the logic, or the lack of logic, of deliberation. It is plain that it is all too easy to comprehend why one person or group might decide otherwise than another, if the decision has been the product of deliberation and the exercise of judgement. There are often reasonable alternative answers to many of the questions about all the possible options, their pros and cons, how they are meant to work, the facts you need to bet on that they will, how you get and verify those facts, which can cumulatively produce quite different decisions, without those answers being demonstrably wrong rather than just contestable. There is often no way to resolve such contests, even between intellectually and otherwise honest people. This difficulty in reaching consensus and proof for a conclusion where deliberation is inevitably required is reflected in the law, where the standard of proof required in the family courts is lower than in the criminal court – "the balance of probability" rather than "beyond reasonable doubt".

This is seen in child protection cases where there are sincerely held but inconsistent views on what to do to best help the child among the professionals who are working with a family. Sometimes, discussion that clarifies each person's reasoning leads to a resolution but, at times, the disagreement is irresolvable. Discussion can at least help each other understand where the disagreement comes from but if, for instance, one person considers that adoption will be better for the child than a kin placement, there is no simple fact of the matter that can determine whether this is right or not. What counts as "better" in terms of a child's overall development can be, and is, disputed.

Deliberation is also needed in most versions of EBPP but seems to be disliked, or at least ignored, by some. EBPP has typically meant advising people to use the "best evidence" from research together with their local clinical knowledge and the user's preferences. This clearly cannot be done by some rote process but requires the professional to weigh up the competing claims of very different types of information. In the growing tendency to shift from talking of evidence-based *practice* to evidence-based *practices*, one can see an attempt to reduce the scope for individual thinking and create a more mechanized process for deciding what to do. However, simplicity comes at a high price. By excluding local wisdom and users' views, you also exclude consideration of some key factors for success or failure thereby reducing the probability of effective help being given (see Box 2.6). Moreover, such an approach raises ethical concerns, as we will discuss later.

Solving complicated and complex problems

It should be clear from the previous discussion, and in particular from Chapter 1 on causation, that the process of deciding what to do about a child with problems is often difficult. The difficulty is of a particular kind: it arises from a problem being complex. *Complex,* as the term is coming to be used in EBPP circles, means something different from, and for the present purpose more daunting than, its near relation *complicated.* Jet engines are complicated. They are composed of very many interconnected parts and processes, which combine systematically to produce propulsive power. For lay people, this means that in practice we do not understand in detail how they work. But that is only because they are complicated. There exist people – specialist engineers – who understand perfectly well how they work. There are blueprints, which set out with precision how the parts and

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Box 2.6 Thinking together

Members of the family and of the professional network will have different pieces of the picture to inform an understanding of the problem and the decision on what to do.

Sharing the process of deliberation with others allows information and ideas to be offered and provides critical challenge that picks up on the biases and inconsistencies in your thinking.

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processes combine. Very occasionally an engine malfunctions, but it is almost always possible to say what has gone wrong and how the problem should be remedied. This is shown by the typical result of an accident that the engine type, even if temporarily withdrawn from operation, is quite quickly reapproved for use. The chances that the remedy is mistaken are low because of the detailed understanding of the processes involved.

Complicated problems, i.e. problems about complicated systems, can be solved. When we think about these problems, the procedure is predominately systematic – we proceed through the options by proceeding through the system – and it is conscious, as is shown by the fact that, as engineers look for the fault, they can answer the question "What are you doing and why?" by referring to the way the system works as set out in the blueprint. Because of this, it is a complete answer.

Of course, dealing with a fault in a system like this is not, in practice, as blindly systematic as just inspecting the engine from beginning to end with the blueprint in hand until you find the fault and put it right. Although you could do that, it is what you would do only if you were baffled – the fault might be anywhere and of any kind. In practice, skilled engineers (and the term "skilled" refers here to being able to jump to at least provisional conclusions better than you or I could) will decide to start in a particular place, either because it is obvious – the fan blade has broken – or because their experience tells them that it is probably a fuel problem. They cannot answer the question, "Why did you

start there and why?" by referring to the blueprint. To that extent, they will set about the problem by using skill, judgement and intuition, and that process is unsystematic in the full sense that we have illustrated.

We set out above an account of an adoption problem to show how very different many child welfare cases are. One way of putting it is that, of course, engineers looking for where the fault lies have to think about the problem, but how much thinking they have to do is much reduced by the fact that the engine is only complicated and that they have the blueprint. Child welfare officers deciding what to do about a particular child or family cannot set about the problem by asking, "Where is the blueprint for this system and where should I start to look to find out what has gone wrong and how to fix it?" Their problem is more than just complicated. It is complex.

The complexity of child welfare decisions arises in at least two ways. First, we have no consensus about what we should do, except at a level of such generality (e.g. "Do the best in the circumstances.") that the answer gives no operational purchase on the question. What are the criteria for assessing what would be a good intervention, if a good intervention is available? The best for the child? For the family? For the child's physical health? For his or her emotional development? All of these are good things. The law gives some guidance on how to prioritise competing values. For example, English law states that children are best cared for in their own families, if possible. This is, though, of limited help.

Professionals do not ignore competing values or the needs and rights of all involved; they weigh them up and come to an answer which they think best addresses them.

Second, we have to find or create and use stories about cases like this, and hence about what is and might happen here, which play the same role in our decision-making as the blue print of the system did for the engineer. In other words, the stories lead us to a conclusion about what has gone wrong and what we should do. However, the process of getting to that story requires thinking about the problem much more widely and imaginatively than is required of the engineer who has a blueprint to consult. So we distinguish the thinking that the engineer has to do from the thinking that the child welfare officer has to do by calling the latter *deliberation*. This is to give it a name that draws attention to the consequences of complexity for how you have to think.

Mention of a *story* links with the reference in Chapter 1 to thinking about the complex causal processes through the use of "causal narratives". This idea – that in deliberating about a problem we are trying to write a story, or construct a narrative – is helpful.

Take the analogy of a detective story. The detective comes to the case and needs to decide somehow what he knows, what he wants to know and how all he knows or gets to know fit together to make an explanation of what happened. These needs are interconnected – what he makes of what he knows, what he wants to know, depends on what story he is trying to test. In traditional detective

stories of the country-house type, the detective ties up all the loose ends in the last chapter and explains how this or that apparently dissonant fact after all makes sense in the final story. Similarly, solving a jigsaw puzzle results in a clear picture with no left over pieces (and a jigsaw is even less like real-life than a detective story, because you know from the start that the pieces you need to make the picture are all in the box and that you have to use all of them).

Narratives about child welfare problems are, alas, not as neat as that. First, as we have said, you have to deliberate about what you are trying to do and why, about what matters. The detective knows what matters – solving the case. Second, you will not typically tie up all the loose ends. There will be inconsistencies, things you cannot take account of properly, a nagging feeling that maybe you have missed something. Third, in child welfare you are usually working with several family members, each of whom has his or her own point of view that has to be explored and taken account of in the final understanding reached.

So a good narrative is unlikely to be perfect (see Box 2.7), and if you only act when you have a perfect narrative, you will often be unable to act. The idea of a narrative, a good enough narrative to proceed with – though with caution – is at the heart of the notion of deliberation.

Box 2.7 Sources of complication and complexity

• No single cause, no single cure of family problems

• Different values among those concerned with a family and its problems, what is to be achieved, what counts as success, what course of action has the best cost-benefit ratio

• Multiple participants who may influence the sequence of events when help is provided

• Any intervention is only one of the many things going on in the life of a family.

• Though there are commonalities, all families and all children are different and may respond very differently to the same interventions.

• Things happen that you may have had little reason to expect or would not have been able to find out about had you tried.

Why do people want objectivity?

If things go wrong, it can be appropriate to criticize the result of deliberation because certain facts were ignored or insufficient effort was made to collect appropriate facts. Criticism can also be appropriate if not all practicable precautions were taken to guard against biases of judgement or if decisions were not discussed with

others who may have different points of view. This is also, of course, appropriate for clear cases of bad judgement, though sometimes, due to very bad luck, matters go wrong despite our best efforts to construct an accurate narrative. Just as there are no conclusive criteria for labelling one narrative as "the right one" at the start, so too there are no conclusive criteria for evaluating after the fact how, or that, things should have been decided differently. Since judgement is inevitable in cases of what we are calling complexity, it makes no sense to blame the process on the grounds that it was "not objective".

Yet the unease aroused by the notion of deliberation is often expressed in terms of its apparent failure to achieve objectivity. This notion is typically not used very precisely, but like *logical* – which rarely means anything very rigorous (such as based on a deductive or similar process of inference, or having its own logic) – it is used to gesture toward the hope that it should be possible to provide a conclusion based more on systematic and proof-like reasoning and less on the personal choices of a particular individual or group.

We believe that there is something wrong with the whole idea of objectivity as commonly used in EBPP. A good deal of what we mean will be apparent from what we have said earlier in this chapter. We want now to bring that all together, and we start by considering why people want objectivity so much in the first place. We shall go on to show how it will not give them what they want: some of it is unachievable, some better achieved by deliberation.

Improving child safety

This is not just a "be realistic" argument. There are indeed practical difficulties in the way of achieving objectivity in the sense suggested by the usual understanding. But so there are in deliberating well and indeed in using any procedure for deciding. The superiority of deliberation and the problems with objectivity go deeper than that.

"Objectivity" can be seen as shorthand for the product of a systematic, proof-like, impersonal and open, i.e. transparent, procedure for deciding. Each of these virtues is an important part of what makes people want objectivity. They want a rule-based process that

- Prescribes what to do and how to do it: *Systematic*
- Produces an incontrovertible result: *Proof-like*
- Will be carried out identically and with the same result whoever does it: *Impersonal*
- Can be audited if, heaven forbid, error or disagreement appear: *Transparent*

If these features are present, then

- We have an agreed upon criterion for whether the decision based on this procedure is a good one – roughly, that the procedure followed the rules.
- We have eliminated certain kinds of error – those arising from personal failings such as incompetence, undeclared prejudice or individual interest.

• Consequently, we have eliminated certain kinds of uncertainty about the validity of the result – those arising from the possibility of such errors.

That said, there are certain evident oddities about the story so far. Maybe they are no more than surprises – meaning that, if this type of objectivity can be achieved, they will turn out to be a list not of defects, but merely of what we did not expect. Here are these oddities:

• If the criterion of success is that the procedure has been followed, then there are no reasons to look at the outcome by itself to assess its quality. It makes no sense to consider the truth of the conclusion of a deductive argument "Socrates is Mortal", because its truth is guaranteed by the truth of the premises.

• The process surely cannot be entirely impersonal. Even following the rules has to be done *by somebody*. Perhaps what is meant is that it could be done by any person, or by a computer, without loss. So the particular person who carries out the process is only the location of a calculation.

• It looks heroically optimistic to claim that the adoption decision in our case study of Doris and Ron could be reduced to rules.

• A prediction based on the systematic and impersonal operations of a computer programme will not eliminate uncertainty if, as it must in child welfare, it includes handling probabilities, and it will often produce errors, in the sense of wrong predictions. There is no way of being sure of getting the future right.

However, we say that these oddities are more than just a list of surprises. They point at serious defects in the idea of objectivity as typically understood above, what it can offer and what we can expect of any decision process. Just as there is no infallible way of being right about the future, so there is no procedure that, through being systematic, impersonal, proof-like and transparent, will guarantee, or even provide a good chance of achieving, what we hope for from a good decision process. Here are the considerations that support this conclusion.

First, procedures such as decision trees achieve their purity by assuming that the dirty work (in the example given, of establishing the options, the utilities and the probabilities) has already been done. All they do is provide a certain kind of consistency. That is indeed proof-like, but this way of proceeding deals with only a small part of what you have to do.

Second, the rest – the dirty work – does not look as though it will yield to proof-like procedures, even if such procedures may be useful here and there. For example, a very well conducted RCT or an econometric study may provide something very conclusive about what caused that outcome there, or what the causal mechanism may be in the study population. If we look at the process of deliberation exemplified by the adoption case and the variety of resources (such as emotional understanding), techniques (such as empathy), circumstances (such as familial conflict) that have to be taken into account, there seems to be little chance that such a procedure is available. Whether that is

because the world is unmanageably disorderly (e.g. full of incommensurability), or because we are incapable of seeing it otherwise, is of no practical importance. The onus of proving that such procedures can be developed is on those who hope to use this feature of objectivity. The evidence of our experience, and of what we can actually do, is otherwise.

Third, and in particular, it does not seem likely that one example of an objective procedure – deduction – is available in practical matters. The thus far vain attempt to construct practical syllogisms shows again how the dirty work cannot be avoided. A syllogism such as:

> Adoption works for children with these particular characteristics in these particular circumstances.
> This is such a child.
> Therefore, recommend adoption.

is reassuring in just the way the Socrates syllogism was. However, unlike in that case, conscientious examination of the truth of the premises is problematic. Such examination at once raises nasty problems, and not just concerning their truth, but also their specification. What are the *circumstances and the characteristics* in the major premise? Can they be listed? Would not listing them require answering the question "When does adoption work?" And if that answer takes the form "It depends on the child and his or her circumstances, and on the adoptive family and their circumstances, and on the local services to support the adoption

and their circumstances", then doesn't that mean that to give content to the first premise you have to go to the second one? If all we can say is that adoption works if it suits the child, then deduction gets us nowhere. We are then just back in the difficulty we had before – that we don't know what should come into deciding on what has to be true to support an adoption decision. Fourth, the paucity of cases where proof-like procedures are valuable or useful does not mean that there are no ways of looking critically at what you are doing, either as you go along or afterwards if things have gone wrong. Absence of proof does not mean absence of reasons, good reasons. To take a real example, the (unpublished) Serious Case Review of the serious injury of a baby concludes that:

• The view of the social worker that the child's injuries might have been caused by the babysitter was mistaken.

• The mistake arose because an early cue – the limited content of a phone call from a police officer after she had interviewed the mother and partner – strongly suggested the plausible narrative that the mother and boyfriend were not implicated, a narrative which survived without challenge despite later cues casting doubt on it.

• This particular mistake can usefully be seen as an example of a type, that is, "Garden Path errors" (that is, where an initial piece of information sets the practitioner's thinking off in the wrong direction – 'up the garden path').

- The bias in how new evidence is interpreted in Garden Path cases leads to the initial assessment not only going unchallenged but being gradually held with more confidence.
- The chances of this kind of error occurring can be reduced if someone new looks at the evidence and sees possible alternative assessments (differential diagnosis).
- There should therefore be a central place for mechanisms that enable review of judgements and decisions by other people.

This example shows that it is possible to provide criteria or questions to assess how a process goes wrong (through Garden Path error) and how that might be avoided (by differential diagnosis) through what arrangements (requiring a second opinion). It does not show, because it cannot be shown, when you are being led up the garden path, nor how to differentially diagnose. Nor can it tell you when these are possibilities to which you should pay special attention.

Fifth, absence of proof-like objectivity does not mean that any answer is as good as any other. The detective who cannot produce a Poirot moment in the drawing room, with every loose end tidied up, nevertheless can solve the case. How he does so is by constructing a story which meets the deliberation tests of a coherent narrative that is fairly consistent, covers most of the relevant information and is plausible (that is, it hangs together and portrays the characters in a coherent, believable manner). Looking just for consistency and plausibility is, as we have pointed out,

unnecessary or incomprehensible in the case of questioning the conclusion of a deductive syllogism. The survival of loose ends does not mean that you cannot have an account that meets the "beyond reasonable doubt" and "balance of probabilities" tests applied in court. Those tests are precisely to distinguish one narrative from another. As many defendants know to their cost, it is not true that in court anything goes, that any story is as good as any other.

Sixth, coherence and plausibility are important features of a good narrative, but they are not enough. We have to distinguish the kind of narrative we need from a thoroughly coherent and plausible novel about things that never happened. The difference is that our narratives have to be anchored to the world. This is done at several levels, from very specific facts to very general theories, and much in between. Facts and theories have to have good support. What support you need varies according to what you need to support. It includes simple observation for brute facts and statistical analysis for general theories (to give just some examples).

Seventh, decisions in child welfare use concepts which have been developed by people or by society. They are in that sense constructs, not naturally occurring features of the world like rocks, which existed before and no doubt after any society. Some see this as undermining their objectivity, but being socially constructed does not mean that we cannot, with any certainty, say that this or that situation does or does not exemplify them. There is no doubt

in very many cases that two people are married, even though marriage is a construct.

Eighth, it is not a defect that a decision is based on the skills and experience of a particular practitioner and is, in that sense, personal. As soon as you abandon the idea of the possibility and desirability of proof-like and rules based procedures, then the alternative – deliberation by particular people in particular circumstances – is not a second best but the right, the only way of proceeding, which fits the problem at hand. Practitioners quite rightly bring their own personal skills and knowledge to the work. Yet, this does not mean that their judgements are personal in the sense of prejudice or mere whim. When a practitioner approaches a problem, he or she sees it not as an isolated matter, but locates it in a wider context of understanding of the world in order to make sense of it.

We expect that practitioners will leave some of their baggage at the door – their prejudices and career prospects for example, things that might affect their judgements adversely. But they cannot and should not leave everything behind. If objectivity means forgetting what you have learned about making sense of this kind of world, it becomes a mad version of approaching a problem with a blank, empty mind.

What practitioners bring to solving problems is their experience – and imagination based on that experience – to get into the debate whatever is needed to make a good decision. That includes brute

facts (such as that the house is cold), facts involving socially constructed concepts (that the child has been abused), theory and generalizations (that adoption rarely works in these circumstances), pattern recognition and everything else that is needed if we are to have a narrative that meets the deliberation tests. It is plain that this requires imagination and creativity disciplined by realism. It is also plain that if we limit ourselves to procedures that fit the objectivity criteria of being proof-like, systematic, etc., then many of the ways in which people successfully use their imagination and creativity will be excluded. That is why so called objective procedures cannot be the gold standard of how we are to work.

If this is so (and we believe that it is), what kinds of experts are child welfare practitioners? How do they carry out their professional role? How should they approach their tasks – deliberate and make decisions on particular cases – in combination with other professional figures (other experts)? How can they do their job well, or get better at what they do? We will question the issue of how to relate deliberation to expertise in the following section.

Deliberating as an expert

Being able to deliberate well is an essential, constitutive trait of expertise. How then do we develop expertise in a given field of inquiry that puts us at an advantage when we come to deliberate

on issues there? Some insights are available from the literature on the conditions and contexts under which expertise is developed.

First, let us consider how types of expertise can differ. Compare a skilled rafter going down the rapids avoiding one potential calamity after another and two creative students in the computer science department at Stanford University who come up with a superior way of searching for information on the internet (i.e. Google). As Kahneman (2011) points out, both are taking risks, both have, to some extent, been lucky, but *experience* has undoubtedly helped the rafter and not the students.

The same can be said of firefighters. Klein (2000) found that expert firefighters did not consider a range of options, or even two alternatives but, in the urgency of tackling a blaze, usually generated just one hypothesis to guide their actions. He concluded that, *through experience* they developed a repertoire of *patterns* of how fires behaved and from this they identified a plausible option that they considered first. They did not just act on this, they tested it by mentally simulating whether it would work in the situation they were facing, taking action if it still looked plausible, generating another option if it did not and subsequently checking how emerging information fitted the hypothesis they were working under.

An expert in child welfare is more like the rafter and the firefighter than the Stanford students. Experience is valuable and can lead to improved expertise. What counts as "experience" in the context of

child welfare? The social worker who has worked with numerous parents who are neglecting their children develops a depth of understanding and a range of skills for engaging with the parents, motivating and helping them to tackle their poor parenting.

The "pattern recognition" type of decision-making used by the firefighters is also relevant in the context of child welfare, as has also been found to be in many areas of expert practice. It is theorized to be effective because it takes advantage of experts' tacit knowledge (Klein, Calderwood and Clinton-Cirocco 1986), that is that body of skills, ideas and experiences not easily expressible, often not codified, and yet crucial in forming a judgement or reaching a decision. It is of course a fallible type of knowledge, and much work has been done to identify when and why experts make mistakes.

A central aim in this body of research is to study how people make decisions in real-life situations, to *describe* decision-making ("naturalistic-decision making") and to demystify intuition, identifying the cues that experts use to make their judgements.

The other set of research on biases of intuitive reasoning, referred to earlier, takes a different approach and, drawing on probability theory, aims to *prescribe* how best to make decisions. Researchers here are generally more sceptical of expert judgement, comparing it with the outcome that would result from a formal use of probability calculus. Meehl's review of studies (1986) that compared predictions made by experts with those predicted by

simple statistical models (actuarial tools) claims that statistical models outperformed experts in almost every case of the kinds studied. Kahneman and others have since studied expert judgements in great detail and identified the biases cited earlier in this chapter.

These two sets of research appear to produce conflicting findings. This led two key leaders from each group to come together to discuss how and why they differed. This resulted in an article titled 'Conditions for intuitive expertise: A failure to disagree' (Kahneman & Klein 2009) where, instead of simply disagreeing, the authors lay out the conditions under which they think competent expert judgement could be acquired and when they think more formal methods are needed.

The first criterion identified by Kahneman and Klein is that 'the environment must provide sufficiently valid cues about the nature of the situation you are facing'. Skilled intuitions will only develop if there is sufficient regularity in the environment so that people can identify recurrent patterns of activity. Buildings on fire act in sufficiently regular ways for expertise to develop – though with numerous variations depending on the type of building, availability of flammable materials, etc. – so that many different patterns of how they progress may be learned.

To what extent does the environment of child welfare provide sufficient regularity? This is not an easy question to answer. However, one can speculate that there will be big differences

between aspects that are frequently encountered and those that are rare. In the case study of Doris and Ron presented earlier, for example, the social worker was informed by her knowledge of the patterns of cleanliness and tidiness in family homes when she felt uneasy about the pattern she was observing in this case. There are also many other scenarios where any one practitioner is unlikely to see enough instances to form competent intuitive judgements. Post-natal depression is fairly common but no one health visitor is likely to see many cases where this escalates to killing the baby. If there are any cues that distinguish the potentially lethal from the less dangerous, they are more likely to be identified by large-scale factor analysis of cases than by individual social workers. It may, of course, be the case that the environment is so irregular that it is impossible to identify sufficiently valid cues to learn patterns and make accurate predictions. Actuarial tools to predict child maltreatment in the general population produce such high levels of false positives and false negatives that they have limited practical value (see, e.g., Peters and Barlow 2003).

The second criterion identified by Kahneman and Klein is that 'people must have the opportunity, and the time, to learn how to develop expertise'. This means that people need feedback about what happened when they acted on their intuitive judgement. Some situations provide instant feedback. The professional seeking to calm a frightened child will get swift feedback on whether their choice of body language and words has been helpful or not. Many of the big decisions in child welfare, however, need follow up to

find out whether the decision was good or not. The intake workers who decide whether a case looks worrying enough to need a full child protection investigation cannot develop expertise in making this decision if they never learn what happened to those cases in later weeks or months. When there is continuity of working with a family then there is greater opportunity for learning, otherwise organisations need to create mechanisms to provide feedback for learning to take place.

Time is essential for learning to occur. Professionals who hurry from one task to another without time to reflect on what they are observing have limited capacity for learning. Time is also needed because acquiring expertise in a given domain does not involve a single skill, but rather a large collection of mini skills including, we add, the skill of combining the different skills. Just like an expert player who can get at a glance a complex position on the chess board only after years of developing that ability, the child welfare worker can develop a sense of the complex and nuanced atmosphere of the family home.

Prolonged practice gives experts not only the time to learn what is required to be an expert but also makes them aware of the limits of any expertise. No amount of expertise can give us complete confidence that we are right about something, or that we can recommend the right course of action. The probability of our belief can increase, though, when the two criteria of a relatively stable environment and prolonged practice apply.

Improving child safety

There are a number of ways in which people can improve their deliberations. We have already talked about the role of emotions and the cognitive biases that affect intuitive reasoning. While there is no guaranteed way to eliminate any distortions arising from them, it is possible to reduce the risk of error.

So, back to the question posed at the beginning of this section: how does expertise help a professional deliberate well or better? Box 2.8 summarizes our answer to this question.

Box 2.8 Deliberation, wisdom and expertise

In deliberating we aim at judgements that not only display knowledge but also, and more relevantly, point us in the direction of 'knowing the right thing to do, at the right time, in the right way, and for the right reason', as discussed by Aristotle in *Nicomachean Ethics*.

Knowing what is right (in the circumstances) is different from being knowledgeable in a disciplinary field. It is a form of wisdom.

An expert is someone who not only has knowledge of a certain area but is also able to use that knowledge to say the right thing, or recommend the right course of action, about something that falls within his area of expertise. (Montuschi, 2017 forthcoming)

He or she is good at "putting it all together" in a usable way.

One final issue: how "objective" can expert deliberations be? How trustworthy can they be? If we go back to the features of objectivity as often understood, and challenged by us in the previous section (systematic or rule-based, proof-like, impersonal and transparent), we see that they hardly apply to expert judgement. This, however, says more about a concept of objectivity based on those features than about how much trust we can put on expert judgement. For example, the alternative to "being impersonal" is not necessarily "being personal" in the sense of being subjective, arbitrary, biased, etc. It could rather be "being the right person for the decision problem", in the sense of "right" suggested above. No ideals of objectivity can teach us to be that person! To be right is a practical achievement – and so is the type of objectivity that we can attach to practical deliberations. (Montuschi 2016)

Conclusion

This chapter has covered many issues. It began with a detailed account of the varied ways by which people make sense of the world through conscious and unconscious processes that are influenced by their emotional responses to experience. It discussed how such sense making appears in the context of professional practice and illustrated how this was both complicated, drawing on a wide range of types of information, and imprecise, following no prescribed method that ensures everyone will reach the same conclusion.

This lack of precision causes discomfort, and those who seek "objectivity" seem to want an alternative that provides a systematic, proof-like, impersonal and transparent process. We argued that this was not a feasible option because the human contexts in which we are interested in child welfare services are not just complicated but complex, so that precise and accurate blueprints are not available.

The absence of proof does not mean the absence of good reasons and good reasoning: abandoning the ambition of ideal objectivity does not mean embracing unbridled subjectivity. The results of deliberation can be appraised according to their plausibility, how well they cover the known facts and, sometimes, we can make predictions of what else should be the case if this account is correct, and so find additional support. In the process of deliberating, drawing on findings from empirical research is one valuable source of support. Moreover, expertise in deliberating in a subject area can be improved through experience, learning and constructive, critical dialogue with colleagues.

In the next and final chapter of this book, we shall draw together what has been said about causality and deliberation to bring out its implications for the role of research in improving welfare services to children and their families.

CONCLUSION

CONCLUSION

We are arguing for the essential role of individual human skill in engaging with the complexity of the world and the tasks of understanding and helping families. This includes a radically different picture of where research fits into child welfare work from the currently dominant picture. The complexity of the social world means that there are severe limitations to how much we can develop general conclusions about what works in helping parents provide better and safer care for children and young people. Research should be seen as a valuable resource but it needs to be read critically, paying attention to negative as well as positive findings and reflecting on the extent to which its context resembles your own. Even when it looks a good bet that it might be helpful in your context, implementation needs to be monitored to see how it is interacting with the numerous other causal processes already operating or that may come up later in the process, perhaps producing unexpected results.

At the same time, more attention needs to be given to the key role of deliberation in deciding what to do to help families. By its nature, deliberation cannot be turned into a formalized, deterministic process where there is one clearly "right" conclusion, but it can be done to varying standards. A better appreciation of how we reason provides guidance on how organisations can enhance the deliberative skills of their workforce. One factor is

giving time for the task, i.e. recognizing its importance. Another is that openness about one's thinking allows others to challenge and support the process, reducing the risk of individual bias or limited experience.

The simplistic version of EBPP that we have been critiquing is not held by all. Indeed, most researchers would, we think, not endorse it explicitly. It is, however, implicit in the dominant narrative in the world of politics and policymaking, where references to "what works" are made as if the findings of an RCT can be readily generalized. Moreover, within this narrative, there is a trend to overlooking the part of the original EBPP that saw research evidence being weighed up with the professionals' local knowledge and the user's views and values. Increasingly, there is reference to evidence-based practice*s* – in the plural – and not to evidence-based practice.

This shift to EBPPs can be seen as fitting EBPP into the 'technocratic culture in children's services' (Hood 2014), a longer term trend of seeking to treat family problems as amenable to a techno-rational approach where the moral dimension of interfering in people's private lives is pushed into the background. Recent decades have seen strategies for improving services taking the form of seeking to proceduralise them and reduce the role of individual expertise, with form filling and box-ticking becoming dominant. *The Munro Review* argued that this leads to services giving insufficient time and skill to helping families solve problems,

and also that it fails to provide the requisite variety to meet the range of needs that professionals address.

Deliberative skills have been our main focus. These draw on all the human skills of intuitive learning, emotional responses and imagination as well as logical thinking. In making the case, we have drawn upon research findings for support. The current understanding of how we reason emphasizes the importance of emotion and intuition, challenging the assumption that logical reasoning is "the best" and to be aspired to in all circumstances. Deliberative skills are not second best to logic but *the* best for the tasks professionals face in child welfare services. Research on the effectiveness of interventions has also highlighted the limits of what can be written out in manuals and the necessary role of individual expertise in understanding and working with families. Unless organisations give due attention to creating and maintaining a skilled workforce, the value contained in manualised interventions will fail to be realized in practice.

The moral dimension of child welfare work is also important to consider. There is a moral dimension to using research: Gambrill has made an eloquent case for claiming that it is unethical to ignore research findings on effectiveness when deciding how to help a child or family (Gambrill 2010). But she has also highlighted the ways that EBPP can be conducted unethically (Gambrill 2012).

First, there is the widely known problem of publication bias. Studies that have positive results are more likely to be published

than those with negative, or non-significant, findings. Yet negative findings, although disappointing to those who hoped they had found a way to help children, are just as informative to professionals, giving them suggestions of what to avoid doing.

Second, there is a problem that, within reported studies, more attention is given to positive rather than negative findings. This bias is then carried through to discussions on what to do, with the dominant question being "What works?" rather than "How much harm might this do?" In a review of published reviews of evidence-based practices, Littell noted that 'most reviews used a single positive statement to characterize results of a study that were decidedly mixed' (Littell 2008). Yet there is plenty of evidence that when professionals intervene in people's lives, however good their intentions, they can do harm.

Another major ethical issue in child welfare is users' consent. In many cases where significant harm from maltreatment is involved, parents and children do not have the freedom to consent to the involvement of professionals in their lives. However, even within this coerced group, there is scope for seeking their views on how problems should be tackled. Those in the helping professions are aware that they deal disproportionately with the disempowered members of society: poor and ethnic minority families are over-represented in those known to child welfare services. Instead of taking advantage of the clear power difference between them, however, professionals typically aspire to practice in a way that empowers services users. To this end, it is crucial to pay attention

to the element of EBPP that includes giving due weight to the views and preferences of those who will receive the intervention.

If services users are to be helped to give informed consent then they need to be given a full account of what is known about the likely and possible effects of the proposed course of action, rather than just being assured that "it works". In medicine, we are all used to the leaflets that come with any drugs telling us of both the common and the infrequent side effects that have been reported so that we are well informed when deciding to take the drug. However, there are at present no equivalent health warnings with social interventions, though there are no grounds for complacently believing that only good or neutral effects result from professional interventions.

There are several criticisms that are likely to be made of our account. It fails to offer the kind of "objectivity" that many want to achieve. However, we have critiqued the idea of objectivity as typically understood and argued that there is no infallible way of being right about the future and no procedure that, through being systematic, impersonal, proof-like and transparent, will guarantee a good decision. The apparent "objectivity" of, for example, procedures or risk assessment tools evaporates on closer study.

Some want more rules and procedures because it reduces the element of individual power and hence of individual responsibility. Child welfare work is an area where tragic outcomes can occur and we live in a society where a high level of criticism can be targeted

at professionals who are seen, with hindsight, to have failed to protect children. The defence of having followed due process can be seen as a way of protecting oneself against attack. However, not only has this defence failed in high profile cases of child deaths (e.g. in the media reactions to the death of Peter Connolly (Warner 2015), but it can only be achieved by standardizing work to an extent such that it then fails to meet the variety of needs child protection encounters.

Many will argue that we are making the whole process so complicated as to be impractical. There is a merit in making research as simple to access, interpret and use as possible since professionals have very busy lives. There are limits, however, to how much this can be done. People have turned to scientific methods because their rigour gives us greater confidence in the conclusions. If we lose that rigour through a wish to simplify results, we lose the benefits of science. To repeat, a chain is only as strong as its weakest link, so cutting corners in drawing on research will undermine the enterprise.

We would also argue that our view of the world as complex is very familiar to those involved in direct work with families. Many professionals have been critical of the tendency to devalue their expertise and try to turn professional practice into a more mechanical process. Its limits are very visible to those who see the variety of the needs and circumstances of children and young people. Research on professionals' views of EBPP found that many were opposed because they questioned its ability to deal with the

complex reality that they faced (Gray et al. 2013). Therefore, the reactions to our arguments may be very different in different communities within child welfare, just as current attitudes to EBPP are varied.

APPENDICES

APPENDICES

You may find it helpful to consult the following websites that evaluate and summarise research on intervention effectiveness in child welfare.

- *The Campbell Collaboration* is an international organization that produces and disseminates systematic reviews of welfare interventions. Its stated mission is to help 'people make well-informed decisions by preparing, maintaining, and disseminating systematic reviews in education, crime and justice, and social welfare': www.campbellcollaboration.org
- *The Child Welfare Information Gateway* from the US Department of Human and Health Services lists currently evidenced interventions for prevention of problematic development, including preventing maltreatment: www.childwelfare.gov
- *Prevent Child Abuse* is a US foundation providing relevant research. It 'recognizes the significance of research to inform the public at-large and specifically, practitioners and consumers of prevention programming': www.preventchildabuse.org

- *The California Evidence-Based Clearinghouse for Child Welfare* states that its mission is 'to advance the effective implementation of evidence-based practices for children and families involved with the child welfare system. The primary goal […] is to provide a searchable database of programs that can be utilized by professionals that serve children and families involved with the child welfare system': www.cebc4cw.org

- *The Canadian Child Welfare Research Portal* 'summarises recently published child welfare studies that have been conducted in Canada': www.cwrp.ca

- *Centers for Disease Control and Prevention* based in the US provide summaries of and links to effective and promising programmes and background materials on prevalence and consequences of maltreatment of children: www.cdc.gov/violenceprevention/childmaltreatment/index.html

- *The Early Intervention Foundation* (UK) describes itself as 'the "go-to" organisation for evidence and advice on Early Intervention. [They] assess the evidence of what works, to determine the best Early Interventions available and their relative value for money'. The EIF provides an interactive guidebook to find evidence and guidance on how to deliver effective early interventions: www.guidebook.eif.org.uk

- *The Washington State Institute for Public Policy* (Child welfare section) provides a resume of the return on investment of various interventions entitled: 'An updated Inventory of Evidence-based, Research-based, and Promising

Practices for Prevention and Intervention Services for Children and Juveniles in the Child Welfare, Juvenile Justice, and Mental Health Systems': www.wsipp.wa.gov

* *The Centre for Excellence and Outcomes in Children and Young People's Services (C4EO)* works with local areas and services in the UK (across the public, private, voluntary and community sectors) to gather examples of excellent local practice which has led to significantly improved outcomes for children, young people and their families. Examples are assessed by a panel of sector experts who consider them against robust criteria, including the ability for other local areas to implement and use this "best" practice: www.c4eo.org.uk

Appendix 2: More kinds of causal maps

This appendix helps you to construct more complicated causal maps. You can use these maps in different ways. These ways are complementary and are often used in sequence. First, as you are trying to formulate a detailed assessment of a family's functioning you want to understand what factors in the family and environment are producing what results. Second, you want the causal map because knowing about the causes of a bad result and how they are acting together to produce it can help you identify effective ways to intervene and effective points at which to do so. Third, mapping out important facts about how a proposed intervention should work and what is in place that can help and hinder it will help you make better predictions about the outcomes of your interventions. And finally, an even more open-ended job, you want to envisage what might change in the future that might bring the child into danger – like the violent partner of the mother moving back in.

The different kinds of causal maps we describe in Chapter 1 have different advantages. The cake diagram highlights support factors but it does not represent anything about how the causal process unfolds step-by-step, which is information that can be very helpful for figuring out where to intervene or at what points the linkages you need for your intervention to work may be weak. On the other hand, you cannot read off from a process graph or a causal loop

diagram of the kind we pictured what the support factors are for the salient features pictured at each step. Here we borrow ideas from a training manual for mental health practitioners (Layne et al. 2014) to show how you can build up a causal map that represents both kinds of information at once.

It is important to keep in mind that these are just ways of representing information that can be important to the outcomes you are concerned about. They are not ways to discover this information but reminders of the kinds of things it may matter to discover. And they are certainly not meant to be treated like boxes that you must fill in: filling them in is neither necessary nor sufficient to getting good predictions. They are meant as an aid to help you think through the details of the causal narrative of what is happening to the family and child, and how, or what would happen, and how, were you too undertake the action you envisage.

Let's build up bit by bit, adding detail as we proceed. You may find you can make do with some of the simpler maps for some cases but want to use the more complicated ones for others.

You are already familiar with cake maps. Each cake depicts a complex of factors that together are enough to make it likely that a contribution to the outcome will occur. For almost all causes or interventions, there will be many different cakes containing the same factors but with different mixes of support factors that can contribute to the outcome. This neglects the fact that an

intervention can generally require other factors to be in place if it is to contribute to the outcome, but there may be more than one such set of support factors that can do the job. Some of these will contribute to boosting the effect. Let's label these with a plus sign: +. Other clusters of factors, other cakes, will diminish the effect. Label these with a minus sign: -. For visual clarity it helps to gather the positive factors in one clump and the negative in another. As in Figure A.1, in which we have coloured the factor which is the salient cause, and often the policy intervention you are focussing on, in grey.
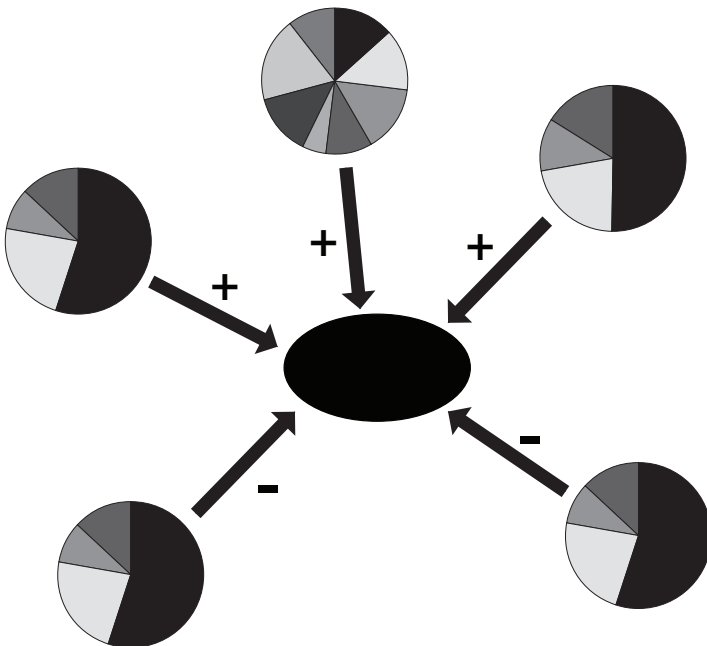

Figure A.1

So here the grey factor, the intervention, boosts the effect when it is combined with the other factors in the (top) cake (on the right hand side); and/or with the (different set of) factors in the middle cake: and/or (with yet another set of) factors in the left-hand side. Similarly, it has a diminishing effect in the cakes on the bottom. This makes sense: parenting classes are good if they are combined with the right set of complementary factors in any one of the three cakes. But are not so good if parents are unmotivated or the teacher is untrained.

If you are considering the effects of just a single salient factor – like a particular intervention – you need to represent only cakes that contain that factor. But if you are trying to understand a fuller story of what is bringing about a result, say the bad situation you are worried about, you will need to try to fill in as many of the causal cakes as possible and that includes cakes in which the salient factor is not the one you first thought of.

That is one kind of causal diagram you might use to organize your thinking. Another is to recognize that typically there are many significant stages that occur between the initial causes and the final outcome. As in our step-by-step strategy above, it can be helpful to think through what they are. For instance, you may see no way to remove an initial deleterious cause. Still you may be able to prevent it contributing to the effect by blocking one of the stages in between. We've illustrated step-by-step already in Figure 1.5. But with an eye to the further complications to be added, you might picture it like the one in Figure A.2.
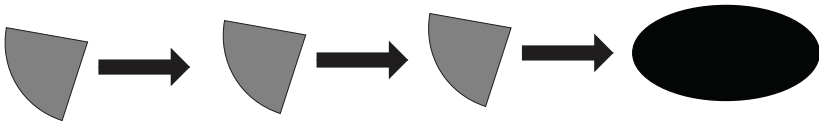
Figure A.2

This map depicts one single factor, the salient factor, after another. But the cake story says that one single factor, even the salient one, will seldom be enough on its own to make the next effect likely. It is just one ingredient – one wedge – in a causal cake. In Figure A.1 we showed the salient factor as a member of a number of cakes, some good some bad, in combination with a variety of other factors. And so too the salient factor at each stage in Figure A.2 is almost always a member of a number of cakes good and bad. That means that you can combine the ideas of Figures A.1 and A.2 to make a causal map with yet more information pictured. You just add the cakes relevant to each wedge at each step, as we depict in Figure A.3. Recalling that some cakes will promote the effect and others inhibit it, we put the promoters on top, with plus signs and the inhibitors on the bottom, with minus signs, as before. If a step is to lead to the next step, then at least one good cake must be effective, i.e. the supporting factors in it must be present, and if more than one cake is complete and thus effective, then the overall effect of the effective good and bad cakes must be positive. If this doesn't hold at each step, you don't get to the end. As in a quick exit tree, though the exit here need not be quick, i.e. early on.
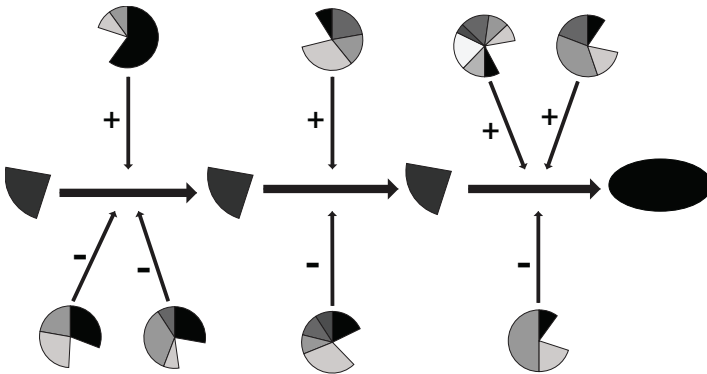
Figure A.3

Figure A.3 shows one pathway, beginning with one salient factor, that can lead to the outcome in question so long as the right combinations of support factors, pictured in the different causal cakes, obtain at each step. It is already fairly complicated because it depicts the different causal cakes that can be relevant at each step. Still it leaves out much of the causal story because it depicts only that one pathway, starting with that one salient factor. But recall our worries in *Step-by-step* that an intervention that is capable of making a positive difference might be derailed or overwhelmed by the action of other causes. This is not an unusual occurrence. In general, there will be many different step-by-step pathways feeding into the same outcome, some with different salient factors at the start but some will have the same salient factor at their head since even the same starting factor can get to the end effect by different series of steps in between (see Figure A.4).

This matters directly for diagnosis, when you want to figure out how a bad outcome is coming about. But it also matters for predicting the effects of treatment interventions, for a couple of different reasons. Knowing what else will affect the outcome in question will help you figure out how much improvement you can expect from what you propose to do. Also it may be that one of the other pathways into the outcome will contain factors that will break one of the arrows in the path that would lead from your intervention to the improvement aimed for so that your intervention won't have its desired effect after all.
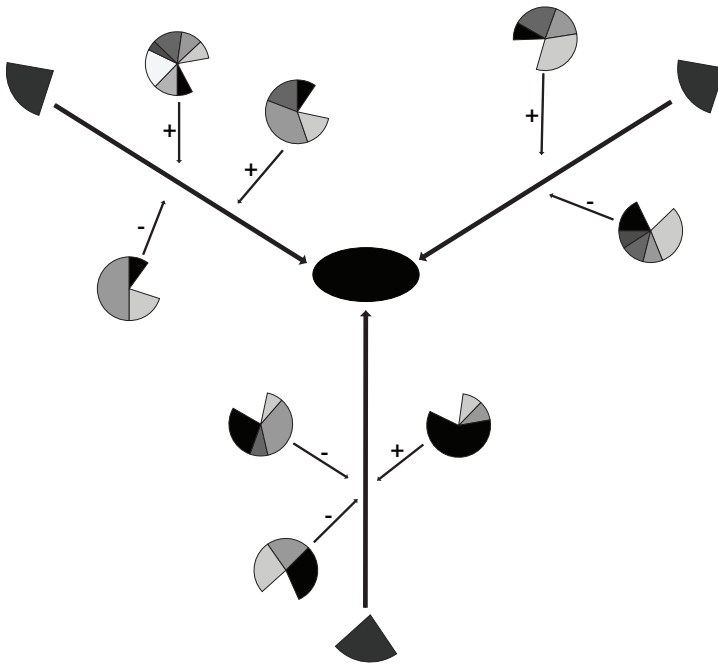

Figure A.4

These causal maps are to remind you what kinds of information you need to think about to make successful predictions or accurate diagnoses. You of course will never be able to fill them in very fully. But you don't always have to. Causal chains are like any other chains: they are only as strong as their weakest link. So, watch especially for places where the arrows may get broken (see box A.1). A broken arrow between your intervention and the outcome will mean that you will not get the effect you are aiming for, at least not along that pathway.

> ### Box A.1 A causal chain is only as strong as its weakest link.
>
> So watch for places where the pathway from starting cause to final outcome may get broken. This can help both in finding points at which to intervene and in predicting the effects of your proposed intervention.

There are two ways the arrow may be broken. Something positively steps in to stop it or some essential support factor is missing. Recognizing this will help you make better predictions about the effects of the particular intervention you propose. It is also helpful when you are trying to find effective ways to

intervene. If you can break any arrow, that pathway to the bad outcome will be blocked.

But be careful. There may well be many pathways all of which contribute to the undesirable outcome, in which case blocking one may not make for much improvement. Also you need to be sure that by blocking one pathway to the negative outcome, you don't open new negative pathways. We've seen an example of just this in the loop diagram of Figure 1.9. Stricter guidelines and more careful monitoring were supposed to stop delays and a too-casual analysis of the problem and thus improve child welfare outcomes. But the interventions also created new pathways that worked for just the opposite effect.

Beyond these kinds of maps you can clearly proceed even further, depending on how fully you want to represent your causal narrative. You can for instance add cakes to a loop diagram or steps between wedges and outcomes to a diagram showing multiple wedges with directed cakes. Generally, the more detail you can fill in, the better grasp you will have of the overall causal picture. But starting out with the idea that you need to fill in some template for one of these complicated diagrams can be daunting. It can inhibit rather than encourage your thinking about what is going on with the children and their family. So it is probably best to start with simple cake diagrams or try to think through what is happening, or what will happen, step-by-step – and always endeavouring to review your hypotheses with others and to monitor that matters are going as expected.

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