

CHAPTER 15

- Reading 15.1 **Rizzi, D.A. (1994). Causal reasoning and the diagnostic process. *Theoretical Medicine*, 15: 315–333 (Extract pp. 315–7).**
- Reading 15.2 **Hume, D. ([1748] 1975). *Enquiries Concerning Human Understanding and Concerning the Principles of Morals*. Oxford: Oxford University Press, section VII (Extract pp. 63–4).**
- Reading 15.3 **Mackie, J.L. (1993). Causes and conditions. In *Causation* (eds. E. Sosa and M. Tooley). Oxford: Oxford University Press, pp. 33–50 (Extract pp. 33–5).**
- Reading 15.4 **Papineau, D. (1986). Laws and accidents. In *Fact, Science and Morality* (eds. G. Macdonald and C. Wright). Oxford: Blackwell, pp 189–218 (Extract 190–1).**
- Reading 15.5 **Cartwright, N. (1983). Causal laws and effective strategies. In *How the Laws of Physics Lie*. Oxford University Press, pp. 21–42 (Extract pp. 23–5).**
- Reading 15.6 **McDowell, J. (1994). *Mind and World*. Cambridge, MA: Harvard University Press (Extract pp. 70–72).**
- Reading 15.7 **Brown, G.W. and Harris, T. (1978). *Social Origins of Depression*. London: Tavistock Publications (Extract pp. 233–8).**

Reading 15.1**EXERCISE 1**

From: Rizzi, D.A. (1994). Causal reasoning and the diagnostic process. *Theoretical Medicine*, 15: 315–333 (Extract pp. 315–7).

1 Introduction

The cogency of causal reasoning in the diagnostic process is the obvious persuasiveness of resolving a diagnostic search by specifying a string of causally related features leading to malfunction of the human organism. In the traditional view, the disease state of a patient is assessed causally by back-tracking a distinctive set of clinical data to an organ-malfunction, which then again can be explained causally as the result of a disease process in that organ or organ-system. The cause of the organ malfunction is subsequently explained by infection, neoplasia, degeneration or a biochemical disorder etc. The causal search is a retrograde process, starting from the effect, whereas the causal explanation equals successively organizing the events which have propagated in the opposite “direction.” This kind of linking procedure is readily verbalized and easily communicated. Causal reasoning has a firm position in the thought processes of physicians, presumably owing to the high status of etiology and pathogenesis held in nosological teaching and research, which again reflects the quest for rational therapeutic measures. Causal therapy is sometimes thought to be the most rational sort of therapy.

When referring to causes of disease, one must realize that conceptions of causation depend on points of view. The clinician, for example, is primarily searching for the causes of disease-manifestations in his or her patient, in order to treat. The medical student, on the other hand, would seem more interested in general causal relations for the disease entity. The scientist is searching for causal relations as well, but he or she is striving to establish or affirm a causal link, somewhere in the train of events that lead to a disease.

Of utmost importance to causal reasoning in medicine is the fundamental distinction between causes that relate to the singular case (so-called singular causation) and the acknowledgment in general that such and such is a cause of this type of event—the general case (also referred to as general causation). When evaluating causes in the singular case, one applies what science, i.e. established knowledge, dictates along with common sense in order to identify the causal factors involved. One compares the singular case to the general case or better, the reference case, in order to judge which factors are accountable. Such judgment is guided by experience (including common sense). Inquiries concerning general causation seek to establish classes or categories of causal relations. These classes consequently can either strengthen or change science. The classes also serve as guidelines for strategies in the singular case.

Regarding disease entities, singular causation is reflected in the clinical situation, the diagnostic search in the single case. General causation is encountered in the scientific search for causal connections that could explain a given disease and potentially make way for therapeutics.

Causal reasoning in the *diagnostic* process can be seen as one of several aspects of causal reasoning, pertaining to singular cases and it is irrefutably conducted under the influence of interests, preoccupations, goals and possibilities, diagnostic and therapeutic options etc.

There currently seem to be some contrasts and discrepancies in how diagnostic causal reasoning is thought to work. The purpose of the following will be to sort out the differences and try to accommodate the separate views, as they are not, in principle, significantly conflictive. The first part of the paper will discuss types of causal search, the second part will involve differences in diagnostic causal-search strategies between medical and technical diagnosis, this will lead to a discussion of models for causal reasoning in the diagnostic process. Then, some remarks about causal definitions of disease will be made. Finally, a sum-up of the issues will be done, incorporating the concepts of causal fields and the stop problem.

Reading 15.2**EXERCISE 2**

From: Hume, D. ([1748] 1975). *Enquiries Concerning Human Understanding and Concerning the Principles of Morals*. Oxford: Oxford University Press, section VII (Extract pp. 63–4).

To be fully acquainted, therefore, with the idea of power or necessary connexion, let us examine its impression; and in order to find the impression with greater certainty, let us search for it in all the sources, from which it may possibly be derived.

When we look about us towards external objects, and consider the operation of causes, we are never able, in a single instance, to discover any power or necessary connexion; any quality, which binds the effect to the cause, and renders the one an infallible consequence of the other. We only find, that the one does actually, in fact, follow the other. The impulse of one billiard-ball is attended with motion in the second. This is the whole that appears to the *outward* senses. The mind feels no sentiment or *inward* impression from this succession of objects: Consequently, there is not, in any single, particular instance of cause and effect, any thing which can suggest the idea of power or necessary connexion.

From the first appearance of an object, we never can conjecture what effect will result from it. But were the power or energy of any cause discoverable by the mind, we could foresee the effect, even without experience; and might, at first, pronounce with certainty concerning it, by the mere dint of thought and reasoning.

In reality, there is no part of matter, that does ever, by its sensible qualities, discover any power or energy, or give us ground to imagine, that it could produce any thing, or be followed by any other object, which we could denominate its effect. Solidity, extension, motion; these qualities are all complete in themselves, and never point out any other event which may result from them. The scenes of the universe are continually shifting, and one object follows another in an uninterrupted succession; but the power or force, which actuates the whole machine, is entirely concealed from us, and never discovers itself in any of the sensible qualities of body. We know, that, in fact, heat is a constant attendant of flame; but what is the connexion between them, we have no room so much as to conjecture or imagine. It is impossible, therefore, that the idea of power can be derived from the contemplation of bodies, in single instances of their operation; because no bodies ever discover any power, which can be the original of this idea.

Reading 15.3

EXERCISE 3

From: Mackie, J.L. (1993). Causes and conditions. In *Causation* (eds. E. Sosa and M. Tooley). Oxford: Oxford University Press, pp. 33–50 (Extract pp. 33–5).

Suppose that a fire has broken out in a certain house, but has been extinguished before the house has been completely destroyed. Experts investigate the cause of the fire, and they conclude that it was caused by an electrical short-circuit at a certain place. What is the exact force of their statement that this short-circuit caused this fire? Clearly the experts are not saying that the short-circuit was a necessary condition for this house's catching fire at this time; they know perfectly well that a short-circuit somewhere else, or the overturning of a lighted oil stove, or any one of a number of other things might, if it had occurred, have set the house on fire. Equally, they are not saying that the short-circuit was a sufficient condition for this house's catching fire; for if the short-circuit had occurred, but there had been no inflammable material near by, the fire would not have broken out, and even given both the short-circuit and the inflammable material, the fire would not have occurred if, say, there had been an efficient automatic sprinkler at just the right spot. Far from being a condition both necessary and sufficient for the fire, the short-circuit was, and is known to the experts to have been, neither necessary nor sufficient for it. In what sense, then, is it said to have caused the fire?

At least part of the answer is that there is a set of conditions (of which some are positive and some are negative), including the presence of inflammable material, the absence of a suitably placed sprinkler, and no doubt quite a number of others, which combined with the short-circuit constituted a complex condition that was sufficient for the house's catching fire—sufficient, but not necessary, for the fire could have started in other ways. Also, of *this* complex condition, the short-circuit was an indispensable part: the other parts of this condition, conjoined with one another in the absence of the short-circuit, would not have produced the fire. The short-circuit which is said to have caused the fire is thus an indispensable part of a complex sufficient (but not necessary) condition of the fire. In this case, then, the so-called cause is, and is known to be, an *insufficient* but *necessary* part of a condition which is itself *unnecessary* but *sufficient* for the result. The experts are saying, in effect, that the short-circuit is a condition of this sort, that it occurred, that the other conditions which conjoined with it to form a sufficient condition were also present, and that no other sufficient condition of the house's catching fire was present on this occasion. I suggest that when we speak of the cause of some particular event, it is often a condition of this sort that we have in mind. In view of the importance of conditions of this sort in our knowledge of and talk about causation, it will be convenient to have a short name for them: let us call such a condition (from the initial letters of the words italicized above) an INUS condition.

This account of the force of the experts' statement about the cause of the fire may be confirmed by reflecting on the way in

which they will have reached this conclusion, and the way in which anyone who disagreed with it would have to challenge it. An important part of the investigation will have consisted in tracing the actual course of the fire; the experts will have ascertained that no other condition sufficient for a fire's breaking out and taking this course was present, but that the short-circuit did occur and that conditions were present which in conjunction with it were sufficient for the fire's breaking out and taking the course that it did. Provided that there is some necessary and sufficient condition of the fire—and this is an assumption that we commonly make in such contexts—anyone who wanted to deny the experts' conclusion would have to challenge one or another of these points.

We can give a more formal analysis of the statement that something is an INUS condition. Let 'A' stand for the INUS condition—in our example, the occurrence of a short-circuit at that place—and let 'B' and 'C' (that is, 'not-C', or the absence of C) stand for the other conditions, positive and negative, which were needed along with A to form a sufficient condition of the fire—in our example, B might be the presence of inflammable material, \bar{C} the absence of a suitably placed sprinkler. Then the conjunction 'ABC' represents a sufficient condition of the fire, and one that contains no redundant factors; that is, ABC is a minimal sufficient condition for the fire.¹ Similarly, let, \overline{DEF} , \overline{GHI} , etc., be all the other minimal sufficient conditions of this result. Now provided that there is some necessary and sufficient condition for this result, the disjunction of all the minimal sufficient conditions for it constitutes a necessary and sufficient condition.² That is, the formula 'ABC or DEF or GHI or . . .' represents a necessary and sufficient condition for the fire, each of its disjuncts, such as 'ABC', represents a minimal sufficient condition, and each conjunct in each minimal sufficient condition, such as 'A', represents an INUS condition. To simplify and generalize this, we can replace the conjunction of terms conjoined with 'A' (here 'BC') by the single term 'X', and the formula representing the disjunction of all the other minimal sufficient conditions—here 'DEF or GHI or . . .'—by the single term 'Y'. Then an INUS condition is defined as follows:

A is an INUS condition of a result P if and only if, for some X and for some Y, (AX or Y) is a necessary and sufficient condition of P, but A is not a sufficient condition of P and X is not a sufficient condition of P.

¹ The phrase 'minimal sufficient condition' is borrowed from Konrad Marc-Wogau, 'On Historical Explanation', *Theoria*, 28 (1962), 213–33. This article gives an analysis of singular causal statements, with special reference to their use by historians, which is substantially equivalent to the account I am suggesting. Many further references are made to this article, especially in n. 9 below.

² Cf. n. 8 on p. 227 of Marc-Wogau's article, where it is pointed out that in order to infer that the disjunction of all the minimal sufficient conditions will be a necessary condition, 'it is necessary to presuppose that an arbitrary event C, if it occurs, must have sufficient reason to occur'. This presupposition is equivalent to the presupposition that there is some (possibly complex) condition that is both necessary and sufficient for C. It is of some interest that some common turns of speech embody this presupposition. To say 'Nothing but X will do,' or 'Either X or Y will do, but nothing else will,' is a natural way of saying that X, or the disjunction (X or Y), is a *necessary* condition for whatever result we have in mind. But taken literally these remarks say only that there is no sufficient condition for this result other than X, or other than (X or Y). That is, we use to mean 'a necessary condition' phrases whose literal meanings would be 'the only sufficient condition,' or 'the disjunction of all sufficient conditions'. Similarly, to say that Z is 'all that's needed' is a natural way of saying that Z is a sufficient condition, but taken literally this remark says that Z is the only necessary condition. But, once again, that the only necessary condition will also be a sufficient one follows only if we presuppose that some condition is both necessary and sufficient.

Reading 15.4**EXERCISE 4**

From: Papineau, D. (1986). *Laws and accidents*. In *Fact, Science and Morality* (eds. G. Macdonald and C. Wright). Oxford: Blackwell, pp 189–218 (Extract 190–1).

II The Humean Programme

The Humean view of laws is the view that laws do not express necessary connections but only constant conjunctions. The fundamental difficulty for this view is that it seems to let in too many true generalizations as laws. If ‘C causes E’ is equivalent to ‘whenever C then E’, then what, say, is to stop the following proposition counting as a causal law: ‘whenever David Papineau watches Arsenal play at home, the score is 0–0’? (I’ve been to Highbury about half a dozen times, and I’ve never seen a goal there, and so I’m not going again.)

Intuitively, of course, we don’t count generalizations like these as laws: my being at Highbury doesn’t *stop* the footballers scoring; it just so happens that when I’m there they don’t. But isn’t this just what Humeans say about laws in general? Causal laws are simply statements of constant conjunction. C’s causing E isn’t anything over and above C’s always being followed by E. So why don’t Humeans count my being at Highbury as the cause of the lack of goals?

It is true that laws, but not accidents, seem to tell us not just about the actual world, but also, counterfactually, about what would have happened if things had been different. (So, for instance: if this water had been heated to 100°C, it would have

boiled. But not: if I had gone to Highbury last Saturday, Charlie Nicholas wouldn’t have scored those two goals.) However at this stage of the argument it is hard to see this as anything more than a restatement of the problem. If we take counterfactual claims at face value, as stating facts about real though non-actual possible states of affairs, then the Humean has to explain why laws—which just state what does happen, as opposed to what necessarily must happen—should carry implications about what goes on in other possible worlds. If, on the other hand, we read counterfactual talk as just a figure of speech, then no doubt the Humean can *introduce* the intuitive distinction between laws and accidents in terms of their differential power to ‘sustain counterfactuals’—but there is still a need to explain why, despite their apparently similar contents, laws and accidents should find expression in different figures of speech.

The task facing Humeans is to explain the difference between laws and accidents without giving up the basic Humean claim that causal laws state constant conjunctions, not necessary connections. On the Humean view, laws and accidents state the same kind of thing about the world: events of one sort always go together with events of another sort. So for Humeans the difference between laws and accidents doesn’t lie in what *they* say about the world, so much as in what *we* say about them. Consequently Humeans will aim to explain what makes it right to say, *of* some true generalizations, that they are laws, while it is wrong to say this of other true generalizations. To put it its simplest, Humeans have to explain why some constant conjunctions are better than others.

Reading 15.5

EXERCISE 6

From: Cartwright, N. (1983). Causal laws and effective strategies. In *How the Laws of Physics Lie*. Oxford University Press, pp. 21–42 (Extract pp. 23–5).

It is generally supposed that smoking causes heart disease ($S \hookrightarrow H$). Thus we may expect that the probability of heart disease on smoking is greater than otherwise. (We can write this as either $\text{Prob}(H/\top S) > \text{Prob}(H)$, or $\text{Prob}(H/S) > \text{Prob}(H/\neg S)$, for the two are equivalent.) This expectation is mistaken. Even if it is true that smoking causes heart disease, the expected increase in probability will not appear if smoking is correlated with a sufficiently strong preventative, say exercising. (Leaving aside some niceties, we can render ‘Exercise prevents heart disease’ as $X \hookrightarrow \neg H$.) To see why this is so, imagine that exercising is more effective at preventing heart disease than smoking at causing it. Then in any population where smoking and exercising are highly enough correlated,¹ it can be true that $\text{Prob}(H/S) < \text{Prob}(H)$, or even $\text{Prob}(H/S) < \text{Prob}(H/\neg S)$. For the population of smokers also contains a good many exercisers, and when the two are in combination, the exercising tends to dominate.

It is possible to get the increase in conditional probability to reappear. The decrease arises from looking at probabilities that average over both exercisers and non-exercisers. Even though in the general population it seems better to smoke than not, in the population consisting entirely of exercisers, it is worse to smoke. This is also true in the population of non-exercisers. The expected increase in probability occurs not in the general population but in both sub-populations.

This example depends on a fact about probabilities known as Simpson’s paradox,² or sometimes as the Cohen–Nagel–Simpson paradox, because it is presented as an exercise in Morris Cohen’s and Ernest Nagel’s text, *An Introduction to Logic and Scientific Method*.³ Nagel suspects that he learned about it from G. Yule’s *An Introduction*

to the *Theory of Statistics* (1904), which is one of the earliest textbooks written on statistics; and indeed it is discussed at length there. The fact is this: any association— $\text{Prob}(A/B) = \text{Prob}(A)$; $\text{Prob}(A/B) > \text{Prob}(A)$; $\text{Prob}(A/B) < \text{Prob}(A)$ —between two variables which holds in a given population can be reversed in the sub-populations by finding a third variable which is correlated with both.

In the smoking-heart disease example, the third factor is a preventative factor for the effect in question. This is just one possibility. Wesley Salmon⁴ has proposed different examples to show that a cause need not increase the probability of its effect. His examples also turn on Simpson’s paradox, except that in his cases it is correlated, not with the presence of a negative factor, but with the absence of an even more positive one.

Salmon considers two pieces of radioactive material, uranium 238 and polonium 214. We are to draw at random one material or the other, and place it in front of a Geiger counter for some time. The polonium has a short half-life, so that the probability for some designated large number of clicks is .9; for the long-lived uranium, the probability is .1. In the situation described, where one of the two pieces, is drawn at random, the total probability for a large number of clicks is $\frac{1}{2}(.9) + \frac{1}{2}(.1) = .5$. So the conditional probability for the Geiger counter to click when the uranium is present is less than the unconditional probability. But when the uranium has been drawn and the Geiger counter does register a large number of clicks, it is the uranium that causes them. The uranium decreases the probability of its effect in this case. But this is only because the even more effective polonium is absent whenever the uranium is present.

All the counter examples I know to the claim that causes increase the probability of their effects work in this same way. In all cases the cause fails to increase the probability of its effects for the same reason: in the situation described the cause is correlated with some other causal factor which dominates in its effects. This suggests that the condition as stated is too simple. A cause must increase the probability of its effects; but only in situations where such correlations are absent.

¹ Throughout, ‘A and B are correlated’ will mean $\text{Prob}(A/B) \neq \text{Prob}(A)$.

² E. H. Simpson, ‘The Interpretation of Interaction in Contingency Tables’, *Journal of the Royal Statistical Society*, Ser. B. 13 (1951), pp. 238–41.

³ See Morris R. Cohen and Ernest Nagel, *An Introduction to Logic and Scientific Method* (New York: Harcourt, Brace and Co., 1934).

⁴ See Wesley Salmon, *op. cit.*,

Reading 15.6

EXERCISE 7

From: McDowell, J. (1994). *Mind and World*. Cambridge, MA: Harvard University Press (Extract pp. 70–72).

3. What is at work here is a conception of nature that can seem sheer common sense, though it was not always so; the conception I mean was made available only by a hard-won achievement of human thought at a specific time, the time of the rise of modern science. Modern science understands its subject matter in a way that threatens, at least, to leave it disenchanting, as Weber put the point in an image that has become a commonplace. The image marks a contrast between two kinds of intelligibility: the kind that is sought by (as we call it) natural science, and the kind we find in something when we place it in relation to other occupants of “the logical space of reasons”, to repeat a suggestive phrase from Wilfrid Sellars.¹ If we identify nature with what natural science aims to make comprehensible, we threaten, at least, to empty it of meaning. By way of compensation, so to speak, we see it as the home of a perhaps inexhaustible supply of intelligibility of the other kind, the kind we find in a phenomenon when we see it as governed by natural law.² It was an achievement of modern thought when this second kind of intelligibility was clearly marked off from the first. In a common mediaeval outlook, what we now see as the subject matter of natural science was conceived as filled with meaning, as if all of nature were a book of lessons for us; and it is a mark of intellectual progress that educated people cannot now take that idea seriously, except perhaps in some symbolic role.³

Now if we conceive the natural as the realm of law, demarcating it by the way its proper mode of intelligibility contrasts with the

¹ See Lecture I, §2. Of course depictions of nature are linked by relations of justification. The point is that there are no such linkages in what is depicted.

² The crucial contrast here is between the internal organization of the space of reasons and the internal organization of nature, on a conception that modern natural science invites us to hold. This contrast echoes the Kantian contrast between the realm of freedom and the realm of nature. It sets the agenda for much post-Kantian philosophy, and it is central to Sellars's thinking.

In the text, I avoid a gloss that some of Sellars's followers put on what stands opposed to the space of reasons: Rorty, for instance, speaks on Sellars's behalf of a distinction between the logical space of reasons and the logical space of “causal relations to objects” (*Philosophy and the Mirror of Nature* [Princeton University Press, Princeton, 1979, p. 157]). I think this reflects a disputable picture of how modern natural science most fundamentally organizes its subject matter: one that Russell protested against in his essay “On the Notion of Cause”, in Bertrand Russell, *Mysticism and Logic* (George Allen and Unwin, London, 1917), pp. 132–51 in the 1963 paperback edition. Russell suggested that the idea of causation should be replaced, in the role of basic organizing principle for the world as viewed by natural science, with something like the idea of law-governed processes. So the right contrast for the space of reasons is not the space of causes but, as in my text, the realm of law. (This leaves untouched the fact, which I exploited in my Sellarsian explanation of why the Myth of the Given is a myth [Lecture I, §3], that a *merely* causal relation cannot do duty for a justificatory relation.)

It is not just that this reading of the contrast is wrong about science; it is also disputable in its implication that the idea of causal connections is restricted to thinking that is *not* framed by the space of reasons. On my reading, the contrast leaves it possible for an area of discourse to be in the logical space of causal relations to objects without thereby being shown not to be in the logical space of reasons. Contrary to what Rorty's contrast implies, reasons might *be* causes.

³ See chap. 1 of Charles Taylor, *Hegel* (Cambridge University Press, Cambridge, 1975).

intelligibility that belongs to inhabitants of the space of reasons, we put at risk the very idea that spontaneity might characterize the workings of our sensibility as such. The faculty of spontaneity is the understanding, our capacity to recognize and bring into being the kind of intelligibility that is proper to meaning. We disclose this kind of intelligibility by placing things in a logical space that is *sui generis*, by comparison with the realm of law. But sensibility, as I said, is part of our nature, part of what we share with mere animals. If that means its operations are what they are by virtue, of their positions in the realm of law, it can seem incoherent to suppose that they might be shaped by concepts. That would imply that their being what they are is also a matter of positions in the contrasting logical space.

Moreover, we had better not aspire to put the lost enchantment back into the merely natural world. According to the picture I have been recommending, our sensibility yields states and occurrences with conceptual content. That enables us to see an experiencing subject as open to facts. The conceptual sphere does not exclude the world we experience. To put it another way: what we experience is not external to the realm of the kind of intelligibility that is proper to meaning. (See Lecture II.) But in so far as what we experience includes merely natural facts, this can look like a call to regress into a pre-scientific superstition, a crazily nostalgic attempt to re-enchant the natural world.

Let me stress that the issue here cannot be confined to our understanding of one another, something that must involve “space of reasons” intelligibility. If we acquiesce in the disenchantment of nature, if we let meaning be expelled from what I have been calling “the merely natural”, we shall certainly need to work at bringing meaning back into the picture when we come to consider human interactions. But it is not just in our comprehension of language, and in our making sense of one another in the other ways that belong with that, that conceptual capacities are operative. I have urged that conceptual capacities, capacities for the kind of understanding whose correlate is the kind of intelligibility that is proper to meaning, are operative also in our perception of the world apart from human beings. The question is how we can take that view without offering to reinstate the idea that the movement of the planets, or the fall of a sparrow, is rightly approached in the sort of way we approach a text or an utterance or some other kind of action.

Reading 15.7**EXERCISE 8**

From: Brown, G.W. and Harris, T. (1978). *Social Origins of Depression*. London: Tavistock Publications (Extract pp. 233–8).

15 Depression and loss

The time has now come to draw together the various factors we have identified as significant in producing and shaping depression. The main task of this book has been to develop a casual model of clinical depression: this has been done and, we believe, it is sufficiently well based for some attention to be paid to the theory that we have developed to make sense of it. But the two must be kept distinct: claims that we make for the causal model cannot be made as yet for the more speculative theory.

We have identified three broad groups of factors; the provoking agents, the vulnerability factors, and the symptom-formation factors. These we believe relate in differing ways to a central experience of hopelessness which develops out of the appraisal of particular circumstances, usually involving loss.

Hopelessness and Depression

Recognition that loss plays an important role in depression has, of course, been widespread. While a good deal of the extensive research literature has dealt with death, Freud made the point in *Mourning and Melancholia* that the object need not necessarily have died but simply have been lost as an object of love. The way in which we have categorized events follows a similar line of thought. Basically we have seen loss events as the deprivation of sources of value or reward. We now go further to suggest that what is important about such loss for the genesis of depression is that it leads to an inability to hold good thoughts about ourselves, our lives, and those close to us. Particularly important, as Melges and Bowlby (1969) have argued, is the loss of faith in one's ability, to attain an important and valued goal. But this must not simply be equated with disappointment and adversity. Most of us (we will not bother with rare exceptions) strive to hold ourselves and those close to us in high esteem—as a good mother, or father, wife or husband, housewife, worker, friend, home decorator, and tennis player, although each of us differs in the relative importance we give to such activities and roles. Sources of value can come from a person, a role, or an idea; but it would also be misleading to see such rewards as mutually exclusive. A mother can value a child for his presence, obtain a sense of identity from her maternal role, and gain reward from fantasy about what he will become. A further point is that it is possible to hold good thoughts about them even when all is far from well with our world. The fact that we are beset by difficulties will not necessarily detract from our ability to feel all right about things; indeed, if we

can believe we have stood up well to adversity, feelings of pride and self-worth may increase. The point is not obscure: the ability to feel good about things is not a straightforward function of the amount of 'difficulty' and 'failure' in our lives.

The fact that reward can be got simply from ideas means that the past, the present, or the future are involved; it follows also that scope for suffering is increased. Ideas about the future may have had only a tenuous link with reality and yet still be experienced as great loss if they can no longer be believed. This independence of ideas from place and time is important for an understanding of loss. The worth of a person or a role does not necessarily disappear with the loss of the person or the role—a widow can continue to have good thoughts about her marriage. In the same way, good thoughts will not necessarily be possible even if person or role remain unchanged. A woman deprived of a lover will not always lose good thoughts about herself or lose hope of gaining another. She may retain the warmest memories and remain confident of her attractiveness and capacity to love. Alternatively, the parting may cast doubt on what she had seen as a successful relationship and lead her to question her ability to rebuild any worthwhile relationship with a man. In other words, the implications of loss usually stretch far beyond the fact of the loss itself. Like Melges and Bowlby we believe hopelessness is the key factor in the genesis of clinical depression and loss is probably the most likely cause of profound hopelessness. But it is not just loss of a particular 'object' that has to be dealt with, so much as its implications for our ability to find satisfactory alternatives. The process of loss can be likened to a series of Russian dolls one within the other—but in a Lewis Carroll world where each succeeding doll may prove to be larger than the last. In loss it is not always just the current situation that is involved (although, we believe, the significance of this is often underestimated). The present is bound to some degree to awaken our past. This has long been recognized: that crises will often awaken 'unresolved conflicts', memories, and emotions. Some emphasise the potential for growth and adjustment here—stressing that the crises give us another chance of dealing with the past. Clinical experience abounds with examples of individuals and families who 'rise to the occasion' when confronted with crises, there by not only successfully mastering the exigencies of the current situation, but also dealing more adequately with long-standing conflicts that have been suppressed or repressed (Parad and Caplan, 1965: 57).

The immediate response to loss of an important source of positive value is likely to be a sense of hopelessness, accompanied by a gamut of feelings, ranging from distress, depression, and shame to anger. Feelings of hopelessness will not always be restricted to the provoking incident—large or small. It may lead to thoughts about the hopelessness of one's life in general. It is such *generalization* of hopelessness that we believe forms the central core of a depressive disorder. It is this that sets the rest of the syndrome in train. We are not the first to believe this (or at least something like it). Aaron Beck has focussed upon a similar cognitive component

of clinical depression. While we do not rule out that at times physical factors may be largely responsible for clinical depression, we believe that in most instances a cognitive appraisal of one's world is primary—and it is from this that the characteristic bodily and psychological symptoms of depression arise. This is not to deny the importance of research on the physical basis of depression. Clinical depression involves profound bodily changes. What we assert is that until such work is extended to take account of bodily processes *before* the onset of depressive symptoms, it has no strict aetiological relevance in the sense used in this book; for the bodily changes may well form part of the dependent rather than the independent variable.

Our argument so far is incomplete. Why do relatively so few people develop such hopelessness? A less familiar component of our theory is that a person's ongoing self-esteem is crucial in determining whether generalized hopelessness develops—that is, response to loss and disappointment is mediated by a sense of one's ability to control the world and thus to repair damage, a confidence that in the end alternative sources of value will become available. If self-esteem and feelings of mastery are low *before* a major loss and disappointment a woman is less likely to be able to imagine herself emerging from her privation. It is this, we believe, that explains the action of the vulnerability factors in bringing about depression in the presence of severe events and major difficulties. They are an odd assortment: loss of mother before eleven, presence at home of three or more children under fourteen, absence of a confiding relationship, particularly with a husband, and lack of a full- or part-time job. (Reversal, of course, will express them as protective factors—*not* losing a mother before eleven and so on.) We suggest that low self-esteem is the common feature behind all four and it is this that makes sense of them. There are several terms other than self-esteem that could be used almost interchangeably—self-worth, mastery, and so on. In the end we chose it because it was a term sometimes used by the women themselves (although they more often talked of lacking confidence). We were particularly interested in a few of the women who took up employment a few weeks *after* the occurrence of a severe event, none of whom developed depression. One working-class woman who had previously not worked for six years commented that 'the money was not much' but it 'gave me a great boost' and 'greater self-esteem'. The relevance for the women of the three vulnerability factors occurring in the present would probably lie in generating a sense of failure and dissatisfaction in meeting their own aspirations about themselves, particularly those concerning being a good mother and wife—this giving them chronically low self-esteem.

When discussing Henry VIII's reaction to the possibility of Katheryn's adultery we related the idea of meaning to plans of action—the King was unprepared in the sense he had 'formed neither a plan nor a preference' for another liaison. McCall and Simmons in *Identities and Interactions* (1966) made the point that the major source of our plans are *role identities*, the imaginative view an individual has of himself as an occupant of a particular

social position. While these are usually socially based, quite idiosyncratic ideas of oneself can be incorporated. We believe it is these role identities that are usually involved in the hopelessness that precedes clinical depression. McCall and Simmons see the identities as woven into various more or less cohesive patterns.

'The basis for this clustering is ordinarily that several role-identities involve similar skills, have the same persons "built into" their contents, or pertain to the same institutional context or period of one's life. These clusters may themselves be linked more or less closely with other clusters or may be quite rigidly "compartmentalized" or "dissociated" from others.'

(McCall and Simmons, 1966: 76–7)

The more a woman has committed herself to a given identity or cluster of identities the more her 'assumptive world', in Parkes's sense, will be caught up in it and the greater the severity of a crisis that deprives her of an essential part of it. Our concepts of general and specific appraisal were based on the way women respond to 'external' events and difficulties—the way they put them together in their mind. In general appraisal there is a simple addition of distress as if the thought 'oh yet another thing' is the final cause of breakdown. In specific appraisal, additivity of events rests on the particular implications of the first event for the second. It is not, however, easy to move from these ideas to the impact of provoking agents on role identities. It is possible to imagine the general appraisal of a number of 'unrelated' severe events influencing just one role identity—learning that one's child is in trouble with the police and that another has failed an important examination may be quite unrelated in an 'external' sense but jointly have a devastating impact on a woman's notion of herself as an effective mother. It is also possible to conceive of a specific appraisal of 'one' event influencing several identities—and even more complex possibilities. Since little is known about the organization of these identities, we can only speculate. In our various discussions of the 'additivity' of provoking agents we have suggested that it is hopelessness about restoring a particular source of value that is usually crucial. This may be something that was once had (a husband's love) or something which was only wished for (a new place to live). It is now clear that this must not be taken too literally; although the hopelessness usually starts from a particular focus, just what is involved in terms of 'psychic additivity' will depend on the underlying role identities. A general appraisal may relate to a specific identity and a specific appraisal to a number of quite disparate identities. However, on the whole, some broad comparability between the two would be expected. It is possible that what is *left* of a role identity or identities after a provoking agent will determine vulnerability. If important role identities are left, a woman will have more on which to build for the future; and one way of viewing vulnerability is in terms of the hope a woman can bring to her situation.

It is not difficult to see how three of the factors we have identified as enhancing vulnerability may relate to role identities or how their reversal (having a full or part-time job, a close

10 CHAPTER 15 READING 15.7

relationship with husband, not having three or more children under fourteen at home) can be protective. In the case of employment, not only does the role identity of worker become available to a woman but her extra social contacts will often provide her with new interpersonal identities. The existence of an intimate relationship most probably acts by providing not only a role identity but also one that is likely to be appraised as successful, and thus a source of self-esteem. In a similar way it is probably usually easier to perform successfully in the role of mother when there are fewer than three children under fourteen, and it is easier for a woman to spend time outside the house building new role identities if she has fewer children who can be left with neighbours or relatives, or even accompany her more easily.

We therefore suggest that the vulnerability factors play an important role because they limit a woman's ability to develop an optimistic view about controlling the world in order to restore some source of value. Of course, an appraisal of hopelessness is

often entirely realistic: the future for many women *is* bleak. But given a particular loss or disappointment, ongoing low self-esteem will increase the chance of a general appraisal of hopelessness:

