6 How Minds are Made Up

6.1 INTRODUCTION

When we 'make up our minds', we concoct justifications for adhering tentatively to particular bounded images of the future that could lie before us when we choose. Some of the devices that people employ in constructing such justifications were considered in section 5.5, in the light of Steinbruner's (1974) work. However, it would be misleading to say that if we know about people using such devices we know how they make up their minds. For a major question is still waiting to be answered, namely why does a decision maker delude herself this way rather than that when forming her mental landscapes of the future? As she constructs single or multiple scenarios it is likely that she will regard some analogies as useful and others as misleading. It is also likely that she will accept the advice of some people and reject that of others, and be selective in the extent to which she takes account of changes in the 'state of the news'. Such inferences of impossibility as she draws may be based on impeccable logic, but logic, however good, is an incomplete tool for making confident assertions; it can only apply to what has already been incorporated in a model of the situation at hand. She could have drawn different inferences on the basis of different partial models that were equally logical in their structures. Inferences of transformation and negative images are by their nature subjective. If the decision maker's mind can cobbled together one set of images and partial justifications, what stops it from constructing another set, given a particular set of possibilities?

In this chapter, the primary aim is to answer this question in a way that avoids the conclusion that decision makers' minds generally operate in a 'spontaneous and erratic' manner (the term is part of Coddington's (1982, p. 481) critical characterisation of the beliefs of subjectivist Keynesians). The failure to avoid such a conclusion would be nihilistic in its implications for economics as a predictive discipline. We would be left admitting that choosers might believe absolutely anything that their creative processes or the 'state of the news' throw up as a possibility, and might act upon it; their behaviour would be unstructured and coherent patterns might only be observed by chance in aggregative contexts.

The nihilistic conclusion is swiftly avoided in section 6.2, with the aid of the remaining key ideas from Kelly's (1955, 1963) theory of personality. In my experience, these ideas are rather more difficult to grasp on first hearing than the ones I introduced in section 4.2; hence, in keeping with Steinbruner's way of thinking, I will devote section 6.3 to some clarificatory arguments from analogy. In section 6.4 some techniques for investigating these ideas empirically will be outlined. The next two sections introduce a strategic/structural perspective. Section 6.5 examines differences in the ways in which people organise their ideas to cope with surprises, while section 6.6 investigates why some ideas—including ideas about what one might choose to do—often seem easier to change than others. Section 6.7 is a thread-tying conclusion.

6.2 RULES FOR THOUGHT

We have already seen, in section 4.2, how people may be blind to some possibilities because they do not include appropriate construct axes in their limited repertoires, and how their expectations will be shaped by the reference standards they use and the ranges of convenience they assign to construct axes which they do employ. What we have not so far considered is how people decide whether and how to include possible construct axes in their repertoires or how they adjust their reference standards and construct ranges. These possible means for forming constructs have to be judged themselves; for they too are expectation-laden constructs—before other expectations can be put together. It sounds at first sight as though we are faced with a problem of infinite regress. For example, consider the mental processes of the subject in the following imaginary interview:

Researcher: Why did you believe the Canon AE1 Program would be the easiest 35 mm SLR camera to use?
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Researcher: 'Why did you believe the Canon AE1 program would be the easiest 35 mm SIR camera to use?'
Subject: ‘At the time I bought it, my friend Grahame had one and he told me it was the only one around that you could just focus and shoot, with no need to worry about aperture and shutter-speed settings.’

Researcher: ‘Why did you believe him?’

Subject: ‘Because he’s the sort of person who always does his homework on expensive products before he buys them.’

Researcher: ‘How do you know this?’

Subject: ‘Because he always seems to know a lot about things.’

Researcher: ‘How do you know he’s not just bluffing?’

Subject: ‘I trust him.’

Researcher: ‘Why?’

Subject: ‘I’ve never had reason to doubt what he says whenever we talk; he’s not like some people who go about making exaggerated claims that conflict with what they said the previous week.’

Researcher: ‘He might be a very clever bluffer, and there might be good reasons behind the surface contradictions in what others say....’

Subject: ‘I doubt it.’

Researcher: ‘Why?’

Subject: ‘Look here, is this the Spanish Inquisition or (getting agitated) something? I’ve got better things to do than to sit here and he quizzed like this.’

The stormy break-up of the interview is precisely the kind of thing that tends to happen in real-life situations where a set of questions gets unexpectedly probing and challenges the bases of everyday beliefs. (See Garfinkel, 1967, for some actual examples, or experiment on friends you do not mind upsetting!) But, in any case, I had to employ some method of bringing it to a close, for in questioning the subject the researcher appeared to be going round in circles or, rather, along an endless judgemental helix. The subject’s expectation about the camera she chose was something she had made dependent on what her friend had to say about cameras. In doing this she was acting upon the expectation that her friend’s advice was worth having, a construct that depended on how she chose to construe her friend as a person, which was in turn determined by the way that he was seen as talking about things relative to the way employed by other people who were believed to be unreliable in what they say.

It is by no means intrinsic to the situation in question that this chain of expectations has to be used to form the end product, the image of the camera that it would be appropriate to buy. However, it is the chain—which we might describe also as a procedure or set of rules—that our consumer happens to have chosen as a means for making up her mind. She is allowing her view about whether a camera is easy or difficult to use to be determined by Grahame’s opinions, rather than being prepared to take note of what people in general say; in the context of judging cameras that she has not yet tried, she ranks her ‘ease of use’ construct as subordinate to ‘Grahame’s opinion’, providing he has an opinion in this context. But when she judges the worth of Grahame’s opinions in this context against those of people in general, she allows her assessment to be determined by how she judges his opinions in terms of the construct ‘moderate/consistent versus exaggerated/inconsistent’. That is to say, if she has (by some thus far unspecified procedure) judged Grahame’s opinions to be ‘moderate/consistent’, then they are deemed worth taking note of; their worth is placed subordinate to their consistency. It should be noticed that if the relationships between constructs are given for the present, and if a higher-ranking construct—the view that Grahame’s opinions are ‘moderate/consistent’—is also given, then we have no need to be troubled by the infinite regress question. Very simply, a given assessment of Grahame’s opinions is being used by our consumer as a basis for forming expectations in situations where he makes suggestions about possibilities. Now we know that if Grahame rushed up and said breathlessly to our consumer: ‘if you’re still looking for the easiest 35 mm SLR to use, don’t buy the Canon AE1 Program, since it’s just been rendered obsolete by a new model’, then she would change her view of the AE1 Program.

This hierarchical, rule-based view of expectation formation seems to be what Kelly had in mind in his theory of personality. His (1955, p. 56) organisation corollary holds that ‘each person characteristically evolves, for her convenience in anticipating events, a construction system embracing ordinal relationships between constructs’. The term ‘ordinal’ suggests that some con-
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Subject: "I've never had reason to doubt what he says whenever we talk; he's not like some people who go about making exaggerated claims that conflict with what they said the previous week."

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structs are subordinate to others, yet may subsume still others, which is precisely what we have just seen in our imaginary interview. In using the term 'evolves', Kelly indicates that he does not believe people generally adhere to unchanging sets of rules in the face of surprises that are judged to have invalidated earlier constructions of events. He elaborates this point with his (1955, p. 72) experience corollary: 'a person's construction system varies as she successively construes the replications of events'. Constructs may thus be re-ranked, reversed in polarity, used with wider or narrower ranges of application, and newly added to (or discarded from) the person's system. For example, suppose Grahame's claim about the ease of use of the AE1 Program had been discredited when the person happened to mention it in the camera shop and was shown a new model with automatic focusing, winding and film loading. The person would then have needed to consider whether she should change her assessment of the general worth of his opinions and use other criteria (for example, what the person in the camera shop says, or reports in a photographic magazine) when deciding upon subsequent purchases.

At this point, we run once again into the 'strange loop' problem. A person can only judge in terms of her existing construction system whether or not a change in that system may be in order: for a new way of looking at things is itself an event that must be construed before it can make any sense (see Kelly, 1955, p. 79).

In order to escape from the loop, we must recognize that a person who changes her way of looking at the world will always make an incomplete break with her past way of forming beliefs each time she adjusts her construction system. She will never 'change her mind' completely; there will always be some (and usually very many) constructs that are maintained from her past view of the world. For example, had the consumer been embarrassed by Grahame's outmoded claim whilst in the camera shop, she might have concluded that it is unwise to judge the worth of somebody's opinions by their consistency, and that a better way of judging them might be according to the criterion of whether or not the person expressing them has a strong enough incentive to give accurate advice. But these conclusions would be things that she allowed herself to believe according to other, given criteria, that prevent her from seeing as adequate her original way of judging opinions. (She would now have the evidence of her own eyes, a personal demonstration, that Grahame can be wrong: previously she might not even have considered the 'incentive to give good advice' criteria, or she may have considered it before and at the time judged it as a cumbersome rule to employ, compared with the one it is now allowed to displace.)

Kelly addresses these issues formally with his (1955, p. 77) modulation corollary: 'the variation in a person's construction system is limited by the permeability of the constructs within whose range of conveniences the constructs lie'. Readers may find it helpful to see a construct's 'permeability' as referring to its readiness to allow the admission of new ways of looking at things—that is, how strictly it serves as a filter, rejecting wholly or in part some notions that might be taken seriously as possibilities (see 'characteristic filtering', in section 7.4). Suppose that the consumer had actually purchased the AE1 Program after taking Grahame's advice and without discovering in the shop that it was now out of date. Suppose also that 'on route for the shop she had met one of the people she sees as an unreliable source of information, and had been informed by this person that 'there is a 35 mm SLR that is much, much easier to use than the AE1 Program, but I'm not sure what it's called'. This statement may not be something which the person would have seen as exaggerated had she heard it from her friend Grahame, but the way she sees the third person prevents her from accepting it and prevents her from seeing Grahame as someone with outmoded opinions about cameras. So she filters the information from her attention and, as a result of the inflexibility of her way of judging what people say, she ends up purchasing a model that is now obsolete and still quite troublesome for her to use. The upshot could be that the views of the world she captures in her photographs fail to come up to her expectations.

In the case used here, the permeability of the consumer's construct seems unfortunate, since it causes her to be needlessly left somewhat behind in a world of rapid change. (Canon AE1 Program owners may miss many action shots because they have forgotten to wind manually on to the next frame, whereas owners of the more recent Canon T80 will not suffer such disappointments, for their cameras have automatic film advance and loading; this was something my own friend Grahame did not mention at the time I asked him which was the simplest SLR camera to
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In the case used here, the impermeability of the consumer's construct seems unfortunate, since it causes her to be needlessly left somewhat behind in a world of rapid change. (Canon AE1 Program owners may miss many action shots because they have forgotten to wind manually on to the next frame, whereas owners of the more recent Canon T90 will not suffer such disappointments, for their cameras have automatic film advance and loading; this was something my own friend Grahame did not mention at the time I asked him which was the simplest SLR camera to
operate! Still, if we have permeable construction systems and discover new possibilities, we live and learn.) However, it would be a mistake to argue that impermeability of constructs is generally a bad thing. On the contrary, it is necessary in some degree if the consumer is to be able to form bounded and resilient conjectures of what could happen, when faced with a turbulent mass of mutually exclusive raw possibilities. By virtue of her incompletely permeable construction system, our consumer at least ends up with some kind of camera and some limited ideas about which photographs are worth trying to take; she is not completely bewildered by the enormous range of choices within the present and between the present and future imagined possibilities (see the discussion of the schizophrenic consumer, in section 6.6).

The limited permeability of a person's constructs, and her need to use some existing constructs to judge new ways of looking at things, combine to ensure that, although she may adjust her world-view in the light of her experience, her system is best seen as being in a fairly viscous state. Her mind will not be in a complete state of flux, with each day's picture of the scheme of things differing in a kaleidoscopic manner from that of the previous day. To be sure, she may make some not inconsiderable kaleidc shifts of the kind discussed frequently within Shackle's work, but these will impact only upon particular subsystems of her overall construction system. Even so, such changes may result in behaviour that surprises onlookers. This problem arises from the fragmentation corollary of Kelly's theory: 'a person may successively employ a variety of construction subsystems which are inferentially incompatible with each other' (1955, p. 83). Unless onlookers perceive the broader contexts in which such subsystems are allowed to operate, the person's expressed thoughts and actions may seem hopelessly inconsistent. This may mean it is difficult to play a particular desired role—such as successful salesperson—in a social process involving this person (see Kelly's sociality corollary, defined in section 4.2).

The idea that a person forms her expectations by employing an hierarchical system of rules does not preclude the possibility that she may fantasise—by considering, 'what if...?'—as she attempts to form the expectations that she will use as a basis for action. Her system may tolerate loose thinking for a time, as in dreams (Kelly, 1955, p. 484), but its rules of operation will eventually firm up expectations, be they composed of single-point forecasts or sets of potential surprise curves, in ways that label some possibilities as 'inconceivable' and assign them to her mental trashcan.

To illustrate this point it is useful to take an example from Kelly (1955, pp. 19–20) concerning the situation of a person who is about to serve a pie at a dinner party. It is by no means intrinsic to a pie that it be served in wedge-shaped slices with the point always facing the diner. However, if the server feels bound by the rules of etiquette in such a situation, because she has made her view of her 'self' subordinate to whether or not she behaves politely, and if her construction of 'polite behaviour' is subordinate to her construction of what constitutes 'conventional behaviour', then there may be very few ways open to her for action. One possible way (not suggested by Kelly) is that she should tear the pie apart with her bare hands and hurl the pieces at the plates of her guests. If the guests view the world according to 'conventional' rules for construing behaviour at dinner parties, they will be shocked, barely able to believe their eyes, if such behaviour actually materialises. It will not fit into their dinner party constructs; they may find it fits only into those of their constructs that relate to mental disorder.

The pie example may seem trivial, but the point it illustrates is quite general. It relates even to how readers can see this book—a work which commits to paper very many of its author's constructs concerning processes of decision making, purporting to be a contribution to economics. If a reader's set of rules for subsuming contributions to economics does not admit non-mathematical pieces of work that do not contain the use of econometric procedures, and which are not formed according to Cartesian/logical positivist principles employed by mainstream theorists, then she will not be able to see it as economics. According to another reader's set of rules, however, it may be open to being construed as a contribution to economics and she does not have to concoct a case for rejecting it. But whether a reader accepts or rejects it, she cannot know for sure whether its ideas are right or wrong; they are merely admissible or inadmissible according to the set of judgemental rules she uses.

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possible by writing as though a subordinate construct only has
one construct that is ranked directly above it; for example, the person's expectation that the Canon AE1 Program would be the right 35 mm SLR camera for her to buy seems to have been determined solely by her expectation that she could find no 35 mm SLR camera that would be easier to use, an expectation which itself was determined solely by Grahame's opinion. Usually though, an expectation will be subordinate to a group of constructs. For example, which camera might be the right one to buy could be judged to depend not merely on ease of use, but also on how the consumer judged price, availability, durability, weight, picture clarity and so on. Each of these subordinate expectations might in turn be subordinate to more than one construct. For example, picture clarity could be judged to depend on film type ('35mm is fine, 110 film is too small'), lens quality (for which price might be taken as a proxy) and type of focusing ('a reflex system is the only one that lets you actually see if your shot is focused').

Now, of course, once we have an expectation being made to depend on a variety of other constructs, ambiguities and conflicts appear to be in the offing once again. For example, how does an expensive 110 SLR camera compare with a cheap 35 mm SLR camera or a moderately priced 35 mm camera with adjustable focus but with a separate viewfinder? how surprised would our consumer be if he found each of them letting her produce pictures of a particular standard of clarity? Likewise, how does the consumer judge that one (or none) of these three cameras could be good enough for her to buy, given that they differ in other respects besides the prospective picture clarity that they are judged able to help her produce? We are back with the initial problem once again, but we can once more note that the consumer has a way out of it if she has, within her construction system, rules for dealing with these puzzles and, if need be, rules for dealing with any problems that the former rules generate or fail to reconcile in a workable manner.

In speaking of procedures for combining potential criteria of appraisal to determine how a person sees various possibilities, I might ostensibly seem to be discussing no more than methods of expectation formation prior to choice. However, I am in reality also discussing how rival action-schemes come to be ranked, for rankings themselves are personal constructs (for example, 'I think camera X could be OK for me but I don't think camera Y is

6.3 CONFLICTS AND COMPLEX HIERARCHIES

The processes whereby people form constructs may be likened to the processes according to which systems of government and corporations reach decisions. Individuals and institutions alike have to deal with conflicting possibilities. Judicial systems and firms do, of course, involve individuals in their processes of conflict resolution; indeed, they are systems that have been designed by people. Yet their basic workings are rather easier to understand since they can be analysed without it being necessary to understand the thought processes of the people involved with them.

Consider a proceeding in a criminal court. Counsels for the prosecution and defence are in the business of selling ideas to a decision-making body: the jury. By their very nature these ideas include rival possibilities. Some of them, however, are deemed 'inadmissible' by the judge; in other words, they are ruled 'out of court'. Clearly, the jury is only being allowed to reach its verdict within a framework that some senior authority has set up. Once reached, the verdict may be disputed on grounds which allow the case to be sent to the appeal court. Such a body can seek to
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In speaking of procedures for combining potential criteria of appraisal to determine how a person sees various possibilities, I might ostensibly seem to be discussing no more than methods of expectation formation prior to choice. However, I am in reality also discussing how rival action-schemes come to be ranked, for rankings themselves are personal constructs (for example, ‘I think camera X could be OK for me but I don’t think camera Y is good enough, since ...’). A person’s construction system is the means whereby she generates her choices, in the face of conflicting ideas about what she could choose and what could happen as a result of, or despite, her actions. In thinking about what she might choose to do, a person generates verdicts with the aid of the hierarchy of rules that she has tentatively put together as a means of coping with life. As we shall eventually see in Chapters 7 and 8, these rules for choice may take a variety of forms when images of possibilities are seen as directly subordinate to more than one construct. This view of the relationship between expectation formation and action dispenses with any reference to a pre-specified, complete system of preferences of the kind that orthodox economists have in mind when they draw indifference curves. I am depicting consumers as if they can only construct and express rankings in respect of possibilities they have actually considered.

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6.4 PERSONALITY AND PREDICTION

The analysis in section 6.2 was constructed with a view to showing that one can adopt a subjectivist view of expectations that is systematic; a subjectivist economist does not have to

overrule the original verdict, but may allow it to stand. In situations where the defence still will not accept the verdict, the case may eventually be referred to the highest court in the land. At this level, one might expect that matters would be settled once and for all, but here politicians might get involved. For example, Hofstadter (1979, pp. 692-7) points out that the US Supreme Court very nearly got itself embroiled in a confrontation during the Watergate era, when Richard Nixon threatened to disobey any supreme court ruling that was not 'definitive', all the while claiming that he had the legal right to decide what was 'definitive'. In the end the confrontation never took place but, had it done so, the President would have needed subsequently to be able to maintain his implicit claim for supremacy in the face of popular opinion. As Hofstadter comments, 'it is well to remember that, in a society such as ours, the legal system is a polite gesture granted by millions of people—and it can be overtaken just as easily as a river can overflow its banks'. In other societies, dictators use the armed forces to assert their superiority, but even these are prone to be overruled in a military coup staged by army officers who see things differently, provided these officers have the support of personnel in the ranks.

The kinds of legal system just described can be depicted formally as if they are collections of rules for making rulings. Some of these rules would concern the circumstances in which other rules can be changed, and whose rulings can be overruled by whom. These rules enable high-level judges to set precedents, for example, and politicians to vote in new laws, including laws that bear upon the powers enjoyed by judges and juries. Ultimately though, judges, juries and politicians are only agents of the people the system seems to control. The masses—in the armed forces or in civilian life, whichever group has the most brute power—have the final say. They will overthrow judgmental systems whose operations produce results that seem to conflict with their expectations; their rules are inviolate, crude though they may seem in comparison with the rules framed by specialists on their behalf. However, since the membership of the population comprising 'the masses' changes through time, the expectations to which agents must conform will not necessarily be static. (I should perhaps add that, in this nuclear age, what I have just said may not strictly be correct: an elected president may get to 'push the ultimate button' and send an automated missile system into operation against the will of the masses, before they have time to band together and defeat him. The possibility of technological failure may then be the only thing left to reverse the president's choice. Here, for those who have imagined the scenario, is a cause for anxiety if ever there were one!)

Corporate organisations, similarly, are hierarchies whose very existence depends on their continuing to conform with externally imposed requirements. They are constrained by the legal framework (though they can try to exert pressure on the systems of government), by their customers' willingness to see their products as they would wish, and by the requirements of their suppliers of finance. These bounds may none the less offer a good deal of freedom for action; there may be many policies which might look as though they could satisfy survival conditions. Different bodies within a corporation will throw up conflicting suggestions as to which policies might be preferred. Unless there is complete anarchy, conflict resolution is achieved by one party being able to exert supremacy over the others. When internal bickering reaches the level of the boardroom, the shareholders may step in and appoint an alternative set of directors. As in systems of government, the extent to which conflicts reach the highest levels can depend considerably upon how conspicuously and persistently certain possibilities are pushed forward; intermediate levels of judgement may sometimes overrule ideas emerging in relation to low-level conflicts, which higher levels would take seriously if only they knew about them. The use of agents and segmented organisational hierarchies economises on the costs of forming judgements and expectations, but at the cost of allowing some inconsistencies to pass by unnoticed. Higher levels will only see good reason to experiment with a change of lower-level elements and organisation when things happen that conspicuously threaten their own positions.
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The analysis in section 6.2 was constructed with a view to showing that one can adopt a subjectivist view of expectations that is systematic; a subjectivist economist does not have to
'sweep the problem under the carpet' (Tarshis, 1980, pp. 12-13) with vague references to 'animal spirits'. The road to nihilism can be avoided with Kelly's structuralist/subjectivist view of how people think, which opens up scope for anticipating patterns of behaviour. At least, this is the impression I have so far sought to convey by emphasising that a person's pattern of beliefs, and hence her expectations, is determined by the way her mind is organised. But a major limitation is imposed upon our predictive capabilities by the creative processes that operate within a person's mind and by the complexity of the processes whereby she encounters other raw possibilities that might be converted into expectations.

In order for a researcher to be able to anticipate correctly a person's behaviour, she needs to be able to uncover not merely the structure of that person's judgemental system, but also the relevant list of raw possibilities that will emerge as candidates for admission to the person's view of the world. The latter list must specify the order in which the person will consider these possibilities, since the ones she thinks about initially may change her way of looking at things and hence affect the way she judges the remaining ones. The list with which the researcher is going to have to work will inevitably be incomplete. Even in the limited circles within which the researcher's subjects move, there is an enormous volume of information about what was, and might be, that each of them might encounter or create and spread.

Even if subjects have highly restricted construct repertoires, they can potentially create enormous numbers of fresh thoughts; as Shackle (1979, p. 21) reminds us, a small set of alphabetic elements can generate a huge dictionary. The 'Gartinkel problem'—the tendency for people to panic and/or become hostile if one tries to get to the core of their views of the world—also poses a barrier to the discovery of complete judgemental structures as a means of dealing with Kelly's fragmentation corollary. At best, the researcher is probably going to be able to uncover only subsystems from her subjects' mental organisations and then see which possibilities, from a list which she has devised, would be admitted by these subsystems. But this, surely, is better than nothing unless the end result of such efforts is that the researcher makes predictions which are no better than those made by lay people—whose own predictive competence is evident in the extent to which they can cope with a social and turbulent world (see Hutchison's (1977, pp. 9-11; 1978) remarks on what should be expected of economists).

As far as discovering cognitive structures is concerned, we can note that there is an extensive technical literature associated with Kelly's own tool, 'repertory grid technique' (see Adams-Webber, 1979, Bannister and Fransella, 1971, Bannister and Mair, 1968, Slater, 1974, 1977, and Stewart and Stewart, 1981). Kelly developed the tool, for use in a clinical context, as a means of helping patients to understand their own views of the world and for helping the clinician to see how less dysfunctional outlooks might be presented to them in ways that could be construed as admissible. One could say that, from the clinician's standpoint, repertory grid technique is a marketing tool, a device to help 'sell' new world-views. That it might also be a useful tool in market research and the design of sales campaigns is something which has not escaped the attention of the marketing profession. However, before considering the use that marketers have made of the technique, it is useful to outline briefly how it works.

In its pure form, Kelly's repertory grid technique is unusual in that, unlike most attitude research devices, it attempts not to impose pre-selected dimensions of inquiry upon subjects. Suppose we want to understand how a person looks at cars. Grid technique begins by asking her to consider some (typically about ten) vehicles that she considers personally significant, possibly including her actual and ideal cars. The elements thus elicited are noted down on separate cards. The person will then be given combinations of cards, three at a time, and asked in what senses the cars are different or similar. By this means, constructs are elicited; for example, the consumer might say that 'Z and Y are front-wheel-drive, whereas X is rear-wheel drive'. When all the possible triadic combinations have been considered, the constructs are listed and the consumer will then be asked to rate all of the elements in terms of all of the constructs, in either a binary or scalar manner. The data matrix thus obtained may be processed, using factor analysis, principal components analysis or a variety of other procedures. (As Adams-Webber, 1979, p. 32, notes, 'during the last two decades there has been a remarkable proliferation of novel statistical techniques for analysing "repertory grid" data'.) With principal components analysis, for example,
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the dimensions that make up a particular subsystem may be identified. In this context, the term 'dimension' means more than just a single construct; it is often the case that some sets of constructs and elements will be particularly closely correlated in the mind of the decision maker, so that they can be thought of practically as separable wholes. For example, the data matrix might produce a strong set of correlations between certain 'performance-oriented' constructs and two particular vehicles, one of which scored consistently at one end of each of these construct axes, and one of which scored consistently at the other end. These two vehicles might well be the ones that the consumer would normally use as 'yardsticks' of good or bad performance when judging a third vehicle. Another strong set of construct/element correlations might concern, say, 'running economy'. But however tight or loose the relationships in the matrix, it will be unusual for there to be more than two or three significant dimensions and ten to fifteen constructs. Many seemingly 'obvious' constructs will often be absent, and repertory grid technique may help pinpoint gaps in a person's world-view.

Basic grid technique tells us nothing about construct rankings and, when used with consumer products, tends to provide 'perceptual constructs that are less representative of the underlying psychological dimensions that serve to differentiate products' (Reynolds and Gutman, 1984, p. 161). (When repertory grid technique is used with people as elements, the subject can be asked to include her actual and ideal 'selves' in the list of elements, and will tend to use more abstract constructs—for example 'cruel versus kind'—rather than merely referring to surface features such as 'tall versus short'.) To obtain such information, one needs to employ the 'construct laddering' and 'implication grid' techniques pioneered by Hinkle (1965), one of Kelly's graduate students (whose unpublished thesis is summarised in Bannister and Mair, 1968). For each of the constructs originally elicited, the subject is asked to explain which is her preferred pole (if she has not already done so by including her 'ideal' as an element). She is then asked why she prefers it. Sometimes the justification will refer to other 'concrete' constructs that may already be on the list: for example, 'I prefer cars with front-wheel drive because they usually have more room inside and are more economical because they are lighter in weight'. But often new personality-related dimensions are evoked: for example, 'I prefer new cars to used cars because you don't have to worry about whether or not they are roadworthy', or 'I prefer a car with good seats and a quiet ride at high speed because I don't then arrive at the end of a long journey feeling exhausted and irritable, and the family likewise'. The procedure can be repeated until new constructs cease to be evoked: there will come a point at which the laddering can go no higher because the consumer in effect says 'I prefer it because I do—the limits of her reasoning, or as much as she is willing to reveal, thereby having been reached. For example, the consumer might say: 'I prefer not to get irritable because I end up losing control of myself—it's obvious why I prefer not to do that'. At this point, the researcher who tries to get the subject to go further is likely to run into the 'Garfinkel problem'.

From this enlarged set of constructs, an 'implication grid' can then be constructed, using the following technique. First, the researcher draws up an 'n by n' matrix for all the constructs. (One could envisage it being possible for this to be done automatically by a microcomputer in front of which the researcher and subject are seated, given appropriate software.) This matrix is then filled in by presenting one construct at a time to the subject and asking: 'If you had to change from being at one pole of this construct to being at the other pole, on which of the other constructs would a change also be necessary?' As Adams-Webber (1979, pp. 56–7) notes:

In this procedure each construct is paired with every other one twice, with any one of four outcomes: (1) a change in Construct A implies a change in Construct B, which is recorded as one 'superordinate' implication for A and one 'subordinate' implication for B; (2) a change in B implies a change in A, which is recorded as a 'superordinate' implication for B and a 'subordinate' implication for A; (3) a change in either construct implies a change in the other, which is recorded as a 'reciprocal' implication for both constructs; and (4) a change in either construct has no implications in terms of the other, in which case nothing is recorded.

Four people could thus possibly include an identical pair of constructs in their repertoires and yet provide the researcher with
the dimensions that make up a particular subsystem may be identified. In this context, the term 'dimension' means more than just a single construct: it is often the case that some sets of constructs and elements will be particularly closely correlated in the mind of the decision maker, so that they can be thought of practically as separable wholes. For example, the data matrix might produce a strong set of correlations between certain 'performance-oriented' constructs and two particular vehicles, one of which scored consistently at one end of each of these construct axes, and one of which scored consistently at the other end. These two vehicles might well be the ones that the consumer would normally use as 'yardsticks' of good or bad performance when judging a third vehicle. Another strong set of construct/element correlations might concern, say, 'running economy'. But however tight or loose the relationships in the matrix, it will be unusual for there to be more than two or three significant dimensions and ten to fifteen constructs. Many seemingly 'obvious' constructs will often be absent, and repertory grid technique may help pinpoint gaps in a person's world-view.

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Four people could thus possibly include an identical pair of constructs in their repertoires and yet provide the researcher with
four different implicational results. To illustrate this possibly, I
will have to depart from the motoring theme since, try as I might,
I cannot think of a ‘motoring’ example which could work four
ways. Let ‘A’ refer to the construct ‘fail to finish my doctorate
versus obtain my doctorate’, and let ‘B’ refer to ‘a non-academic
job versus a lecturing job (when my research scholarship money
runs out)’. Now imagine four people who would prefer to finish
their doctorates and get lecturing jobs when their scholarships
come to an end. We could then possibly have:

1. person W, who believes that ‘if I can’t finish my doctorate, I
   won’t be able to get a lecturing job, though not getting
   such a job wouldn’t necessarily stop me from getting my
   doctorate finished eventually’;

2. person X, who believes that ‘I’m not going to finish my
doctorate before my money runs out and if I don’t then
get a job as a lecturer I’ll never finish it, though fortunately
it should not be necessary to have it finished in order
to get a lectureship’;

3. person Y, who believes that ‘if I couldn’t finish my
doctorate before my money ran out, I’d be stuck in a
Catch-22 situation: I couldn’t get a lecturing job without
having finished my doctorate, but without the time that a
lecturing job, unlike a non-academic one, allows for
research, I’d never be able to finish it’;

4. person Z, who believes that ‘if I couldn’t finish my
doctorate, it wouldn’t necessarily stop me from getting a
lecturing job, and if I had to try to finish my doctorate
while working as something else, I can’t see this would
necessarily stop me from getting it’.

It should be noted that the wording of the question that is used to
fill in an implication grid does not require a subject to specify
how much of a change in a subordinate construct would be
brought about by a polar switch in terms of a superordinate
construct. The aim is simply to discover if one construct has some
leverage over another. Of course, if one is dealing all the time
with strictly dichotomous constructs, as opposed to scalar ones, a
change in a subordinate construct is always a polar one. With
scalar constructs, however, it is easy to envisage the technique
being adapted to make it reveal the extent of leverage between
pairs of constructs. Such a modification could prove very valuable
in situations where one construct was subordinate to a group of
others, each of which might change only partially at any one
time.

Apart from the excellent work with the ‘construct-laddering
Latin’ carried out by Gutman and his colleagues (Olson and
Reynolds, 1983, Reynolds and Gutman, 1983, 1984, Gutman and
Alden, 1985, and Reynolds and Jamieson, 1985), the use of
Kellian methods in market research seems hitherto to have failed
to encompass the use of Hinkle’s methodology. Rather, it has
involved the use of factor analysis and principal components
analysis of repertory grids, to discover: the distinctive dimensions
of choice, whether or not already restricted repertoires of con-
structs can be further simplified due to some constructs having
essentially the same meanings, and where particular products
seem to fit into subjects’ views in relation to the images of the
‘ideal’ and rival products. Frequently the main aim in marketing
applications of Kellian techniques, aside from that of uncovering
categorisation tendencies and the extent of blinkering, has been
only to help segment a market into groups of potential customers
who share broadly similar outlooks. This activity is known as
‘psychographics’ and an excellent review of it has been provided
—largely in relation to work on US lifestyles—by Wells (1975).
Lewis (1982, p. 64) has proposed a similar kind of role for
repertory grid techniques in the context of research into attitudes
towards state benefit and taxation systems, pointing out that,
unlike many other research methods, it ‘would go a long way
towards shielding the respondent from interpretations imposed
by the investigator’.

Although the scope of these consumer-oriented applications of
the research methods of PCP looks narrow by comparison with
the applications I can envisage, it is most heartening to see the
growing interest in these techniques. However, before going on
to examine still more of the theoretical territory that such tools
open up to empirical exploration, it is important to note that, in
the forms in which they are presently used, they leave something
to be desired in contexts where subjects perceive uncertainty.

Repertory grid technique somewhat paradoxically attempts to
uncover expectations without asking subjects to delimit the extent
of their uncertainty in their constructs. Typically subjects are
asked to locate each element on a point on each construct scale
four different implicational results. To illustrate this possibility, I will have to depart from the motoring theme since, try as I might, I cannot think of a 'motoring' example which could work four ways. Let 'A' refer to the construct 'fail to finish my doctorate versus obtain my doctorate', and let 'B' refer to 'a non-academic job versus a lecturing job (when my research scholarship money runs out)'. Now imagine four people who would prefer to finish their doctorates and get lecturing jobs when their scholarships come to an end. We could then possibly have:

1. **person W**, who believes that 'if I can't finish my doctorate, I won't be able to get a lecturing job, though not getting such a job wouldn't necessarily stop me from getting my doctorate finished eventually';

2. **person X**, who believes that 'I'm not going to finish my doctorate before my money runs out and if I don't then get a job as a lecturer I'll never finish it, though fortunately it should not be necessary to have it finished in order to get a lectureship';

3. **person Y**, who believes that 'if I couldn't finish my doctorate before my money ran out, I'd be stuck in a Catch-22 situation: I couldn't get a lecturing job without having finished my doctorate, but without the time that a lecturing job, unlike a non-academic one, allows for research, I'd never be able to finish it';

4. **person Z**, who believes that 'if I couldn't finish my doctorate, it wouldn't necessarily stop me from getting a lecturing job, and if I had to try to finish my doctorate while working as something else, I can't see this would necessarily stop me from getting it'.

It should be noted that the wording of the question that is used to fill in an implication grid does not require a subject to specify how much of a change in a subordinate construct would be brought about by a polar switch in terms of a superordinate construct. The aim is simply to discover if one construct has some leverage over another. Of course, if one is dealing all the time with strictly dichotomous constructs, as opposed to scalar ones, a change in a subordinate construct is always a polar one. With scalar constructs, however, it is easy to envisage the technique being adapted to make it reveal the extent of leverage between pairs of constructs. Such a modification could prove very valuable in situations where one construct was subordinate to a group of others, each of which might change only partially at any one time.

Apart from the excellent work with the 'construct-laddering technique' carried out by Gutman and his colleagues (Olson and Reynolds, 1983, Reynolds and Gutman, 1983, 1984, Gutman and Alden, 1985, and Reynolds and Jamieson, 1985), the use of Kellian methods in market research seems hitherto to have failed to encompass the use of Hinkle's methodology. Rather, it has involved the use of factor analysis and principal components analysis of repertory grids, to discover: the distinctive dimensions of choice, whether or not already restricted repertoires of constructs can be further simplified due to some constructs having essentially the same meanings, and where particular products seem to fit into subjects' views in relation to their images of the 'ideal' and rival products. Frequently the main aim in marketing applications of Kellian techniques, aside from that of uncovering categorisation tendencies and the extent of blinkering, has been only to help segment a market into groups of potential customers who share broadly similar outlooks. This activity is known as 'psychographics', and an excellent review of it has been provided —largely in relation to work on US lifestyles—by Wells (1975). Lewis (1982, p. 64) has proposed a similar kind of role for repertory grid techniques in the context of research into attitudes towards state benefit and taxation systems, pointing out that, unlike many other research methods, it 'would go a long way towards shielding the respondent from interpretations imposed by the investigator'.

Although the scope of these consumer-oriented applications of the research methods of PCP looks narrow by comparison with the applications I can envisage, it is most heartening to see the growing interest in these techniques. However, before going on to examine still more of the theoretical territory that such tools open up to empirical exploration, it is important to note that, in the forms in which they are presently used, they leave something to be desired in contexts where subjects perceive uncertainty.

Reperatory grid technique somewhat paradoxically attempts to uncover expectations without asking subjects to delimit the extent of their uncertainty in their constructs. Typically subjects are asked to locate each element on a point on each construct scale
or on one or other pole of a strictly dichotomous construct axis. It would be more time consuming, yet by no means impossible, to ask subjects if they felt uncertain about how to rate elements in terms of the constructs they had evoked. Whenever they answered in the affirmative, they could be encouraged to define potential surprise curves for the construct axes and elements in question.

Second, we should note the care with which implication grids need to be constructed or interpreted if misleading conclusions are not to be drawn from them. Consider once more the doctorate/lectureship example. Person Z believes that a failure to finish her doctorate will not necessarily mean she cannot get a lecturing job. However, this does not necessarily mean that she believes doctorates and lectureships are unrelated; she could well believe that a failure to finish her doctorate could pose something of a barrier to getting a lectureship, even if it would not necessarily debar her from obtaining such a job. The point here is that the implication grid is not being constructed with reference to a construct such as 'helps versus hinders (my chances of getting a lecturing job)' but with reference to a construct that concerns the type of job. In the 'finished doctorate/Chances of a lectureship' construct pairing, person Z might well have in mind a ranking of a deterministic kind, even if she does not see that the possession of a doctorate necessarily determines whether or not she can get a lectureship. Clearly, when constructs are differentiated from each other in this subtle kind of way, the researcher must record and interpret with great care her subjects' comments concerning likenesses and differences amongst elements. It would be only too easy to draw inappropriate inferences from sloppily defined constructs.

6.5 ENVIRONMENTAL TURBULENCE AND MENTAL ORGANISATION: THE EVOLVING CONSUMER (3)

The data contained in an implication grid are useful if we wish to understand how the person in question may feel if she sees her expectations being falsified, and how she might behave as a consequence. A perceived falsification is essentially a construc-
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struction of a part of reality that is newly admitted by a person’s construction system, at the cost of discarding a previously held, mutually exclusive expectation. The implications that the person will see as a result of admitting the falsification will depend on how she organises her ideas.

For example, suppose a person receives notification that she has not been successful in her application for a job she fully expected to get. She might, of course, be totally unable to believe the rejection letter and see it as a mistake or a hoax, continuing for the moment to believe she is going to get the job. But suppose she actually finds the rejection letter perfectly credible, albeit very surprising. Its implications might in some cases be seen by her in a positive manner; for example, not getting the job might be taken to imply no need to continue to suffer the anxieties of moving a long distance or having to play new workplace roles. However, she might construe many implications in negative terms; for example, she may no longer expect to be able to explore an exciting new environment a long way distant from where she presently lives, she may no longer expect to have consumer durables she had hoped to be able to buy, and she may see her self-image and social standing threatened by such reductions in her planned conspicuous consumption. Whether, and to what extent, the rejection letter comes as a relief or as a disappointment will depend on two things:

1. on precisely how much leverage she allows a particular revised construct to exert over the constructs that she sees as being subordinate to it—for example, a forgone prospect of a particular means towards conspicuous consumption does not have to be seen as implying a crushing blow for her self- and social-esteem; for its role is a personal construct too, and she may judge that it is appropriate to see her self- and social-esteem as if they are dependent on a variety of things, combined in a particular way;

2. on how she judges the overall implications—both positive and negative—of her changed assessment of her prospects related to the future she had previously imagined for herself.

Both of these issues take us back to the need to consider possible forms of rules for assessing possibilities (in this case: “how I
should see my failure to get the job, which could be seen in a variety of ways) when these have been made subordinate to a complex of other constructs. These rules are examined in detail in Chapters 7 and 8.

Ahead of a discussion of the forms such rules may take, we can presently notice that the consumer has it in her own power to manage her feelings of disappointment (or joy) in a world of surprises. She can determine the spill-over effects of changing any single construct via her choice of impingement linkages. Such a choice comes into the ‘strategic’ category and in considering it we may once again usefully draw parallels with Neil Kay’s work on how choices of product portfolios may be taken by corporate planners with regard to the ways in which linkages between product markets affect prospects for corporate disappointment.

Many kinds of ‘mental strategies’ are possible, but two potentially dysfunctional ones seem to serve to illustrate clearly the main dilemma with which consumers must grapple: I am thus going to introduce the ‘schizophrenic consumer’ and the ‘obsessive-compulsive consumer’.

Consider first the case of a person who is disappointed by the fit of her constructs against her experience. She notices that it is the interrelationships between her expectations that are causing her to be particularly upset at what has happened. From the way she looks at things, the world seems a turbulent place that is going to continue to disappoint her unless she does something about her way of forming expectations. She decides that, even if she cannot form expectations that individually match her experience better, she can at least reduce her failure rate by reorganising her ideas in a way which cuts down the linkages between them. A search for new ways of looking at things may also seem likely to help. Such a change of mental strategy is akin to that of a corporation which diversifies in order to reduce its overall dependence on activities in which it had previously sunk resources in an attempt to obtain synergy. It is quite possible that the consumer’s new strategy will be an improvement: she may find life much less stressful in prospect and, because any individual disappointment that she suffers is not a disaster for her, she has more time for carefree thoughts from which may emerge ideas that match her experience better than before. However, it could be that the strategy still leaves her in a state of confusion; since she has cut down on linkages between ideas and their associated activities, she may be even less able to form a coherent set of expectations. In particular, she may run into problems as a result of trying to acquire new constructs by experimenting in areas that are only loosely related to what she has done before.

In the latter case, it could be a dangerous move to repeat the strategy. Ordinal relationships between constructs are used as means of resolving conflicts and imposing bounds upon one’s expectations. If a person removes such relationships, she is discarding ways of making up her mind. For example, suppose the consumer has hitherto made her expectation about whether or not she can engage successfully in particular acts of conspicuous consumption dependent solely upon her expectation concerning a particular job prospect. Now she severs the link. Not getting the job will no longer imply she cannot afford to buy the conspicuous consumption goods. But it will not imply she can buy them either. So she would then see that she might be perfectly able to afford them and that she might not. That she would then not be able to make up her mind might worry her if she has made her self-image strongly dependent upon the possibility of being able to engage successfully in such conspicuous consumption. However, suppose she also sever this link. Then nothing would be implied about what kind of a person she is by whether or not she is able to engage successfully in conspicuous consumption. This means that it would not seem to matter to her whether or not she could really afford to buy the goods in question without suffering from financial ruin. She could get out her credit card and buy them without worrying about her ability to meet payments, but she would also have no need to engage in such expenditure, since its outcome would tell her nothing about the validity of her self-image construct. She might jump either way, on impulse.

Pushed to the extreme, a strategy of hedging one’s mental bets will result in one possessing, not a construction system, but a mere bundle containing a large number of unrelated constructs. It would not seem to matter what one did or believed, so long as one kept one’s expectations independent of each other—one would be making everything subordinate to the notion that the key to survival in a world of surprises is to stop single disappointments from having spill-over effects. One could end up being
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unable to dismiss all manner of ‘fantastic’ notions that most people would regard as crazy, and hence be diagnosed as suffering from ‘thought-disordered schizophrenia’. Someone suffering from this condition finds it difficult to make any consistent, lasting judgements, as ideas flit through her mind. Studies of how such people think do indeed suggest that their minds may be characterised as having unusually large numbers of weakly correlated constructs—see Adams-Webber (1979). The mind of this kind of schizophrenic looks like the prototype of the ‘spontaneous and erratic’ mind that Coddington (1982) has argued to lie at the centre of Shackle’s (and other ‘fundamentalist’ Keynesians’) analyses of expectations. Someone suffering from this condition needs to be trained to introduce some structure into her construct collection. Otherwise, as Adams-Webber (1979, p. 66, emphasis added) observes, ‘The experience of such [a person], in so far as we can imagine it, must seem hopelessly kaleidoscope’.

(Another route to such a state of confusion, which would also involve the victim having unusually large numbers of constructs, might begin with the consumer trying to conjure up or look around for possible consolation—positive implications—that could be made subordinate to negative outcomes of experimentation. It would then be something of a disappointment not to be disappointed. The consumer who had a very creative mind could end up being totally unable to rank rival action schemes, just as surely as if she had pursued the linkage-severing strategy. In fact, it is not inconceivable that someone might experiment with both strategies. Being able to think of the good and bad points of rival possibilities is a useful skill to have, unless one is always able to think of a few more ‘plus points’ as redeeming features of any possibility that is looking relatively difficult to take seriously.)

The polar extreme to thought-disordered schizophrenia is known as the ‘obsessive-compulsive syndrome’ (see Makhoul-Norris and Norris, 1972). Here a person gets into difficulties as a result of constructing an overly integrated view of the world; when sufferers’ construct subsystems are examined using principal components analysis what is usually discovered is either a single ‘monolithic’ cluster, in which everything is correlated very tightly, or a series of essentially segmented compact clusters of elements and constructs. The problem is that the sufferer has developed a view of the world in which there are very many reciprocal relationships between constructs, as well as one-way implicational relationships. Hence any failure to match expectations by one construct calls into question most of the person’s other expectations in that area. The sufferer cannot rest with anything that is not absolutely in conformity with her expectations; *something is not ‘just right’, everything seems a disaster.* (The rock group ‘The Police’ included on their third album a song about precisely such a person, the title of which conjures up neatly the fragility of such a way of life: ‘Canary in a Coalmine’.) In order to be able to weather the ‘minor’ upsets and disappointments of everyday life, and to allow what would normally be regarded as minor ‘fires’ to burn unattended, such thinkers need to be trained to sever some of the linkages between their constructs and generally loosen up their ways of thinking—in other words, they need to be trained to introduce more permeability into their construction systems (see the discussion of problems with ‘conjunctive’ choice rules in section 7.4). In the absence of such therapy, someone suffering from this syndrome is likely to find life very difficult. She is likely to make a supremely accurate clerk; unfortunately, she is also likely to be completely unable to get to work on time because her appearance and the house she leaves behind must be absolutely spotless and in order before she can feel secure.

While these two dysfunctional syndromes are rather unusual, they arise from extreme applications of modes of thought that we all tend to employ in some degree as consumers. In section 6.4, I noted how principal components analyses of construct subsystems reveal that people normally tie referential elements and constructs together in a strictly limited number of dimensional clusters. Within these clusters, the invalidation of a particular way of construing things could be expected to have spell-over effects on other constructs—the more the more closely correlated any of these are with the invalidated one. But so long as a person has other dimensions of thought and other, essentially separate construct subsystems, such an invalidation will not wreck her expectations (her life) completely. Even within a damaged dimension, the correlations are not usually total, so even when a person loses a major reference point or assumption, she may be able to find some starting points for putting the fragments back together again. Moreover, as the work of Makhoul-Norris and Norris (1972) shows, the construct subsystems of ‘normal’ people—in
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contrast to those of obsessive-compulsives—usually each contain some degree of articulation between dimensional clusters. That is to say, some constructs will be correlated with more than one cluster, implying that the person has more than one way of deciding how events should be fitted against such attached ‘articulating’ constructs; in other words, she has ‘another way of looking at things’ in the face of disappointments that destroy one of the clusters.

This pattern—of partially correlated groupings of elements and constructs, with tendencies for articulation between some constructs—has an obvious parallel in the mixed synergistic/hedging patterns identified by Kay (1982, 1984) in respect of business themes and activities in corporate strategies. People, like firms, usually exploit to some extent the potential for conceptual linkages, but they also partly hedge their expectational bets as they do so. In some construction subsystems they may build up their expectations around a variety of loosely connected themes, yet in others they may integrate their ideas rather tightly—as with the person who sees nothing wrong with letting her house and style of dress look a shambles, yet insists fanatically on keeping up with the ‘state of the art’ in hi-fi equipment. Or they may be consistent in the degree to which they tie their ideas together. By such choices of ways of looking at the world, people seek to predict and control events; but some people, like some companies, fail to select viable strategies.

It would seem reasonable to hypothesise that, as a result of experiences in different kinds of environments, people may often come to believe that the more turbulent an environment seems the wiser it is to avoid creating large numbers of expectational linkages (especially reciprocal ones), and the more sense it makes to be ready to take life as it comes. Their choices of activities and kinds of household relationships will reflect these patterns of thought. To the extent that people are slow to recognise that some areas of their lives are becoming more turbulent, they may suffer disappointments and stress before they adjust accordingly their strategies for thinking. When they do make these adjustments they will not usually end up in a state of thought-disordered schizophrenia. However, their choices of activities may seem increasingly to lack consistent themes or to be based less upon strongly held values (aside from ‘flexibility’ or ‘independence’), they will seem less obsessive in these turbulent areas than before, less willing to commit themselves. But not all people will conclude that this is how one should face up to turbulent environments that are costly to avoid. Some may see dangers in seeking to avoid disappointments by avoiding forming expectations. In particular, it may seem unwise not to set goals in one’s life (a goal essentially being an expectation of what one might achieve in a particular area), since, without something at which to aim, one may avoid disappointment at the cost of simply drifting around. Some people may see themselves as more than usually able to determine what happens, instead of becoming victims of their circumstances. They may therefore be willing to let many of their expectations ‘revolve around’ a few strong assumptions.

An example from the business history literature may serve not only to illustrate how vulnerable to mugging someone with an integrated, one-dimensional mental strategy may be, but also to provide a bridge to the next section, which is concerned with barriers to changes of mind. It concerns the career of Lee Iacocca, the present head of Chrysler. Having unexpectedly been fired by Henry Ford II, Iacocca found the ideas of early retirement, or life outside the car industry, unthinkable. Moritz and Seaman (1981, p. 213, emphasis added) capture his world-view vividly:

“It didn’t take Iacocca long to conclude that what he wanted most was to get back to the automobile business. As broadly applicable as his marketing skills might be, they were, for him, built around a love for cars. He was not a very diversified man. He’d done some things for the Boy Scouts and was, because of his wife’s long affliction, an active member of the American Diabetes Association and related groups; he was a trustee of Lehigh but almost everything else he did revolved around his family or the automobile business. He lived and breathed cars. Even working for an automotive supply company like Dana or Bendix or Buick couldn’t have satisfied him. ‘I had to be in the mainstream of the car business,’ he recalled. ‘That’s where I’d spend my life. It’s like a guy saying “Gee, you’re a good musician—you can play the piano. Why don’t you try the saxophone?”’

There is an ironic, but obvious, parallel between Lee Iacocca’s reluctance to change direction when Henry Ford II’s action of firing him threatened to destroy his expectations, and the reaction of Henry Ford I in the face of consumers whose switch away from
contrast to those of obsessive-compulsives—usually each contain some degree of articulation between dimensional clusters. That is to say, some constructs will be correlated with more than one cluster, implying that the person has more than one way of deciding how events should be fitted against such attached ‘articulating’ constructs; in other words, she has ‘another way of looking at things’ in the face of disappointments that destroy one of the clusters.

This pattern—of partially correlated groupings of elements and constructs, with tendencies for articulation between some constructs—has an obvious parallel in the mixed synergistic/hedging patterns identified by Kay (1982, 1984) in respect of business themes and activities in corporate strategies. People, like firms, usually exploit to some extent the potential for conceptual linkages, but they also partly hedge their expectational bets as they do so. In some construction subsystems they may build up their expectations around a variety of loosely connected themes, yet in others they may integrate their ideas rather tightly—as with the person who sees nothing wrong with letting her house and style of dress look a shambles, yet insists fanatically on keeping up with the ‘state of the art’ in ‘hi-fi’ equipment. Or they may be consistent in the degree to which they tie their ideas together. By such choices of ways of looking at the world, people seek to predict and control events; but some people, like some companies, fail to select viable strategies.

It would seem reasonable to hypothesise that, as a result of experiences in different kinds of environments, people may often come to believe that the more turbulent an environment seems the wiser it is to avoid creating large numbers of expectational linkages (especially reciprocal ones), and the more sense it makes to be ready to take life as it comes. Their choices of activities and kinds of household relationships will reflect these patterns of thought. To the extent that people are slow to recognise that some areas of their lives are becoming more turbulent, they may suffer disappointments and stress before they adjust accordingly their strategies for thinking. When they do make these adjustments they will not usually end up in a state of thought-disordered schizophrenia. However, their choices of activities may seem increasingly to lack consistent themes or to be based less upon strongly held values (aside from ‘flexibility’ or ‘independence’), they will seem less obsessive in these turbulent areas than before, less willing to commit themselves. But not all people will conclude that this is how one should face up to turbulent environments that are costly to avoid. Some may see dangers in seeking to avoid disappointments by avoiding forming expectations. In particular, it may seem unwise not to set goals in one’s life (a goal essentially being an expectation of what one might achieve in a particular area), since, without something at which to aim, one may avoid disappointment at the cost of simply drifting around. Some people may see themselves as more than usually able to determine what happens, instead of becoming victims of their circumstances. They may therefore be willing to let many of their expectations ‘revolve around’ a few strong assumptions.

An example from the business history literature may serve not only to illustrate how vulnerable to mugging someone with an integrated, one-dimensional mental strategy may be, but also to provide a bridge to the next section, which is concerned with barriers to changes of mind. It concerns the career of Lee Iacocca, the present head of Chrysler. Having unexpectedly been fired by Henry Ford II, Iacocca found the idea of early retirement, or life outside the car industry, unthinkable. Moritz and Seaman (1981, p. 213, emphasis added) capture his world-view vividly:

It didn’t take Iacocca long to conclude that what he wanted most was to get back to the automobile business. As broadly applicable as his marketing skills might be, they were, for him, built around a love for cars. He was not a very diversified man. He’d done some things for the Boy Scouts and was, because of his wife’s long affliction, an active member of the American Diabetes Association and related groups; he was a trustee of Lehigh but almost everything else he did revolved around his family or the automobile business. He lived and breathed cars. Even working for an automotive supply company like Dana or Bendix or Buhl couldn’t have satisfied him. ‘I had to be in the mainstream of the car business’, he recalled. ‘That’s where I’d spend my life... It’s like a guy saying “Gee, you’re a good musician—you can play the piano. Why don’t you try the saxophone?”’

There is an ironic, but obvious, parallel between Lee Iacocca’s reluctance to change direction when Henry Ford II’s action of firing him threatened to destroy his expectations, and the reaction of Henry Ford I in the face of consumers whose switch away from
the Model T Ford in 1926 threatened to destroy his business. Just as Iacocca had built his life around cars, so Ford had created an integrated production process that was specific to the Model T and which was only reluctantly abandoned. Ford’s assembly lines, foundries and machine shops were not suited to the Model A, still less to the annual replacement of entire ranges of products. During the eighteen-month changeover, Ford lost $200m and laid off 60,000 workers in Detroit; 15,000 machine tools had to be replaced and another 25,000 had totally to be rebuilt. Furthermore, as Selzick (1957, p. 110) notes, ‘even this did not bring about the changes in orientation, with attendant upward revisions in the status of sales and public relations activities, that were required. Only after World War II was a reorganisation in depth completed’. If Iacocca had not been able to get back into the mainstream of the car industry, the effect of losing his job with Ford would have been similarly traumatic for his personality. It was his good fortune that Chrysler’s top management were having trouble making their own expectations come true in the turbulent world of the automotive industry.

6.6 RESISTANCE TO CHANGE:

When a person is surprised by an inadequate match between her expectations and her impressions of reality, she might be expected to be receptive to new ways of looking at the world—ways that offer the prospect of an enhanced ability to anticipate events. Bannister and Mair (1968, p. 211) have hypothesised that the elaboration of new constructs and construct relationships is initiated—as was suggested in respect of the problem of thought-disordered schizophrenia—by attempts to understand inconsistencies generated by existing patterns of thought. Likewise, Adams-Webber (1970, p. 39) argues that people restructure their construction systems in attempting to accommodate ambiguities. However, such changes of outlook and of associated activities may often be resisted, even if they are being suggested by helpful friends and media sources and not by seemingly biased salespersons. In this respect, the inertia of consumers parallels that identified in academic science when new paradigms emerge (see Kuhn, 1970) and in large corporations when major organisational restructuring or changes of activity are proposed in times of difficulties (see Chandler, 1962, and Earl, 1984, Chapter 5). Such resistance can be understood in a variety of ways.

When her expectations are falsified, the consumer’s first task is to decide what kind of problem she is up against. This initial decision may take her a good deal of time to reach, since she has to deal with something known to philosophers of science as the Duhem–Quine problem (after Duhem, 1906, and Quine, 1951). She cannot simply say that one of her beliefs has been refuted, even if its predictions have not materialised, for she is always testing a complex of theories: her assumptions may involve the use of further theories, while her test techniques and interpretations of results certainly will. Thus the Duhem–Quine thesis holds that, if a particular idea is apparently contradicted by events, there may be nothing wrong with it as such; it may merely be that part of the theoretical apparatus used to test it is not behaving in the expected ways. For example, suppose our consumer keeps finding that her car requires expensive repairs. This does not mean that she must necessarily revise her view of it and construe it as a ‘lemon’. It could simply be that she is unknowingly allowing it to be ‘fixed’ by an incompetent or dishonest garage. Like an academic scientist, an inquiring consumer can only say that a particular set of theories she holds is or is not inconsistent with a particular body of evidence framed in the light of some of the theories in this set. There is no way of knowing for sure which part of her world-view needs to be reconstructed, or whether the whole (sub)system is obsolete. Our motoring consumer might simply need to change her favoured garage, but she might really have a lemon, or even a lemon whose performance is made worse than need be by the garage she uses.

In order to avoid letting this problem paralyse her, the consumer will sooner or later bring into play her self-imposed rules for resolving inconsistencies in her construction system; for example, she may conclude that ‘I think my car is the problem, not the garage, because the latter has serviced all my previous vehicles, and many owned by my friends, without there being trouble on such a scale. I can’t believe the garage’s standards have suddenly slipped, since it’s still the same old family business’. Here we might note that this way round the Duhem–Quine problem, embodied for ‘man the scientist’ in the organisation and
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modulation corollaries of Kelly’s theory of personality, is very similar to the analysis put forward by Lakatos (1970) in respect of the behavior of academic scientists. Lakatos argues that the scientist is not driven back to first principles by each new anomaly she discovers. Rather, she operates according to a ‘scientific research programme’, divided into two sections: a ‘hard core’ and a ‘protective belt’ (Lakatos, 1970, pp. 132–7). The former is a set of propositions and procedures which the scientist makes a dogmatic methodological decision not to lay open to empirical challenges. The latter is the body of ‘auxiliary’ hypotheses which she is prepared to modify in the face of empirical observations or perceived logical difficulties. If necessary, she is prepared to make ad hoc modifications to auxiliary hypotheses, though if this is the best she can do, Lakatos (1970, p. 118) would describe her research programme as ‘degenerating’. Remenyi (1979) has taken these ideas further, postulating that scientific subdisciplines, existing within the main core’s protective belt, will have their own ‘demi-cores’ and associated protective belts of auxiliary theories—these are the analogue of Kelly’s construct subsystems. Thus the Lakatosian view is of research programmes as hierarchical groupings of theories, with their users proceeding on the basis that their ways of looking at things are not rotten to their hard cores if things appear not quite to fit. The protective belt serves as a buffer against changes in its respective (demi-)core. Reality may dent the belt by forcing adjustments to auxiliary hypotheses but it is not allowed to challenge core notions.

A second source of delay in the consumer starting to become seriously interested in new ideas is that even once she has decided what is in doubt, she may still believe that she has not yet got an adequate basis for concluding that things are bad enough for her to be well advised to consider alternatives. What might be seen by an obsessive-compulsive as a major source of alarm might come well within the bounds of tolerance of another thinker. For example, a rapid succession of automotive repair bills might be taken as symptomatic of enormous potential for future bills; or such a collection of bills might come as only a moderate surprise to the consumer and, having incurred them, she might judge that she is now very likely set up nicely for a period of trouble-free motoring. But it is by no means easy to decide how brittle to make one’s expectations. An ‘obsessive-compulsive’ motorist may lose thousands if she switches her car at the first sign of trouble or (by way of insurance) the moment its warranty runs out; yet, at the other extreme, one can equally lose a fortune by motoring in the belief that one’s present car is not a lemon and is worth investing in to keep it in good order. The latter strategy is one which it is particularly difficult to demonstrate to have been a failure. Between the beginning and the end of a motoring year, the consumer may end up spending more on repairs than it would have cost her to switch at the outset to a vehicle guaranteed to be free of repair bills. Members of her reference group may point this out to her and argue she has made a mistake. If her construction system does not admit the idea that she could be fallible in this respect, then she can try to demonstrate her decision-making competence by continuing her policy for a further year; it may then become apparent that the total cost of repairs would have been less than the total cost of guaranteeing repair-free motoring for two years. If she is still down by the end of the second year, she can still try to demonstrate that her policy is cheaper than an ‘obsessive one’, by spending yet more (see Wolf, 1970, 1973). (Both extremes of behaviour might seem ‘crazy’ to someone who employs the policy of buying a three-year-old car each year and keeping it for only a year, regardless of the bills—which in some years may be very high—incurrd in the year of ownership.)

A third reason for resisting new ideas, when existing ones are being called into question, is that new modes of thought and possible action-schemes cannot be costlessly evaluated or assimilated, even when pertinent information is ‘freely’ available. There are a number of sides to these costs. First it should be recognised that, if a person is busy trying to change herself, she is forgoing opportunities to devote her attention to problems that still seem amenable to control with the aid of procedures from her imperfect construction system/research programme. There is no point in trying to learn about a superior way of coping with the future if one’s life disintegrates in the interim. The significance of this barrier to change will depend upon how brittle one makes one’s expectations and upon how many negative implications would seem to follow from their disconfirmation. An ‘obsessive-compulsive’ will see alarming ‘fires’ forever breaking out in her life. She will thus not feel able to stand back and try to work out
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a more fireproof way of forming expectations: she will not even feel free to examine the extent to which it is the inadequacy of her present way of seeing how to fight the fires of everyday life that enables them to keep flaring up afresh. (For parallels in corporate behaviour, see Radnor, 1975, and Sir Michael Edwardes', 1983, especially pp. 75, 282, account of his stressful life at British Leyland.)

A second feature looming large in any consideration of the costs of changing one's mind is the possibility that one could end up investing a good deal in a new way of looking at the world, only to find that it, too, has weaknesses as a way of anticipating events. This is something that Lakatos (1970, p. 155) neglects in setting out conditions under which a new research programme will be adopted. He suggests that this will happen if the new way of proceeding can offer excess empirical content (in Kellian terms: 'a wider range of convenience') while also explaining how the past successes of the old one were achieved. The trouble is that it is not obvious that the research programme which has seemingly fitted events best in the past will continue to do so in the future; science has a tendency, not unlike that in fashions of dress, to go round in circles as old research programmes in somewhat revamped forms acquire seemingly improved explanatory powers (see Robertson's, 1956, p. 81, famous analogy between high-brow opinion and a hunted hare, and note also the end of section 9.2). Such considerations may mean that potential for 'excess empirical content' remains undiscovered. For although her current research programme is not entirely satisfactory, a decision maker may feel justified in devoting her philosophical energies to examining how it might be made to perform better, rather than to exploring radically different alternatives: better 'the devil you know' than to 'jump out of the frying pan and into the fire'.

As a person assesses possible costs of changing her ways of thinking, she might not unreasonably be expected to see them as positively correlated with the number of subordinate expectations that she has attached to the construct(s) currently being called into question. If so, she would be more likely to invest in trying to see a way of making a superordinate construct fit reality—instead of looking for an alternative way of forming constructs presently deemed subordinate to it—the more subordinate impli-

Cations she has attached to it. In other words, we should expect to find that resistance to change in respect of a particular construct is a function of the number of expectations it carries. Precisely such a finding emerged in Hinkle's (1965) original work with implication grids. As well as using the 'implication grid technique' to uncover the number of findings that would result from a polar change for each construct, Hinkle elicited from each of his subjects a 'resistance-to-change ranking' of constructs. The method involved presenting each subject with all the possible pairs of constructs from the larger sets they had evoked, and asking, on which of these two constructs would you prefer to remain with respect to, if you had to change in terms of only one of them? (For example, 'you say you would prefer to be kind rather than cruel, and generous rather than mean, but if you could be only one of these, which one would you prefer to be?') Constructs were then ranked from lowest to highest according to the number of times they had been designated for 'no change'. Support for Hinkle's results is to be found in the work of Crockett and Meisel (1974), which combined implication grid technique with experiments that provided subjects with bogus feedback against their expectations. As Crockett and Meisel (1974, p. 298) point out, on more than one occasion subjects faced with inconsistencies to resolve were heard to remark, 'if I change this, I'll have to change practically everything'.

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they have such possibilities brought to their attention. As they consider them, they may be horrified by what they see.

For example, many people expect that, in their main meal of the day, they will normally eat meat, despite the fact that this is by no means intrinsic to the nature of such a meal. Now let enter the strict vegetarian, who refuses to consume meat as well as any other animal products. Most people find such a person’s behaviour quite perplexing, all the more so once they have made the deviant give justifications for her actions. The vegetarian may point out that (1) the conventional picture of a meal is based on the tacit assumption that it is entirely acceptable to exploit and slaughter animals for human gratification; and (2) that she does not see herself as someone who can eat food prepared at such a cost when it is (a) unnecessary for humans to consume animal products, (b) technologically inefficient and (c) selfish to do so, given the low vegetation/animal conversion ratio and the millions who are starving in a world which would comfortably give all an adequate vegetarian diet. For the vegetarian to behave in the conventional manner could therefore be seen by her as an act which would call into question her view of herself as someone who is not selfish and respects the right to life. If omnivorous consumers also see themselves as non-selfish people who respect the right to life, we might expect them to be swift converts to the vegetarian lifestyle. However, a consideration of the implications of such a change may lead them to see that they could suffer other kinds of self-image confusion and the opening up of all manner of gaping holes in their abilities to cope with the world. For example, their possible choices of restaurants, clothes, shoes, shopping routines, cosmetics, cars (no more ‘luxury’ hide interiors and leather-bound steering wheels), holiday accommodation, and so on, will be greatly constricted, whilst their existing knowledge of cookery will be rendered largely obsolete (even ‘beans on toast’ isn’t as simple as all that, since most bread uses animal shortening); they may also envisage a shrinking social life (fewer dinner party invitations, for example) and the need to be able to deal with frequent demands for self-justification.

Thus having started with a simple, ‘minor’ matter involving a challenge to a construction of the nature of a meal, we now find the omnivorous consumer considering things that matter to her a good deal. She essentially has to ask herself whether she finds it either (1) easier in prospect to suffer what she presently sees as damage to her self-image owing to forgone luxuries, and to suffer anxiety whilst learning how to be a vegetarian, or (2) easier in prospect to suffer guilty doubts about her view of herself as a someone who is not selfish and respects the right to life. Caught thus on the horns of a dilemma, she might choose either way, depending on the rules of her system. Experience suggests that in situations where the omnivore elects not to change, she either refuses to justify her position to inquisitive vegetarians or cultivates the skill of putting forward anti-vegetarian arguments that are often ad hoc and include the following: ‘at least I’d never stoop to ordering lobsters that are cooked live, and I don’t waste a scrap of meat, since I put all the leftovers in soups’; or ‘but if I give up eating meat and dairy products, the animals won’t be bred and get to live even for a short period’; or ‘what about the rights of a farmer a livelihood: how can you say that her happiness and that of her customers is not increased by more than the happiness animals lose in factory farms and slaughter-houses?’; and ‘don’t plants and agricultural pests have rights too?’ Thereby such consumers seek to avoid feeling guilty as they resist the costs of changing their lifestyles.

These arguments are not without their practical implications for those involved in marketing. It would appear that, if a seemingly minor change of activity could actually require a consumer to make a major change of mind, it will be difficult for a marketing strategy to produce such a change unless:

1. the consumer’s attention can be kept away from considering implications that she has not yet construed yet which she would be liable to see as destructive (once the person has committed herself to the new way of thinking, and the products it entails, she may then wake up to problematical implications and yet carry on with her new philosophy because a reversion to her original one would carry even more difficulties);

2. it can be demonstrated to the consumer that a failure to change her way of thinking will cause much greater damage to her subordinate construct groupings than she would suffer by changing;

3. the consumer can be provided with a comprehensive new way of looking at things, which repairs the damage which
they have such possibilities brought to their attention. As they consider them, they may be horrified by what they see.

For example, many people expect that, in their main meal of the day, they will normally eat meat, despite the fact that this is by no means intrinsic to the nature of such a meal. Now let enter the strict vegetarian, who refuses to consume meat as well as any other animal products. Most people find such a person's behaviour quite perplexing, all the more so once they have made the devil give justifications for her actions. The vegetarian may point out that (1) the conventional picture of a meal is based on the tacit assumption that it is entirely acceptable to exploit and slaughter animals for human gratification; and (2) that she does not see herself as someone who can eat food prepared at such a cost when it is (a) unnecessary for humans to consume animal products, (b) technologically inefficient and (c) selfish to do so, given the low vegetation/animal conversion ratio and the millions who are starving in a world which would comfortably give all an adequate vegetarian diet. For the vegetarian to behave in the conventional manner could therefore be seen by her as an act which would call into question her view of herself as someone who is not selfish and respects the right to life. If omnivorous consumers also see themselves as non-selfish people who respect the right to life, we might expect them to be swift converts to the vegetarian lifestyle. However, a consideration of the implications of such a change may lead them to see that they could suffer other kinds of self-image confusion and the opening up of all manner of gaping holes in their abilities to cope with the world. For example, their possible choices of restaurants, clothes, shoes, shopping routines, cosmetics, cars (no more 'luxury' hide interiors and leather-bound steering wheels), holiday accommodation, and so on, will be greatly constricted, whilst their existing knowledge of cookery will be rendered largely obsolete (even 'beans on toast' isn't as simple as all that, since most bread uses animal shortening); they may also envisage a shrinking social life (fewer dinner party invitations, for example) and the need to be able to deal with frequent demands for self-justification.

Thus having started with a simple, 'minor' matter involving a challenge to a construction of the nature of a meal, we now find the omnivorous consumer considering that matter to her a good deal. She essentially has to ask herself whether she finds it either (1) easier in prospect to suffer what she presently sees as damage to her self-image owing to forgone luxuries, and to suffer anxiety whilst learning how to be a vegetarian, or (2) easier in prospect to suffer guilty doubts about her view of herself as a someone who is not selfish and respects the right to life. Caught thus on the horns of a dilemma, she might choose either way, depending on the rules of her system. Experience suggests that in situations where the omivore elects not to change, she either refuses to justify her position to inquisitive vegetarians or cultivates the skill of putting forward anti-vegetarian arguments that are often ad hoc and include the following: at least I'd never stoop to ordering lobsters that are cooked live, and I don't waste a scrap of meat, since I put all the leftovers in soups'; or 'but if I give up eating meat and dairy products, the animals won't be bred and get to live even for a short period'; or 'what about the rights of a farmer to a livelihood: how can you say that her happiness and that of her customers is not increased by more than the happiness animals lose in factory farms and slaughterhouses?'; and 'don't plants and agricultural pests have rights too'? Thereby such consumers seek to avoid feeling guilty as they resist the costs of changing their lifestyles.

These arguments are not without their practical implications for those involved in marketing. It would appear that, if a seemingly minor change of activity could actually require a consumer to make a major change of mind, it will be difficult for a marketing strategy to produce such a change unless:

1. the consumer's attention can be kept away from considering implications that she has not yet construed yet which she would be liable to see as destructive (once the person has committed herself to the new way of thinking, and the products it entails, she may then wake up to problematical implications and yet carry on with her new philosophy because a reversion to her original one would carry even more difficulties);

2. it can be demonstrated to the consumer that a failure to change her way of thinking will cause much greater damage to her subordinate construct groupings than she would suffer by changing;

3. the consumer can be provided with a comprehensive new way of looking at things, which repairs the damage which
an initial change of outlook and behaviour would trigger off via linkages amongst constructs and construct subsystems. My earlier (section 4.4) arguments about the role of marketing plays that relate to guilt and anxiety may now be seen to have substantial theoretical underpinnings.

6.7 CONCLUSION

In this chapter I have attempted to show that although the world with which consumers may have to contend may be highly fluid, they usually attempt to think about how to deal with it in ways that are systematic. With the aid of self-constructed networks of rules for forming expectations and for amending them in the light of experience, they come to 'see' that some actions are preferable to others. These networks of rules effectively serve to ensure that, no matter how carefully they think about what they do, their choices are, in an important sense, programmed. People run their lives according to different programmes because they started out with different elementary principles and in different environments, with different capacities for handling interdependencies and making connections (one might say: 'different mental hardware'), and because, partly as a result of how they started, they have had differing histories, which have impacted upon the outlooks they have evolved. They will thus differ in their expectations, including those concerning which activities they can safely and profitably undertake—just as firms with different histories, self-perceived capacities and planning departments will evolve different strategies for coping with the world of business. These differences, which encompass differences in capacities for originate thought, will mean that, at best, the resource-constrained market researcher is only going to be able to attempt approximately to anticipate the behaviour of broad groups of consumers comprising individuals whose judgemental systems have a good deal in common. However, the researcher's task owes its very feasibility to the resilience of judgemental rules that competent decision makers select as means for thinking about choice environments that are often highly turbulent. As Heiner (1983) has argued, prediction would be impossible if people did not employ simplifying rules for coping with change and instead always adapted perfectly to each new situation.

The arguments in this chapter may also enable us to see more precisely what Kelly had in mind in suggesting that it may be useful to see people as if they were trying to 'predict and control' events. Until now, I have not explicitly noted that, according to Kelly (1955, p. 525), a person is 'in control' if she is able to extend the range of convenience of her predictive system while maintaining its essential features intact. The discussions of implicational relationships between constructs reveal what is meant by 'essential features': a person is losing control when, in order to preserve her highest-ranking ideas, she finds herself having to admit expectations that destroy fairly high-ranking constructs (rank being dependent on the number of superordinate implications a construct carries), yet which do not bring with themselves admissible new ways of theorising about the events whose previous images have been demolished. In such a situation, she will suffer from anxiety and will attempt to avoid admitting such possibilities; that is, she will behave in a hostile manner, seeking to reconcile them with her expectations by contorting them if need be, until things get so twisted and/or complicated to hold together that she crosses a self-imposed threshold of tolerance and recognises (is converted to) the idea that it is easier to reorganise her system of thought than to prop it up with ad hoc arguments.

The more a consumer is able to envisage losing control in her present environment, the more she will seek to develop a predictive system which may enable her to establish control in new territories. Even if the imagined difficulties do not materialise, such experimentation at least enlarges her experience, her knowledge. In deciding quite where and how to experiment, the consumer faces a problem similar to that which confronts a firm when it cannot take it for granted that its products' lifecycles will not suddenly be truncated; on the one hand, it can be dangerous to pin many expectations on only a few ideas, or to make them highly interdependent, but on the other the costs of avoiding integration by compartmentalising ideas and activities may be a loss of insight and a failure to achieve control. However, the consumer, like the firm, needs some principles for thought if she is not to become overwhelmed by a raging
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sea of seemingly believable but forever kaleidoscopically changing thoughts.

The scope for empirical work in relation to the ideas expressed in this chapter seems considerable, especially given that the theoretical ideas are so closely bound up with the techniques of repertory grid and implication grid analysis. I would strongly urge readers to examine the pioneering studies by Gutman and his colleagues, referred to in section 6.4. It would be interesting to go beyond these to see how far mental attempts to hedge or exploit scope for linking expectations are associated not merely with anticipated environmental turbulence, but also:

1. with the degree of environmental turbulence that a consumer has experienced in the past (other things equal, people with stable backgrounds would be expected to be less likely to be "mental hedgers");

2. directly with hedging and synergy at the level of physical choices. Here one might conveniently investigate, for example, the relationships between the structures of university students' construct subsystems pertaining to their record collections and the degree of diversity in these collections. People with "obsessively" structured collections would be expected to have more tightly correlated sets of constructs than others with similarly sized but "schizophrenic" collections that sample a wide variety of artists and styles of music. Investigations of such subjects' "record subsystems" and physical collections over a number of years, or the study of their own accounts of how they evolved them, might also be revealing in strategic terms and could shed some light on (1) above. Records are a particularly interesting product to investigate from this standpoint, since the record market is highly turbulent and pervaded by fashions and peer pressure amongst consumers.

If the second kind of research involved the compilation of implication grids as well as repertory grids (preferably repertory grids enlarged via the construct-laddering technique), resistance to change could be studied in relation to cognitive structures. For example, if studying "record-collecting strategies", one might seek to explore why some people vehemently resist opera, and others avoid rock, reggae or "new wave". One might even use implication grids from samples of university economists to test my (1983a, especially pp. 102-3) analysis of the reasons for resistance to behavioural theory amongst the bulk of the economics profession. Instead of starting out with repertory grids for consumer products, one could begin by getting economists to compare and contrast the seven economics research programmes mentioned in section 1.2.
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