Robin Wensley

EFFECTIVE MANAGEMENT *in* PRACTICE

Analytical Insights & Critical Questions

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1 Extending Analysis in Effective Management

The Legacy of the Sixties

I believe the approach I have adopted in this book can be seen as the true inheritance of the oft-maligned Foundation Reports[1], both produced in 1959 and both highly critical of the quality of students and faculty in many US business schools at the time, as well as the nature of the underlying pedagogy which often relied on descriptive "war stories" from seasoned campaigners. The Foundation Reports not only recommended a substantial improvement in the quality of both students and faculty but also the development of a pedagogic approach which encouraged the twin application of sound theory and robust empirical evidence. In the later case, the reports clearly assumed that a more analytical approach would be completely compatible with a significant improvement in the nature and impact of management practice. Although the reports themselves have often been identified as a key influence in a shift towards a form of academic study which is seen as unworldly and of little use to practising managers, this was clearly not their intention. This book is an attempt to put the more analytical aspects of management back on the course which was originally charted for them by the two Foundation Reports: to play a key role in enhancing and developing the practice of management.

To do this, however, we need to recognise the essential flaw in the previous approach which was very much of its time. The sixties were a time of optimism – at least in Europe and North America – about not only the beneficial impact of technology but also of the burgeoning fields generally described as the social sciences. There was great optimism that many complex social and societal issue would succumb to effective policy initiatives based on a range of theoretical and empirical investigations.

> The discussion about the need for a social science research council began in earnest as the Second World War was drawing to a close. It was a time when the thoughts of policymakers and academics alike were turning to how to achieve the changes in society clearly required in the wake of two

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[1]Foundation Reports was the colloquial term for the combination of Gordon and Howell (1959) and Pierson (1959).

destructive world wars. It was also a time of optimism, with a belief that all social problems were ultimately soluble. As Michael Young, the first Chairman of the Social Science Research Council (SSRC), reflected: 'there were high hopes, even among some normally cautious administrators, about what social sciences should do to illuminate public policy'. (ESRC [formerly SSRC until 1983] 2005: 4)

However, it was some considerable time after the war before the SSRC was actually established. After various "false starts" the Heyworth Committee was set up in 1963 and was a key committee in recommending the establishment of the SSRC in 1965:

> The Introduction (to part two of the report) set the scene for the recommendation that an SSRC should be established. The chapter stressed the need for more research … After wide discussion there was as remarkable amount of sympathy with the aims of social scientists and appreciation of the benefits to be gained … Much larger resources could be absorbed in social science research. "All" agreed on the need for more research on the social sciences, and much more utilisation of the results was required. The aim of the research could be seen as to increase knowledge of how society worked. (Nicol 2001: 81–82)

However, the net result was nicely summarised later and very much after the event by the notion of the "Moon Ghetto Paradox" – on the one hand the ability of a developed human society to succeed in achieving the complex technical task of landing a man, or more strictly men, on the moon, yet on the other hand singularly failing to overcome the social challenges inherent in the urban ghetto (Nelson 1974).

The underlying principle therefore of this book is that our forms of analysis should start from two assumptions that were almost always missing from or at best marginalised in the analytical treatments that informed developments in the sixties. These two assumptions are: first, the nature of the phenomena we study is such that in a broad sense appropriate analysis and action is inevitably context dependent in a way which cannot be captured adequately by any form of simple or indeed complex contingency framework; and, second, that useful forms of analysis and analytical insights are much more likely if they start from current management practices and understandings. A nice illustration of the problems of adopting the opposite approach – starting by redefining the problem so it becomes more amenable to our preferred forms of analysis – is to be found in the short fable on teaching the prince how to play chess (Petersen 1965).

Extended Analysis: Both Analysis and Synthesis

Analysts should therefore set rather more realistic objectives for their analytical investigations. Whilst they should still be true to the essential etymology of the word and develop understandings based on a closer look at constituent parts of the issue and the use of appropriate theory and empirical evidence, they should expect to arrive at insights rather than general prescriptions and at further questions rather than answers. Perhaps yet again it is worth recalling that one of the key elements in the Toyota Production System (TPS) is the notion of "asking the five whys". Invented in the 1930s by Toyota founder Kiichiro Toyoda's father Sakichi and made popular in the 1970s by the Toyota Production System, the five whys strategy involves looking at any problem and asking: "Why?" and "What caused this problem?" The idea is simple. By asking the question "Why" one can separate the symptoms from the causes of a problem. This is critical as symptoms often mask the causes of problems. In this way one should also ensure that analysis is combined with synthesis: achieving benefits from analysis requires recognising the equal need for some form of synthesis.

Meta-Analysis and Systematic Review

Such a synthesis should in general involve balancing analysis from different perspectives but also relying on differing forms of empirical evidence – both qualitative and quantitative. I have a number of techniques and processes to facilitate doing this and I will review and contrast them in more detail later in this book. In general, two challenges often get intertwined: incorporating different analytical perspectives on the nature of the "problem" situation alongside introducing evidence from public or private sources which relate to previous analogous situations. Here it is convenient to follow the terminology used by the Cochrane Collaboration, developed in the field of medical research, and use "meta-analysis" to refer to statistical methods of combining evidence, leaving other aspects of "research synthesis" or "evidence synthesis", such as combining information from qualitative studies, for the more general context of systematic reviews. In the latter case, I reserve the term "systematic review" for the wider integration of differing sources of data as well as differing analytical frameworks. Hence, meta-analyses are often, but not always, important components of an overall systematic review procedure.

In general, there are better-defined procedures for conducting a meta-analysis on quantitative data but when it comes to qualitative studies, although at some higher level the need to compare, contrast and evaluate is

similarly important, there is less consensus about the most appropriate forms to adopt. This is at least partly a function of the wider range of forms of empirical data. Barnett-Page and Thomas (2009), in reviewing the various methods, partly focus on the underlying assumptions of the researcher[2]:

- *Subjective idealism*: there is no shared reality independent of multiple alternative human constructions.

- *Objective idealism*: there is a world of collectively shared understandings.

- *Critical realism*: knowledge of reality is mediated by our perceptions and beliefs.

- *Scientific realism*: it is possible for knowledge to approximate closely an external reality.

- *Naive realism*: reality exists independently of human constructions and can be known directly.

  Thus, at one end of the spectrum we have a highly constructivist view of knowledge and, at the other, an unproblematized "direct window onto the world" view.

They then note that such differences influence the choice of analytical tools for synthesis:

  Our methods split into two broad camps: the idealist and the realist [see Table 1.1 for a summary]. Idealist approaches generally tend to have a more iterative approach to searching (and the review process), have less a priori quality assessment procedures and are more inclined to problematise the literature. Realist approaches are characterised by a more linear approach to searching and review, have clearer and more well-developed approaches to quality assessment, and do not problematise the literature.

Unfortunately whilst their distinctions along the individual dimensions are useful, their labels are confusing: in their earlier analysis they have already recognised that in this context the terms "idealist" and "realist" can cover a range of research methods when it comes to interpreting the nature of a particular context.

   Hence, whilst in overall terms realism reflects a belief that reality exists independently of any observer, whilst idealism in essence maintains that experience is ultimately based on mental activity, the different forms of both

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[2]They refer in particular to Spencer et al. (2003).

Table 1.1 Summary table

	Idealist	Realist
Searching	Iterative	Linear
Quality assessment	Less clear, less a priori; quality of content rather than method	Clear and a priori
Problematising the literature	Yes	No
Question	Explore	Answer
Heterogeneity	Lots	Little
Synthetic product	Complex	Clear for policy makers and practitioners

N.B.: In terms of the above dimensions, it is generally a question of degree rather than of absolute distinctions. (Copyright © 2009 Barnett-Page and Thomas. Reproduced with permission)

these frames of reference are more to be seen as differing assumptions within the framework of two conflicting philosophies as to the extent to which, in the case of idealism, there are or are not shared understandings and, in the case of realism, our understanding of the real is achieved directly or more mediated by our perceptions and beliefs. The distinction is further complicated by the fact that in the philosophy of mind, idealism is more the opposite of materialism, in which the ultimate nature of reality is based on physical substances but we should not assume that materialism and realism are strict synonyms.

As so often in these situations we encounter the issue of incommensurability: the degree to which particular theories can or cannot be compared to determine which is more accurate. In this sense most would argue that it is not possible to conduct a direct comparison between idealism and realism but it is possible at least to some extent to conduct such comparisons between different "variants" of each.

This helps to explain the rather confusing nature of Table 1.1 in that it is implied that each dimension is continuous and at least implicitly correlated but in practice the issues are more complex:

- At a philosophical level any dispute between idealism and realism cannot be resolved by pure empirical means. Again, in practice this may be less of a problem than in theory since both distinct views might support rather similar choices and actions in a particular context.

- The comments above apply most strongly to what might be termed naive realism and naive or subjective idealism but there becomes a form of partial convergence when we consider in the former case a shift towards critical realism and in the latter a shift towards objective idealism. For

instance Byrne (2002) provides a constructive critique from a critical realist perspective on the issue of interpreting quantitative data.

• When it comes to the issue of the product of any research exercise, it is true that a form of naive realism helps to generate clear answers for policy makers and practitioners and in many ways this is linked to the real or apparent positivism of much policy research. On the other hand, as I will argue later in this book, if we look more for better questions rather than answers we may be able to avoid some of the traps of naive realism whilst still being seen as of genuine value to both policy makers and practitioners.

Beyond Naive Realism

Moving away from a perspective of naive realism also means moving away from the positioning of all five dimensions on the right-hand side of Table 1.1. However, it would be very misleading to suggest that the further one move towards naive idealism the more one shifts along all of these dimensions. It is more appropriate to see the critical realist or the objective idealist in a world which tends to have the dimensions of:

• iterative search;

• quality assessment based on content rather than method;

• a critical evaluation of prior literature;

• exploratory questioning;

• heterogeneity and complexity.

If this is most likely to be the output from an analytical and systematic review, where does it lead us in informing choice and action?

The basic analytical approach presented in this book is that of a further two-stage process as illustrated in Figure 1.1.

The final process to resolve remaining differences has to be based on judgement, experience and rhetoric. We also need to recognise that such an extensive and extended process is often unrealistic in terms of normal management practice and indeed even in policy contexts. As a necessarily anonymous example, I was in discussion with a group of civil servants about the evidence background for a new policy paper for UK ministers. As the most senior of the civil servants noted, his personal role was to produce the conclusions in consultation with the ministers concerned whilst, as he put it, the most senior
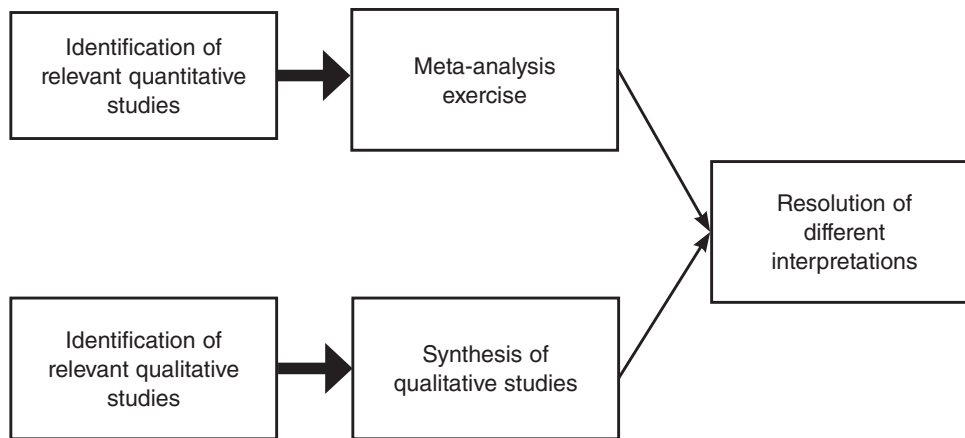
Figure 1.1   Basic two-stage process

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analyst, who was also present at the meeting, would work with a team to produce a synthesis of the relevant evidence for the appendix!

This means that analytical "interventions" must be timely and effective (rather than delayed, irrelevant and unrealistic) and so it is crucial to have a good sense of the basic assumptions and robustness of our analysis and ways of representing and presenting it which others will find convincing alongside an ability to refute what we see as flaws in alternative approaches. Later in this book, I will therefore compare the broad analytical approach with what is known about the nature of managerial wisdom, which we can describe as tied up more in what others have called "folk wisdom", as well as the issues in both process and analytical terms of the "onus of proof" in providing a means to achieve a clear resolution.

Whilst the discussion above is primarily framed in more philosophical terms I now wish to treat this more as a backdrop to the subsequent text: I will shift the focus to the key aspects in ensuring my analytical approaches, broadly defined, achieve real practical impact on action and choices.

The Relationship between Analysis and Process

Finally, as background it is important to recognise that analysis and process are not direct opposites; in the context of management choices and action, not only can most analysis be seen as also a process but analytical thinking is often embedded in the process itself. This inter-relationship underlies my emphasis on "extended analysis" looking beyond just the assumptions and limitations of particular analytical tools and approaches to the ways in which they can be used in particular contexts and the role they therefore

might play in what is often described as the process of choice and action. Even this rather broad description of choices and actions could still be seen as rather misleading. Others would argue that it is much more of a chaotic flow of events and interventions and that many of the descriptions of choices made and actions decided upon are to a lesser or greater extent post-hoc rationalisations, at an individual or collective level. I am reminded of an aside made by Charles Snow, at a retrospective event to consider the 30-year legacy of the seminal paper by Miles and Snow (1978), when he said something to the effect that "we never saw the world as this complex – we just tried to start from what managers did"!

So we find that in many ways the original critique that managers should be better informed, in terms of both evidence and theory, and should be able to apply this knowledge more effectively through a process of analysis, remains valid today. The major difference is that we now know that there is neither one right way either in terms of theory or analysis so that we need to think much more carefully about what theories, what evidence and indeed what analysis is appropriate in any particular context. Not surprisingly our understanding of what makes for effective leadership and management, has evolved in the fifty years since the Foundation Reports, much as our understanding of both the benefits and the limitations of work measurement and control foreshadowed in the work of F.W. Taylor has similarly evolved over the last hundred years, but in both cases there remains still much to learn and apply.

F.W. Taylor is often seen as the initiator of the scientific management approach. In this he gave particular emphasis to two aspects: labour specialisation, much along the lines of Adam Smith's pin factory, and careful, accurate and fine-grained measurement of the work components in a similar manner to that espoused by the experimental scientists. This later aspect can, however, result in what might be termed "the tyranny of measurement". In particular, whilst Sir William Thompson, later Lord Kelvin, is commonly regarded as the source of the quotation:

> When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge of it is of a meagre (sic) and unsatisfactory kind. (Thompson 1883: 80)

There is another side to this aphorism, perhaps best encapsulated in the story of one of his contemporary scientists, James Joule. The two of them were involved in a slightly bizarre experiment in 1847, when Joule, actually on his honeymoon, attempted to show that when water falls through 778 feet it rises one degree Fahrenheit in temperature. One of them was positioned at the top

and the other at the bottom of the Cascade de Sallanches in Switzerland. However, in practice the flow was "too much broken into spray" to yield any results.

The Interrogative Mood

The essence of the approach developed in this book is well summarised by the title of Padgett Powell's 2009 book, although perhaps with a greater emphasis on the words before the colon. The full title is "The Interrogative Mood: A Novel?" but its form – a collection of questions which on the surface appear to be unrelated – helps both to emphasise the insights that can be achieved by a process of interrogation but also that the process of questioning even in a 164-page book does have to come to an end sometime!

The process of analysis that I have been outlining above requires a significant degree of interrogation: of the evidence, of others perspectives and of the forms of analysis that might and can be used. How far should this process go? Should we take the Toyota Production System (TPS) five whys as gospel, even when various introductions to this approach themselves note that it is much more important to get to a useful action point rather than slavishly always repeat the question why five times? Padgett Powell's book, however, also reminds us that the nth question, particularly if it is from what our American colleagues term "left field", can still provide a valuable new insight.

For me, this harks back to some early empirical research that I did with three colleagues at London Business School – Paddy Barwise, Paul Marsh and Kathryn Thomas – on the process of strategic investment decisions within a few large diversified corporations. In one case we were debriefing the chief executive officer and the chief financial officer after an executive committee meeting which had given the go-ahead to the particular project we had been following. In the meeting I was struck by the fact that one way of looking at the process of the meeting was that initially it was carefully staged by the project team but it was the supplementary questions by committee members that often elicited useful additional insight.

There seemed to be an analogy between this process and that to be found in Minister's questions in the House of Commons – the first response being a carefully crafted one to a prior question but the supplementary questions being a much severer test. Given that at various times in the executive committee process we had observed the CEO had decided to stop a particular line of questioning by one of his colleagues, I asked whether rather like the Speaker he had some general views as to the appropriate "stopping rule" on which he based his intervention. When I tried to explain as best as I could

the analogy I encountered serious, blank expressions! I never did get an answer but I hope readers of this book will maybe have a better sense of their own when they have finished reading.

Indeed, the House of Commons Speaker has also very rarely pronounced – for good reason – on any universally applied number and relied more on his or her absolute discretion. Often the maximum in practice is around three from any one member but in response to a query during an extended exchange in December 1912 between Lord Beresford and Winston Churchill, then First Lord of the Admiralty, on the resignation of Admiral Sir Francis Bridgeman as First Sea Lord, the then Speaker indicated clearly that he would never allow more than eight questions (see Hansard 1912) – slightly less than the number employed in rather different circumstances by Jeremy Paxman, who in interviewing Michael Howard famously asked the same question 12 times (BBC 1997).

Issues of Representation

Throughout this book I will give significant emphasis to the particular ways in which we may choose to represent the outcome of any specific analysis. At this stage I will consider three exemplars: lists, boxes and arrow diagrams. Maybe we should actually start by considering what has almost become the generic representation form itself, not the two-by-two box diagram, but the mere process of listing has a longer history.

Lists and Columns

One exercise often used in management development programmes, but also to be found in use in many practical group situations, is to start or indeed sometimes summarise a discussion by providing a list of issues or considerations, often in columns which can be labelled in various ways: Good/ Bad; Option A/Option B and so on.

This form of representation, as with any other, has some potential biases; the most obvious being that the option with the longest list of positives and/or, where relevant, the shortest list of negatives is often assumed to be the dominant one. This creates a form of game playing which encourages producing various phrases as separate items, with little consideration as to both the extent to which the new aspect is distinctly different from those already listed and the nature of the evidence claims in putting forward this particular aspect. This is why business-school professors often start a case discussion by encouraging the class to participate in some form of collective list writing so that they can then use such

a diagram to develop and extend the overall case analysis to consider the degree of both the similarity and separateness of the items that have been listed.

Technically speaking we can resolve some of these analytical challenges by resorting to various more complex – and often number-based – forms of analysis but, as we will discuss further in the book, techniques such as cluster analysis and the analytical hierarchy process (AHP) can often mean we have to make prior assumptions and many users find the interpretation of the analysis more challenging than illuminating.

The Two-by-Two Box

Perhaps the most common medium used to translate management research into descriptions and prescriptions for management practice is the two-by-two matrix or similar device. George A. Miller (1956) wrote a paper entitled "The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information", which asserted that the number of objects an average human can hold in working memory is 7 ± 2. Hence, an average limit on an individual's one-dimensional absolute judgement could be characterised as an information channel capacity with approximately two to three bits of information, which corresponds to the ability to distinguish between four and eight alternatives. More recently, Cowan (2000) also noted a number of other limits of cognition that point to a "magical number four" which might at least help to explain some of the sustained attraction of the two-by-two matrix! It is often suggested that a lecture course on management analysis could consist merely of one two-by-two box for each lecture with the only difference being the specific labels on the axes for each lecture. There are a number of key questions about this general form of representation that are almost always overlooked; in particular not only the extent to which the two basic dimensions are independent (orthogonal[3]) but also the degree to which the actual observations are really widely distributed in the matrix or concentrated in limited clusters or even only found close to the centre of the matrix.

Figures 1.2–1.7 show how the underlying representation might be altered to reflect the actual degree of orthogonality between the axes of the box or the actual dispersal of individual observations. Figures 1.2 and 1.5 are the "ideal" but in practice it is likely that we will often encounter both of the complications represented in the other figures.

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[3]In mathematics, two vectors are orthogonal if they are perpendicular, i.e. they form a right angle. The word comes from the Greek (orthos), meaning "straight", and (gonia), meaning "angle".
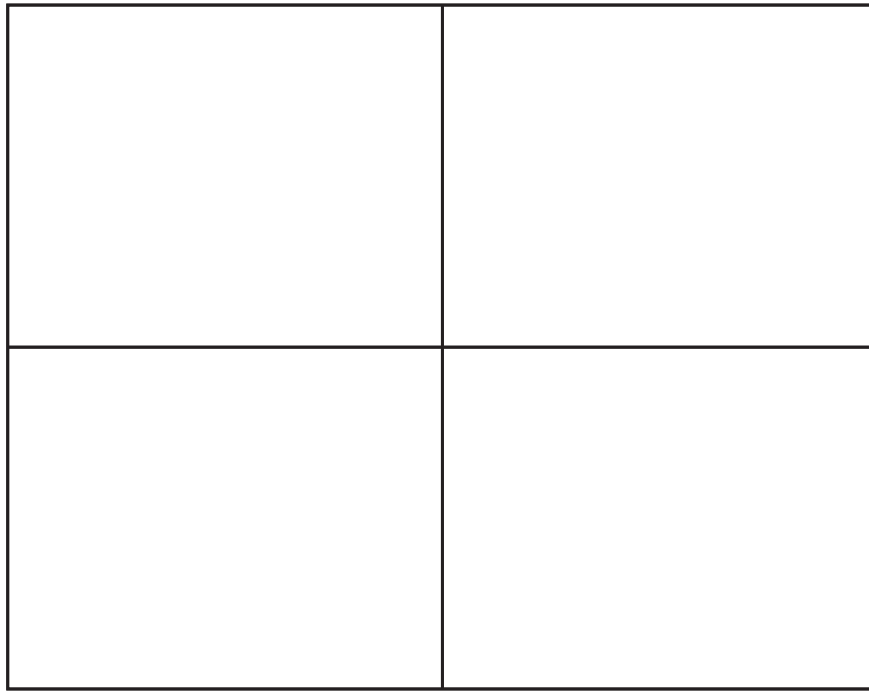
Figure 1.2   A matrix with fully orthogonal dimensions
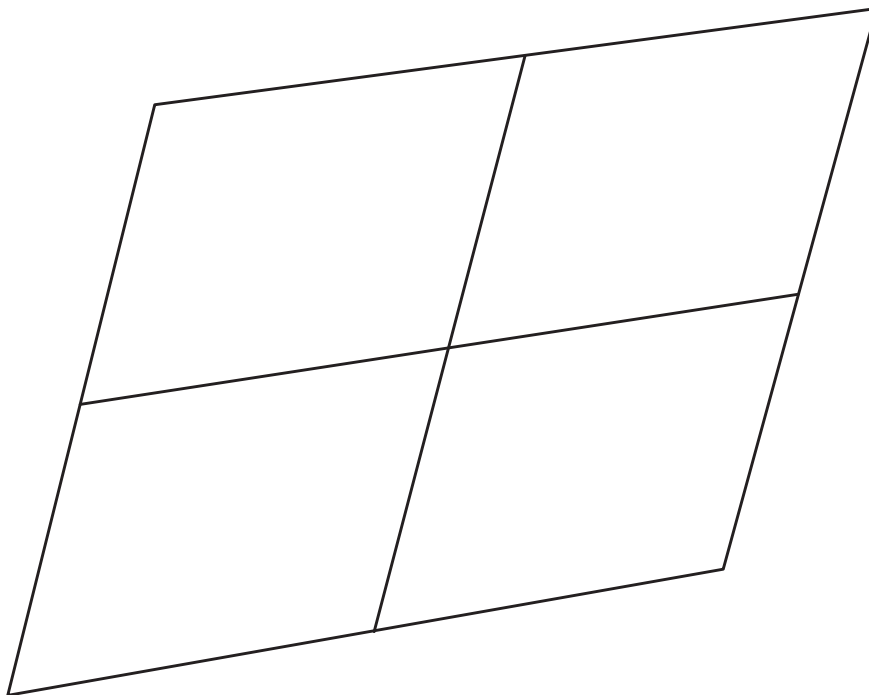
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Figure 1.3   A matrix with significant orthogonality
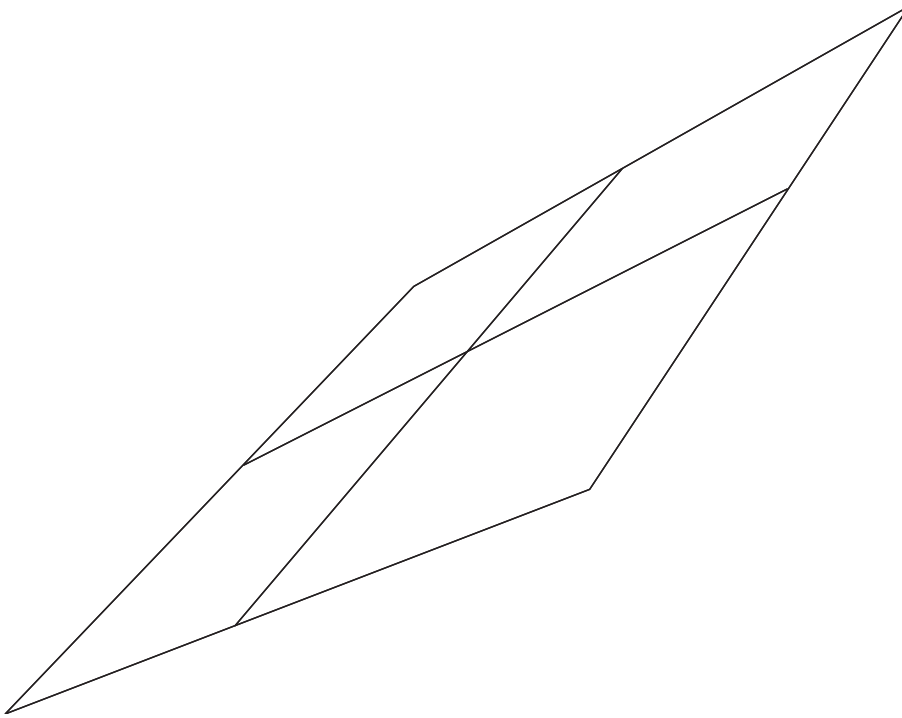
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Figure 1.4   A matrix with limited orthogonality
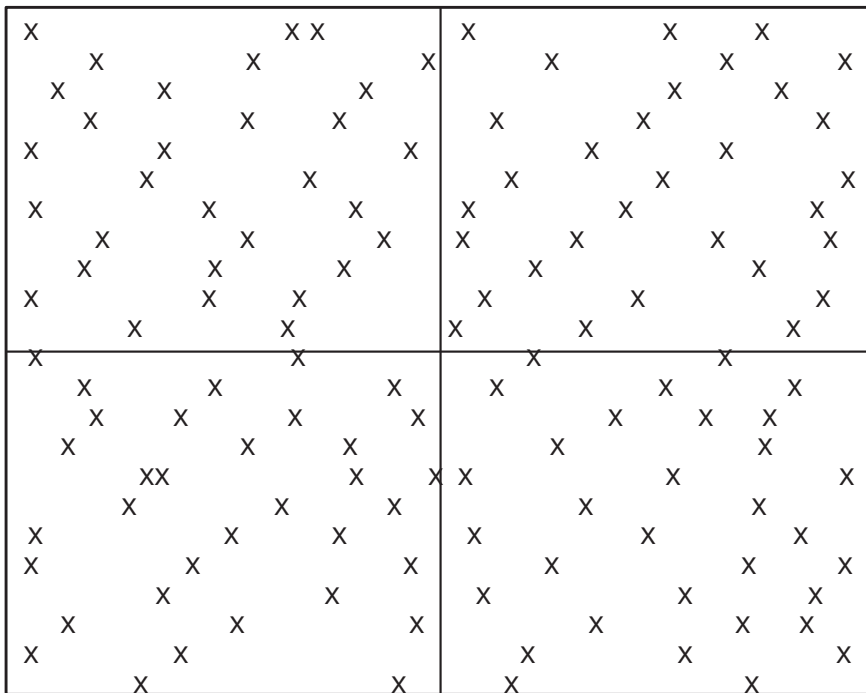
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Figure 1.5   A matrix with fully dispersed observations
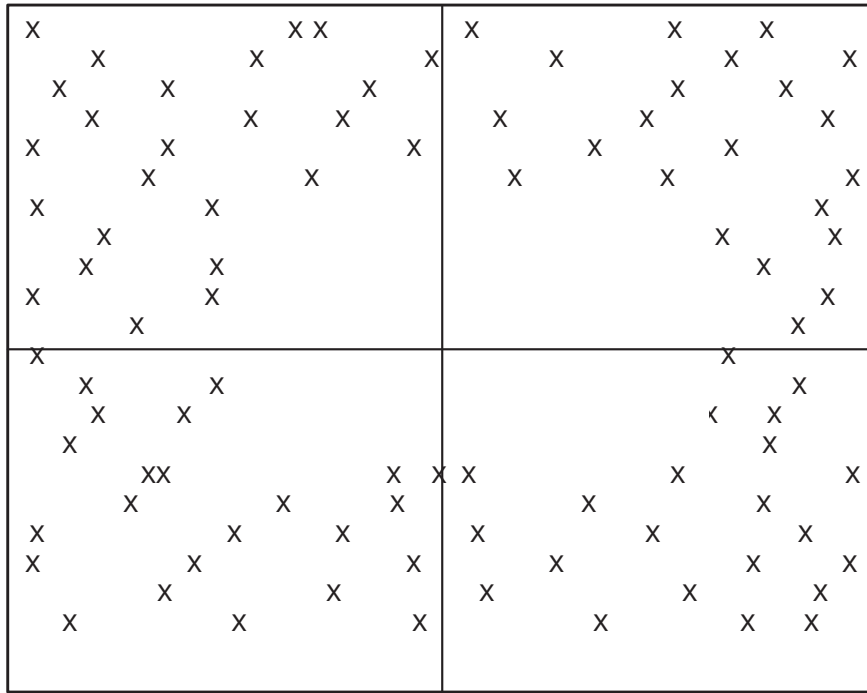
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Figure1.6   A matrix with observations clustered at the extremes
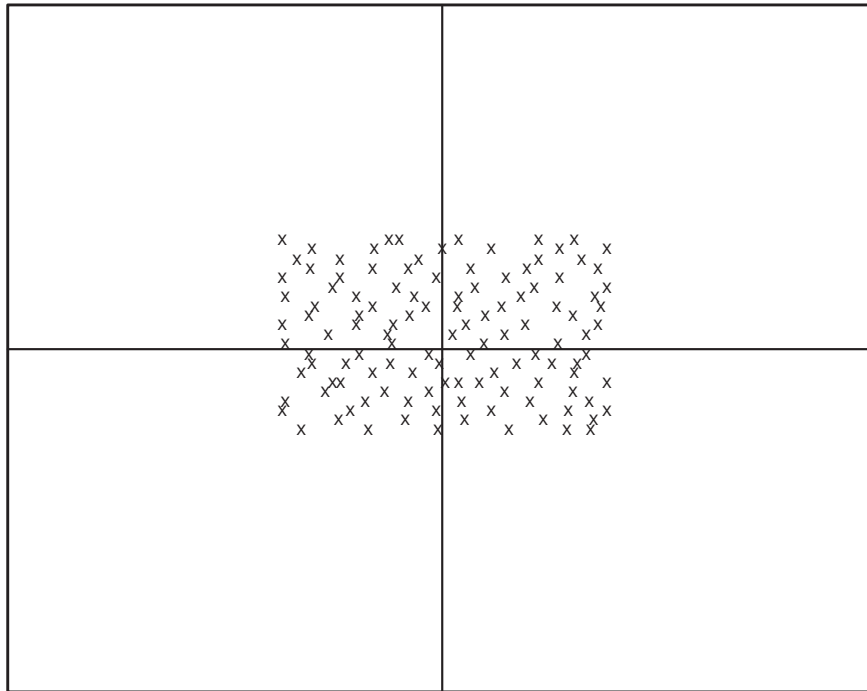
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Figure 1.7   A matrix with observations clustered at the centre

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In general, each of these limitations can result in a misleading analysis of the available options:

- In the case of limited orthogonality, we may assume that any position within the whole of the two-dimensional space within the box is at least feasible, but in fact we are much closer to only having a single dimension to operate along which is actually more like the diagonal of the box diagram itself.

- In the case of clustered dispersion we face a different issue: in discussing the positioning options, we may again assume that at least to a certain extent any position is feasible when the empirical evidence is that this is not apparently the case. Perhaps the severest error is when in practice observations are clustered near the centre of the matrix but the analysis of options is conducted and explained as if the options were clustered at the extremes. In such cases the archetypal unit in any one quadrant is represented as one close to the extreme end and the relevant managerial prescriptions developed on the basis of such an archetype. Such a prescription is then applied to those units that map into the quadrant even if they are actually much closer to the middle rather than the extreme.

Introducing Time and Movement

Two-by-two boxes and similar representations focus our attention on the position of the entities, be they, for instance, a range of the firm's offerings or indeed a set of our own and competitors' offerings at a particular point in time. Most times in my analysis I am also interested in how such positions have moved and then will move through time. For instance, in one particular presentation by a senior colleague to an executive audience this was perhaps carried to its logical conclusion in that he labelled the axes in terms of "Hi" and "Lo", in the opposite manner to the direction of travel he proposed for the new strategy. When asked afterwards about this he responded that the proposed direction should always be represented as upwards and rightwards whatever the axes said; this would ensure the audience were more convinced of "progress"! In this particular case the audience appeared to be quite satisfied with the initial presentation.

In more academic terms, the problem in answering questions about movement through time is often that, to quote a rather well-known expression, the map is not the territory. The aphorism itself is commonly attributed to Alfred Korzybski who coined the expression in "A Non-Aristotelian System

and its Necessity for Rigour in Mathematics and Physics", a paper presented before the American Mathematical Society at the New Orleans, Louisiana, meeting of the American Association for the Advancement of Science, 28 December 1931. The paper was reprinted in the book *Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics* first published in 1933 and more recently in 1958. "A map *is not* the territory it represents, but, if correct, it has a *similar structure* to the territory, which accounts for its usefulness" (Korzybski 1958: 58). Although he did use a number of geographic examples, he focuses mainly on spatial sequencing in an essentially two-dimensional world and in particular does not really develop the topographical perspective, where often the direct route from A to B is blocked by mountains and chasms whilst the indirect route is much more feasible. On top of this, he generally defined maps and mapping very broadly, particularly when considering the role of language:

> If words *are not* things, or maps are not the actual territory, then, obviously, the only possible link between the objective world and the linguistic world is found in *structure, and structure alone*. The only usefulness of a map or a language depends on the *similarity of structure* between the empirical world and the map-languages. If the structure is not similar, then the traveller or speaker is led astray, which, in serious human life-problems, must become always eminently harmful. If the structures *are similar*, then the empirical world becomes "rational" to a potentially rational being, which means no more than that verbal, or map-predicted characteristics, which follow up the linguistic or map structure, are applicable to the empirical world. (Korzybski 1958: 61)

In discussions about management theory, a rather different approach has been popularised by writers such as Karl Weick, who have focused attention more on the ambiguity of the relationship between maps and reality combined with the importance of action rather that the importance of similarity in structure. His most quoted example is:

> A small Hungarian detachment was on military manoeuvres in the Alps. their young lieutenant sent a reconnaissance unit out into the icy wilderness just as it began to snow. It snowed for two days, and the unit did not return, The lieutenant feared that he had dispatched his people to their deaths, but the third day the unit came back. Where had they been? How had they made their way? Yes, they said, we considered ourselves lost and waited for the end, but then one of us found a map in his pocket. That calmed us down. We pitched camp, lasted out the snowstorm, and then with the map we found our bearings. And here we are. The lieutenant took a good look at this map and discovered, to his astonishment, that it was a map of the Pyrenees. (This story was related by the Nobel Laureate Albert Szent-Gyorgi and was turned into a poem by Holub, 1977.)

My favourite moral of the Pyrenees story is the advice, if you're lost any old map will do. For people who study maps, as well as those who claim to use them, a map provides a reference point, an anchor, a place to start from, a beginning, which often becomes secondary once an activity gets underway. Just as a map of the Pyrenees gets people moving so they find their way out of the Alps, a map of the wrong competitor can get people talking so they find their way into the right niche. (Weick 1990: 4)

Not surprisingly Weick's use of this example has raised some important questions. First, perhaps inevitably, there has been a long running debate as to whether in the way he told the story Weick was also guilty of plagiarism in failing to acknowledge the extent to which he copied Holub's poem word for word.[4]

But the more interesting question is the extent to which "any old map will do". Maybe we can find further enlightenment from Lewis Carroll who can be relied on to provide a rather contrarian view on many issues. As Tosey points out: "In the poem [The Hunting of the Snark], the Bellman's chart is, delightfully, entirely blank. This was much appreciated by the crew, who found it 'a map they could all understand'" (2005: 338). The efficacy of an analysis based solely on blank sheets is, however, something we might wish to challenge!

On top of the question of what might reasonably be termed the landscape is the further issue in many cases of the likely actions and reactions of our competitors and how they might intend to move their own offerings as well. I will return later to the ways in which we may be able to find useful insights in dealing with such a complex, interactive and path-dependent situation.

Choices, Decisions and Action

Weick, amongst others, reminds us that in a managerial context there is almost always an issue of action as well as understanding. The most common way of representing this analytically is a time sequence:

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[4]Some have claimed that in his book he "straightforwardly plagiarizes Miroslav Holub's 'Brief Thoughts of Maps'". (http://hdl.handle.net/2381/3745) but Weick himself claims imperfect memory and archiving rather than any dubious intent (www.ephemeraweb.org/journal/6-2/6-2weick.pdf), and some of us suspect another academic descent into the grey world of asserted plagiarism. I once found myself on an examination appeals committee where the critical plagiarism case revolved around a single missing quotation mark. However, we should not underestimate the possible consequences of such accusations in certain cases; see the Jonah Lehrer case covered later in this book.

- choices: in which the discrete choices or options are identified;

- decisions: in which various forms of analysis are conducted to enable a particular choice to be made;

- action: in which action is taken to implement the choice which has been made.

Throughout this book we will encounter a significant number of limitations with this particular way of understanding what is going on. In some cases there are analytical approaches which can at least ameliorate these limitations; in other cases beyond recognising at least analytically speaking there is little we can do except recognise the limitations of a particular analytical framework being used.

Generally speaking the basic issue is that to conduct pretty much any useful analysis, the choice or action under consideration in both space and time. But any particular action is but one in a stream of actions through time and each such action can have direct and indirect consequences outside the particular analytical frame. It was for good reasons that A.J.P. Taylor suggested that it was the way the rail timetables for the mobilisation of the various armies were constructed that meant that there was no going back!

In his 1969 book *War by Timetable*, Taylor examined the origins of the First World War, concluding that though all of the great powers wished to increase their own power relative to the others, none consciously sought war before 1914. Instead, he argued that all the great powers believed that if they possessed the ability to mobilise their armed forces faster than any of the others, this would serve as a sufficient deterrent to avoid war and allow them to achieve their foreign policy. Thus, the general staffs of the great powers developed elaborate timetables to mobilise faster than any of their rivals. When the crisis broke in 1914, though none of the statesmen of Europe wanted a war, the need to mobilise faster than potential rivals created an inexorable movement towards war. Thus, Taylor claimed that the leaders of 1914 became prisoners of the logic of the mobilisation timetables and the timetables that were meant to serve as deterrent to war instead relentlessly brought war.

It will not, of course, come as surprise that a number of other commentators have contested A.J.P. Taylor's interpretation: not least because he was a vocal critic of the then current strategy of MAD (mutually assured destruction), which formed the rationale for nuclear deterrence.

In the less cataclysmic world of business decisions, however, it remains true that individual decisions are almost always to be seen within the context of a

sequence of choices and interventions both within and also outside the organisation. Inside the organisation Nils Brunsson (1982) suggested in his research that one of the only things one can assert is that decisions are very rarely made at the point at which they are formally endorsed. After all, the first rule of organisational politics might be said to be to canvass support well before the formal decision. Indeed, in the research we (Paddy Barwise, Paul Marsh, Kathryn Thomas and myself) undertook on the nature of strategic investment decisions, we noted that in some cases key project sponsors had built in broad outline commitments in plans that had been approved one or more years earlier.

Rationality in Practice: Simplification Approaches

Another key aspect in interpreting the process of decision making is the extent to which the complex cognitive structure that underlies a full picture of any specific choice means that in practice a simplification approach such as that of "bounded rationality", as defined by Herb Simon (1991), is required. I note two particular strategies.

First, that of simplifying the structure of the choice map itself through some form of modularisation: we can in principle modularise in either or both space and time. There is an implicit assumption that in doing this the interactions that are being ignored are second order compared with those retained in the analytical framework.

Second, an approach based on a particular process of decision making employing so-called procedural rationality rather than more complex substantive rationality. In its simplest form procedural rationality requires us to start by focusing on ends or objectives and then gradually and consistently moving towards the specific current choice. In its more complex forms there is some form of check-list which we are required to follow. It should, however, be noted that it is in principle an empirical question whether particular decisions derived from a rational procedural approach are consistently "better" than those generated by other often less systematic procedures.

However, we need to recognise that this particular way of simplifying the analytical task embodies various assumptions about the nature of the choices themselves and indeed the role and form of analysis.

In two key papers, Brunsson (1990, 1993) went further in his analysis. In one paper he argued that organisational decisions sometimes play one or more of three other roles: mobilising organisational action, distributing responsibility or providing legitimacy. Different roles imply different designs of decision processes, different usages of information, different costs

and different needs for making decisions at all. The degree of rationality in decision processes tends to vary according to the roles adopted. High degrees of rationality can be interpreted as attempts to prevent action, evade responsibility or support organisational legitimacy in a complex environment. In the other paper, he argued that irrationality is a basic feature of organisational behaviour. Organisational decision making tends to be irrational, and organisational ideologies bias organisations' perceptions. Much effort has been spent on prescribing how organisations should achieve more rationality. However, rational decision making affords a bad basis for action. Some irrationalities are necessary requirements for organisational actions. Choices are facilitated by narrow and clear organisational ideologies, and actions are facilitated by irrational decision-making procedures which maximise motivation and commitment.

Brunsson's focus on so-called irrationalities, which of course could also be seen as rational if we allowed a wider context to be considered that recognised clarity, co-ordination, commitment and motivation, are all essential elements in ensuring that actions taken are indeed effective. This relates rather closely to the observations made by Ed Lindblom (1959, 1979) in the field of public policy, where he argues that to achieve consensus it is often more effective to eschew an approach based on procedural rationality and focus attention on means rather than ends.

The other key assumption underlying the bounded rationality approach is that the choice process is to be seen from an analytical perspective as cognitive rather than intuitive. There has been a recent increased interest in the role of intuition in management decision making (Dane and Pratt 2007; Hodgkinson et al. 2008) and with the advantage of hindsight it is clear that the US Foundation Reports with which this chapter started did not really consider the role of the intuitive in analytical management. The specific word "intuition" is not to be found in either report but there are some illuminating comments on "intuitive" aspects of management. The most direct are:

> The critical change will be the increase in the clarification of variables that need to be considered in making decisions, the increase in the use of carefully obtained quantitative information concerning these variables, and the increase in rigorous analysis weighting and combining the variables involved. We all know that in some vague intuitive way this is what we must be doing when we make decisions now. The change I am predicting is, therefore, one of clarifying and of bringing to the surface the variables and implicit logical models our minds must be using now in decision making, and of persistently improving the logic of these models. (Bach 1959: 322)

"In Peter Drucker's words, 'The days of the "intuitive" managers are numbered.' Since the closing decades of the nineteenth century, the problems facing the businessman have become increasingly complex" (Gordon and Howell 1959: 12). This general assertion is combined with a rather vague notion of what is called "semi-intuitive":

> The management of economic resources takes place in a continually changing environment. It must try to anticipate a future that can be but imperfectly foreseen. It must not only react to past and current change but also try to anticipate future change. Imagination, the ability to make decisions on the basis of incomplete information, and a semi-intuitive skill in anticipating the future all have to be combined with the kinds of knowledge we have described. (Ibid. 1959: 68)

As will be discussed later in the book, it has become much clearer that not only does intuition play a significant part in many actual choice situations, but also that this aspect can be subjected to some degree of analytical scrutiny alongside the more cognitive approach around forms of bounded rationality.

Conclusion: Coping with Complex Rationality

So I end up with a rather complex notion of rationality, one which might, or might not:

- simplify the analytical task by either or both bounding the problem domain (in terms of space and time) and focusing attention more on a so-called rational process rather than analysis itself;

- extend the notion of rationality to include the critical factors such as commitment, motivation and co-ordination;

- focus attention more on achieving consensus around the next action to be taken rather than the long-term desired end-state.

Of course in practice I will choose to emphasise rather different elements of these three choices in different specific contexts. I now turn to the critical issues of how we might learn to operate more effectively in such an ambiguous environment and some analytical perspectives that might help us to do so.