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One case study is enough¹

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Abstract

Case studies are becoming an increasingly popular research method. However the usual justification for their use is that they provide a rich picture of a particular situation. While this is certainly true there is a problem in linking the findings to theory. This is particularly true for single case research. However the philosophical position of Critical Realism can supply just such a justification based upon the concepts of theoretical entities having causal powers and liabilities that interact as particular mechanism to explain the occurrence of events.

Key Words Single case research, Critical Realism

Introduction

Was ist das Allgemeine?
Der einzelne Fall
Was ist das Besondere?
Millionen Fälle

What is the General?
The single case
What is the specific?
Millions of cases

(Goethe (1994) p433)²

One of the key methodological issues in case based research in marketing is how many case studies should be undertaken to answer a particular research question. Any competent researcher will have undergone training in sample survey theory and will know that the larger the sample size the smaller the confidence limits will be for the estimates of the parameters of the population from which the sample is drawn. The temptation for the case researcher is to be influenced by this prescription but to argue that each case is much richer and more time consuming to research than a single respondent and so a small number of cases is an acceptable compromise.

However the key argument proposed in this paper is that inferences stemming from case research should be based upon quite different ontological and epistemological assumptions from survey research. The logical conclusion of this argument is that Goethe was right, acknowledging a certain amount of poetic licence. One case study is enough, under certain not particularly limiting conditions. We can know a great deal about the general from the specific if we know where to look and the general can be hidden in a vast number of cases if we don't. The paper begins by defining case research and then proceeds to a general discussion of epistemology and the problem of generalisability. Two philosophical schools of thought, positivism and pragmatism are then briefly described and their positions in relationship to case research discussed. It is then argued that a third school, Critical Realism, provides the most appropriate ontology and associated epistemology for determining the number of cases required and one that can be used to justify single case research.

Case Research

² I am grateful to Stefanos Mouzas for pointing out this apt quotation.

More and more researchers in marketing are using case studies despite the overwhelmingly positivistic turn of the subject, especially in the US. But what is case research? Yin, who has written several much quoted books on the subject, sets out the defining characteristics of case research as follows: "A case study is an empirical enquiry that: investigates a contemporary phenomenon within its real life context especially when the boundaries between the phenomenon and context are not clearly evident" (Yin, 2003; p13). It is somewhat disappointing to note that in a previous edition of the book the phrase "and in which multiple sources of evidence are used" (Yin, 1989; p.23) was included but now no longer appears. For me this is the most important characteristic of case research. Moreover I would extend it to include not just the output as evidence but also the process. Case research should be about "peeling the onion". Concentration on a case allows researchers to go back to the research site time and again, after analysis and reflection, to test their understanding of what they are researching.

I would also argue that Yin misses out on another crucial attribute of case studies. "Case studies take as their subject one or more selected examples of a social entity...." Hakim (1987) p.61. A case is case of something. It is simply one or more instances of a phenomenon that has been or can be researched. Case research is therefore also implicitly about sampling and sample size and hence the issue of whether one is enough arises.

Qualitative research and case research and are often conflated (for example in Bonoma (1983)) and it useful to distinguish between them. Qualitative research could, at its simplest, be defined as any research that produces qualitative data; anything that does not have a number attached to it. However in practice it has come to mean so much more than that. "It is, at best, an umbrella term covering an array of interpretative techniques that seek to describe, decode, translate and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world (Van Maanen, 1983, p.9).

If one accepts Van Maanen's view then there is an argument for including case research within the very large domain claimed by qualitative researchers. However I would argue that while case study research largely yields words and not numbers this is because of the social phenomena we research. In principle there would be no epistemological problem with a case study comprising entirely quantitative data. In the physical sciences that is what can happen in, for example, high energy physics and astronomy. Phenomena are studied at the level of the presenting data until their event characteristics are known and then other quantitative measuring techniques are devised to try to understand why they occur. However in social research in depth exploration yields, at best, qualitative data. It is how those data are used that sets case research apart from mainstream qualitative research.

Epistemology and Generalisability

The justification for using a single case can only, I argue, be based upon a defensible epistemological position. Epistemology is the study of the ways in which we can make claims about the world. It is concerned with the

nature and scope of knowledge, how it is produced and justified and notions such as truth, validity and reliability.

Monsieur Jourdain, a character in Moliere's *The Bourgeois Gentleman*, was amazed to discover "I have been speaking prose all my life, and didn't even know it!". Similarly many researchers across all disciplines who research and publish the results may be surprised to learn that they are implicitly, and by default, adopting an epistemological position. Frequently this is a simple commonsense approach but in matters of philosophy what seems obvious is not necessarily defensible. The socialisation we undergo as both individuals and researchers leads us too often to accept the taken for granted and not question the most basic aspects of the assumptions we make in carrying out research. Indeed part of the power of any paradigm is that we accept certain basic postulates. Not having to question or defend them allows us to carry out research more efficiently but perhaps less effectively.

At the heart of the single case issue is the concept of generalisability. Research is only worthwhile to the extent that it is comprehensive and general, leaving aside what those terms might mean in this context. What we want ideally is theory that will apply and is "true" everywhere and all the time. Clearly this will never be possible but the closer we get to the ideal the better.

However different epistemological positions approach the issue of generalisability in different ways. In the remainder of the paper I set out three alternative epistemological positions and discuss whether any of them can be said to offer a justification for a single case on the basis of their approach to generalisability. The three positions are positivism, pragmatism and critical realism

Positivism

Positivist researchers³ could never accept that one case is enough if they agree with the basic tenets of their espoused epistemology. Burrell and Morgan point to key aspects of the approach that has moulded the current positivist schools; "...searching for regularities and causal relationships between (its) constituent elements" (Burrell and Morgan, 1979, p. 5). Certainly the former is a major plank of the positivist platform though the latter is certainly contested and for good reason.

Regularities imply that large numbers of data points are required. Clearly one does not meet that criterion. How can you generalise from one case? However the rest of this section sets out reasons why a positivist epistemology is generally problematic and certainly not the only way to decide whether one case is enough.

Empirical regularities, generalisations or law-like relationships have acted as very powerful engines for the growth of positivist views in the physical sciences. The existence of a regularity provides three major benefits. The first is that it can be useful knowledge. It can be used in practical applications without reference to any underlying theory. For example the uniform expansion of mercury in relationship to temperature change provides the basis for a thermometer. While such regularities are less common in the social sciences in general and marketing in particular they

³ For a brief review of the various positivist schools see Easton (1998).

do exist as demonstrated by, for example, Andrew Ehrenberg's work over several decades (Ehrenberg, 1995). Knowing that average frequency of purchase is generally close to a constant in many product fields can be very helpful in thinking through appropriate marketing strategies.

Similarly the notion of a sales response function assumes some sort of regularity and it may not be important to know why sales increase with increased advertising but enough to know that it does so within certain margins. This is termed the black box approach to practical utility.

The second benefit is that regularity in terms of events makes it more likely that there is regularity with respect to the mechanisms that cause such events to happen. A simple model that provides one level of explanation of the gas laws in physics envisages gaseous molecules as perfectly elastic balls that collide with one another and with the walls of the container thus exerting pressure and reacting to increased temperature by increasing their average velocity. In the same way it would be possible to look at the mechanisms that cause marketing regularities to occur.

Thirdly, regularity also allows positivists to believe that they can make causal statements, as suggested by Burrell and Morgan. If two events occur together regularly then one can be said to explain the other. In cross sectional data, which is the most commonly available, the occurrence of two events at the same time may be regarded as evidence of an explanation. Gas vessels at higher temperatures exhibit higher pressures than those at lower temperatures. Large firms enter into long-term buyer – seller relationships more than small firms therefore size may be adduced as the reason for, and explanation of, use of relationships. More convincingly longitudinal data allow researchers to make if – then statements. If advertising is increased then sales will rise and the increase in advertising can then be regarded as the cause. Causal relationships are inferred directly from regularity of correlation.

However this simple and elegant formulation has any number of problems. The first of these is a practical one. It is often difficult to experiment sensibly in social situations and hence causal if - then sequences are difficult to research. In practice the simple but flawed solution is to carry out cross sectional studies where correlations may be observed but also where the causal sequence has to be assumed. The second problem is that the complexities of the social world mean that any theory must include a large number of variables that have to be measured. But it is almost always the case that there are some variables that are omitted from the theory. This is one of the Achilles heels of positivist research. One of the variables that has not been measured may have caused the correlational regularity to have occurred giving a spurious result.

A third problem is that the demonstration of regularity requires many data points. In a closed physical system it quickly becomes obvious that two variables correlate. Where there are many measured variables to be correlated then large data sets are required. This may not be a problem if the data are secondary in nature as in scanner systems data from supermarkets. However much of this kind of research requires specially designed instruments and scales and is expensive to obtain. Rarely are populations researched; samples are required. This brings a whole raft of new problems to do with inferential statistics. These problems make the

lives of positivist researchers difficult though not impossible. Time series data, testing for all possible causal variables and using large and truly random samples can all help.

The fourth, and most important, problem is that constant conjunction of elements or variables is not a causal explanation or indeed an explanation of any kind. It is simply an atheoretical statement about the world. Price reduction is followed by sales increase is not an explanation. It doesn't answer the question why it simply tells us what had happened? Nor does the statement that a positive attitude towards a brand is correlated with experience of that brand. It is not what theorists are looking for.

Ironically the requirement for a causal sequence of events provides a reason for accepting the argument that one case is enough. Logic demands if there is a causal sequence it must occur in every case. If it doesn't this is tantamount to saying that other variables are involved which have not been measured and causality, even in the limited terms required in positivism, is absent. So a single case can disprove but not prove positivist regularity. "...once a theory is disproved by the discovery of a single refuting instance, it should be eliminated from the body of science (Leong, 1985, p. 24). On the other hand it might strengthen the argument for the existence of a regularity if the case chosen is an extreme one where it might be expected that the regularity would break down.

A number of writers on case research method tend to take a positivist position without perhaps realising it. For example Eisenhardt (1989) has written one of the most widely cited papers dealing with case research. Yet her approach is implicitly positivist. Her advice on the number of cases to be used is "Finally, while there is no ideal number of cases, a number between 4 and 10 cases will usually work out well" Eisenhardt (1989). The justification for this statement is based on her experience with case research and is implicitly about increasing numbers as a way of improving correlations.

Ragin (2000) uses an intermediate approach to case analysis. He adopts what he calls a configurational approach based on the use of combinatorial logic. "The logic of the case is fundamentally configurational. Different parts of the whole are understood in relationship to one another and in terms of the total picture or package that they form" Ragin (2000, p68). Multiple qualitative case studies are examined and nominal or categorical variables are created for each case e.g. high vs. low market share, UK vs. Germany. Each possible combination of all these variables is regarded as a configuration. The presence or absence of particular configurations in the data set leads to holistic theories of the phenomena. However this is clearly still positivist in tone even if the numbers of cases are small, the variables categorical rather than interval scaled and emphasis is placed on the combination of variables rather than their independence as is the case with traditional linear statistical modelling.

Pragmatism

The naïve pragmatist case can be summarised in the following way. Clearly, in order to counter its low statistical representativeness a case study must offer something else. The logic of generalisability must be totally different. A single case study must be able to stand on its own. The

justification that is frequently used is the depth and comprehensiveness of case data. A case study will normally be very much more structurally complex and contain far more data at the level of the unit of analysis than the equivalent case in positivist research. The latter would typically involve answers to some tens of questions or scale items while the former might run to several hundred pages of interview transcripts and documentary evidence as well as the implicit knowledge in the researcher's head. There is obviously a contrast in terms of depth and breadth in relationship to the basic unit of research (e.g. firm, person, role, innovation). This logic leads inexorably to multiple sources of evidence. Thus, for the naïve pragmatist case research involves one or a small number of social entities or situations about which data are collected using multiple sources of data and developing deeper, thicker, more holistic "descriptions" as the end result. Descriptions are in quotation marks because there can be a variety of outcomes from case research, each of which can, and has been, used as a justification in PhD theses and published papers (Feagin et al, 1991).

The first of these relies on the richness argument. Descriptions may provide a vivid and detailed picture of a phenomenon (buying a consumer durable) that had not been described at that level of detail before. The second justification relies on novelty, the discovery of a phenomenon that had not been known before and would not have been discovered by other means (shopaholics). A more substantial rationalization occurs when concepts, frameworks or theories are tested in great depth and detail (agency theory). Of course this is simply one case so generalisability of a theoretical deduction is problematic. This is often the argument used for case research being used before moving on to large-scale data collection. Another option is to argue that the research provides a contribution to knowledge but in an under-specified way. Since knowledge in any field is often of varying forms and unintegrated it may be argued that it is asking too much of one researcher to claim to complete the jigsaw (trust in buyer – seller relationships) with their piece of research. Case research may also be justified on the grounds that the research reveals something of great practical use, albeit in a limited context. Action research (creating a key account management system) might fit that bill.

Generalisation can also be defended via the route of further research in new and different contexts. This result was obtained in a retailer in the US, would it also occur in a manufacturer in Germany? Arguments of this kind imply that the research is exploratory and that the results can be further confirmed by doing not more of the same but more that is different. While this may be an acceptable argument it seldom works in practice. There are relatively few instances in research in marketing where case research has been extended to a range of different contexts and the results published on a continuing basis. One reason why this may be rare is because replication, even in different contexts, is valued less highly in academic circles than novelty of any kind.

However pragmatism has existed since the turn of the last century as a formal school of philosophy and it has something to offer naïve pragmatists. It can best be understood by examining how it stands in relation to other theories of truth, particularly correspondence theory. Both positivism and, as I shall argue later, Critical Realism assume a correspondence theory of truth. According to this theory statements of

any kind, included theoretical ones, are judged by their correspondence to facts or, more generally, the "real" world, where however the concept of real is a contested philosophical issue.

By contrast the original pragmatists, such as Dewey, James and Pierce argued that it is the seeking for truth and, most importantly, the uses to which truth is put that are important. Rorty (1991), who is labelled a neopragmatist, went a step further. He argued, "Pragmatists think that the history of attempts to isolate the True or the Good, or to define the word "true" or "good", supports their suspicion that there is no interesting work to be done in this area. Ghiraldelli (2000) also points out that "The classical pragmatists say less about correspondence and coherence and say more about the idea that a theory of truth, to be legitimately constructed, should look to the idea of experience – our behaviour in life. Experience must be used by someone to judge if a belief is true or false." How is this to be achieved? ".....(it) is more useful to believe a statement upon which we have consensus than to believe statements without defenders, or without good defenders, or without at least one *reasonable* defender in our community."

Thus pragmatism espouses usefulness but only specifically and in context. Truth is what is useful to people working in that field, what helps the research project, what can be accepted and defended, what is open to criticism and renewal. It is a linguistic convention, a sort of shorthand that helps us to achieve our various objectives when researching and theorising.

The difficult, but not impossible, task for neopragmatists is to argue that what can be learned from a single case study can only be justified in terms of its usefulness in promoting the communal project, academic or societal, in which they are involved. In each of the outcome justifications cited above it is possible to see how neopragmatists could make such a claim. For example discovery of a new phenomenon is likely to be useful in many different ways in many different settings but also useless in others. Context is all.

Critical Realism

Basic assumptions

In a previous work (Easton (1998)) I argued that the school of philosophy described as Critical Realism offers a defensible rationale for the use of case study research. This was based upon the ontology of Critical Realism which assumes that events are caused by processes and structures in the world that are, for the most part, invisible yet real. It is clear that it espouses a correspondence theory of truth. The causes of events can only be explained by reference to the interplay among these forces. Case studies, I argued, are admirably suited to the task of the teasing out of these interplays.

There are many differing views about Critical Realism (Bhaskar, 1978; Lawson, 1997). In this paper I will be relying largely upon Andrew Sayer's work (Sayer, 1992). He describes what he regards as the 8 key assumptions of Critical Realism in the following extract from his book.

- "1. The world exists independently of our knowledge of it.
2. Our knowledge of the world is fallible and theory-laden. Concepts of truth and falsity fail to provide a coherent view of the relationship

between knowledge and its object. Nevertheless knowledge is not immune to empirical check, and its effectiveness in informing and explaining successful material practice is not mere accident.

3. Knowledge develops neither wholly continuously, as the steady accumulation of facts within a stable conceptual framework, nor discontinuously, through simultaneous and universal changes in concepts.

4. There is necessity in the world; objects – whether natural or social – necessarily have particular powers or ways of acting and particular susceptibilities.

5. The world is differentiated and stratified, consisting not only of events, but objects, including structures, which have powers and liabilities capable of generating events. These structures may be present even where, as in the social world and much of the natural world, they do not generate regular patterns of events.

6. Social phenomena such as actions, texts and institutions are concept dependent. We therefore not only have to explain their production and material effects but to understand, read or interpret what they mean. Although they have to be interpreted by starting from the researcher's own frames of meaning, by and large they exist regardless of researchers' interpretation of them. A qualified version of 1 therefore applies to the social world. In view of 4-6, the methods of social science and natural science have both differences and similarities.

7. Science or the production of any kind of knowledge is a social practice. For better or worse (not just worse) the conditions and social relations of the production of knowledge influence its content. Knowledge is also largely – though not exclusively – linguistic, and the nature of language and the way we communicate are not incidental to what is known and communicated. Awareness of these relationships is vital in evaluating knowledge.

8. Social science must be critical of its object. In order to be able to explain and understand social phenomena we have to evaluate them critically." Sayer (1992, p5).

The first point sets out the basic assumption of any realist ontology. There is a real world out there. There is no way that such an assumption can ever be proved or disproved as social constructivists, pragmatists and even positivists are ready to argue. However we can add a rider to point 1 by arguing that this assumption is performative. In other words we behave as if it was true, as if the world was real and in general this behaviour works, especially for the physical world. For example no constructivist would dare to say any longer that the world is totally socially constructed since that is clearly a realist statement.

Points 2, 3, 6 and 7 temper the first point and accept some of the social constructivist arguments. Put in an extreme form they state that our world is, of course socially constructed, but not entirely so. Reality kicks in at some point. We can socially construct a world in which we can fly but put it to the test and we find that we can't. This stricture applies to the processes of research as well as everyday life.

In particular Critical Realists distinguish between the empirical, the actual and the real. The empirical is what we measure. The actual is what occurs whether we measure it or not and this distinction implies that there will be a gap between the empirical and the actual. The real is what exists and

which causes the actual to occur. All of this provides us with a warning about the difficulty of discerning what is real beyond what we can sense and that our explanations are essentially fallible. Points 4 and 5 allow Critical Realists to begin to develop a causal language in order to provide causal explanations.

Causal Explanation

"To ask for the cause of something is to ask 'what makes it happen', what 'produces', 'generates', 'creates' or 'determines' it, or, more weakly, what 'enables' or 'leads to' it". (Sayer 1992, p104.)

But what is it that needs to be explained? Outcomes or events are what we research, that is the external behaviours of people and things as they occur or as they have happened and usually as they are reported rather than observed. In particular it is processes, including those that reproduce social order and institutions, and changes that researchers seek to understand. Even geologists study the processes by which the apparently unchanging rocks came to be what and where they are today.

Objects, or more generally entities, provide the basis for an explanation. We choose the nature of the bodies we wish to research and these can be firms, people, attitudes, inventions etc. The key point is that we must have reason to believe that such bodies have powers or liabilities to cause events to occur. A power may be physical or social. In general sellers have the power to persuade buyers to buy. A liability may be regarded as a susceptibility to the action of other bodies, for example buyers' physiological needs make them liable or susceptible to advertising for food.

Objects will usually be structured. Structure is defined as "...a set of internally related objects or practices" (Sayer 1992 p 92). An organisation as a body may be considered to comprise a series of other objects (departments, people, processes, resources) all of which can affect one another. Structures can occur at any and all levels of aggregation; for example from the societal to the neurological; from the universal to the subatomic.

Structures are nested within structures. For example actors can be organisations that have departmental structures and relations and within them, individuals who have particular characteristics such as gender and psychological structures. Gender forms part of the internal relations of a person if it is to be regarded as a necessary part of the structure that is being built.

However such hierarchies do not imply simple reductionism. It is clear that higher level structures can have emergent properties that are not simply the aggregates of structures at the lower level. For example firms have properties that extend beyond those of a simple agglomeration of their employees. In choosing a level of analysis one accepts that ready access to other levels is not necessarily easy.

Explanation cannot occur unless we make assumptions about the causal relations between objects and these are of two kinds. Critical Realists argue firstly that necessary or internal relations exist among objects. As Sayer (1992, p 89) writes

"...the relation between a slave and a master is necessary, in that what the object is is dependent on its relation to the other; a person cannot be a slave without a master and vice versa".

In terms of marketing a buyer cannot be a buyer without there being a seller and without an exchange taking place (Easton 2002). Necessary relations are not tautologies. The relation between an object and the events it helps to cause is a rich and varied one. Thus the elements of the relation are not simply given by the mutual definition. Buyers and sellers have many ways of relating to and defining one another's roles. We can now see that bodies are defined in terms of their necessary relations. A seller must be able to take part in an exchange with a buyer. For complex bodies there may be any number of relations that define both it and the other bodies to which it is related. None of these ideas are likely to be particularly surprising. When we research we build up theories that comprise a number of concepts that refer to particular bodies and we specify the relations among them to create a theory or theoretical framework. But it is clear that in doing so we are relying on the relations among bodies to hold the whole edifice together. In other words the definitions become referential and interdependent.

Contingency and Context

By contrast an external or contingent relation occurs when "It is neither necessary nor impossible that they stand in any particular relation" Sayer (1992, p89). Put at its simplest this distinction recognises that bodies can have some relations that will affect one another and some that may affect one another. A government might affect an exchange or it might not. But there is no necessity because the relation is a contingent one. But contingent relations are different from necessary relations only in the nature of those relations. ".....the contingently related conditions are never inert, but are themselves the product of causal processes and have their own causal powers and liabilities" (Sayer (1992) p140.)

It is also important to distinguish between context and contingency. The former offers a simpler, less well-articulated version of the latter. Context is simply "relevant circumstances" so it is very general and says little about the relationship between the focal object and the environment except that it is relevant. The positivist approach to context is to treat it as a series of variables that are external to the key correlational model that is being proposed as invariant (Zeithaml et al , 1988). A classic method of treating such contextual variables is to create dummy variables for particular industries, periods or products. Such variables parameterise the equations and estimate how the equation fits differently in different contexts. But this does not constitute an explanation since the variables used are simply qualitative indicators that certain regularities obtained in the set of data. Knowing that one industry has a somewhat different equation than another gives few hints as to why that might be.

Pawson and Tilley (1997) offer a more realist approach. They suggest that any outcome is a result of the combination of a particular mechanism and a particular context. Mechanisms "refer to the choices and capacities which lead to regular patterns of social behaviour". "Context refers to the spatial and institutional locations of social setting together, crucially, with the norms, values and interrelationships found in them". While this is closer to a Critical Realist approach it is still not equivalent. For example it looks for regularity in the outcome rather than in the mechanisms leading to that outcome and in doing so harks back to a positivist view. In

addition the context is described in a somewhat more fine-grained form than Ragin (1992) but is rather specific to their own arena of criminology evaluation and offers little in the way of an articulated view of how context "works" or helps to explain.

The key difference between context and contingency for a Critical Realist is that contingency implies that there exists a body with causal powers that may affect a particular situation. In practical terms this requires an answer to the question "what is it about the contingency that affects the necessary relations that are being studied?" For example if the existence of a competitive brand is thought to affect a pattern of exchange for a focal brand then the way in which it does so (e.g. by being both perceived and evaluated as a substitute and not a complement) has to be specified and researched.

Mechanisms

Mechanisms are at the heart of causal explanation but also afford a constant source of debate. "On the realist view, causality concerns not a relationship between discrete events ('Cause and Effect'), but the "causal powers" or "liabilities" of objects or relations, or more generally their ways-of-acting or mechanisms" (Sayer (1992, p104)). Perhaps the simplest way of regarding mechanisms is that they are ways in which structured objects, and their powers and liabilities, combine in order to act and cause particular events. "When activated, particular mechanisms produce effects in "conjunctures", which may be unique. According to conditions, the same mechanism may sometimes produce different events, and conversely the same type of event may have different causes" (Sayer, 1992, p116)).

I would argue that an important aspect of mechanisms in this tradition is that they offer a rich source of variety for explanation. They need not be linear additive as required by statistical models or as in the box and arrow diagrams that so beloved of many writers. They can be linguistic in nature and metaphorical (symbols trigger emotions, breaking B2B relationships involves different mechanisms analogous to the breaking of a physical bond (Easton and Araujo (1986)). Other possibilities include more sophisticated models such as catastrophe and complexity theory. The possibilities are endless but clearly need to fit the particular situation in a way that helps.

In a single case, it is both possible and necessary that a number of different causal explanations are put forward and researched. Pawson and Tilley (1997), for example, suggest 8 different mechanisms that might account for the finding (admittedly an observed regularity) that placing CCTV cameras in car parks reduces car thefts and damage. In a similar way it wouldn't be difficult to come up with a number of different mechanisms that might be at work in advertising increasing (or decreasing) sales.

It then becomes necessary to decide which of these mechanisms appears to be working in the particular case. It will usually be possible to collect data that enables the researcher to decide between the alternatives. For example in the advertising case, if the mechanism is thought to be the influence of advertising on retailers rather than customers then one might collect data on retailers' attitudes and their subsequent behaviours, e.g.

increasing shelf space and promotions in the expectation of a advertising campaign.

In this way theory is developed or progressed. In the latter case a theory, model or concepts are brought into the explanation at the outset and therefore the approach could be described as, at least partly, deductive.

In exploratory work theory may be induced from the data.

To summarise Critical Realist causal explanation I paraphrase Sayer; Objects (Xs) having structures (Ss) necessarily possessing causal powers (Ps) and liabilities (Ls) under specific conditions involving other objects with powers and liabilities (Os), within particular mechanisms (Ms) will cause events (Es) to occur (or not occur).

Critical Realists and the Single Case

The knowledge claims of case study research are, as argued previously, often attacked on the grounds of lack of generalisability. The argument runs thus: we can accept that you have made a very convincing job of explaining the rather complex situation you have been researching, but how do we know your case situation was representative? How can you generalise from this one result? Yin (1989, 1994, 2003), in each edition of his books on case research, argues that "...the mode of generalization is "analytical generalization, in which a previously developed theory is used as a template with which to compare the empirical results of a case study." However he also adds in the 2003 edition " If two or more cases are shown to support the same theory, replication can be claimed". Clearly Yin's approach seems to owe much to positivism with its emphasis upon deduction and replication.

What, then, is the argument for generalising from a single case? Critical Realism can come to the rescue here. A causal explanation in a single case must be based upon a theory structured in terms of what comprises a Critical Realist causal explanation as described above. The best explanation, i.e. the one most consistent with the data, is what is being sought.

However generalisation of any kind is not possible unless there is some invariance in the world. If all events and their causes are unique then we could never have theories that work. And by unique I mean substantially and not trivially unique since in some sense every event in the world is unique. Clearly we do not look to explain every event in all its detail. We would be happy if we could say what, in general, caused this person to buy this product under these circumstances and ignore details like whether he or she paid by credit card or cash when this wasn't either what we were interested in or a major causal factor.

The invariance for positivists is between events, hopefully in time sequence. Invariance for Critical Realist has to relate to elements of what they claim are the constituents of a causal explanation. Again Sayer offers some suggestions " Abstract theories analyse objects in terms of their constitutive structures, as parts of wider structure and in terms of their causal powers. Concrete research looks at what happens when they combine " (Sayer, 1992, p116).

If a defensible causal explanation has been produced in one case then the constituents of that explanation provide a basis for developing theory beyond that case. This might mean, firstly, that the identification of the bodies concerned has been useful and can be used in other circumstances.

Secondly, the structures of the bodies have been elucidated to some extent and relations among them established. Sayer puts it this way "Structures can therefore be said to be 'invariant under certain transformations', that is, they can continue to exist while their constituents undergo changes in attributes which are not relevant to their reproduction" (Sayer 1992 p94). Thirdly, some of the powers and liabilities of those bodies have been identified and shown to be present in these circumstances and fourthly key contingent relations have been shown to operate and necessary relations confirmed. Fifthly certain mechanisms, the essential components of a theory, have been shown to operate. And lastly in all cases there is evidence to support the conclusion that the explanation holds. These achievements would all represent significant contributions to knowledge and a basis for future research. They also help to decide whether one case study is enough. The following conditions suggest themselves. Where there is heterogeneity, or even uniqueness, of events then any kind of constant conjunction is unlikely to be detectable and seeking a credible casual mechanism is the only way to advance theory. Such heterogeneity may however be caused by the impact of a large number of powerful and active contingent relations and so working through the particular ways in which they operate in a single case will be not be as rewarding as using several cases. Explanations can be more or less "deep" and "wide". They can incorporate a number of different emergent levels (individual, group, firm) and a number of different entities. In general deeper and wider explanations are to be preferred in order to promote theory development in the ways described above but there is always likely to be a trade-off with available research resource, access and theoretical complexity. Relationship with existing theory is important. Where there is little then one case can be enough to begin the process of theory creation. Where there exists well articulated theory, particular aspects of that theory, the entities, their powers, the nature of the relationships and the overall mechanisms, can be targeted and attempts made to elucidate one or all of them in a single case. More generally, a pragmatic approach can be adopted. If the objective is to advance theory then one should be able to say which theoretical aspects does one wish to address and how will that be served by undertaking one case study compared with many.

Conclusions

Goethe was right. He was arguing, I believe, that it is possible that understanding one instance in depth can offer universal understanding that study of millions of cases cannot. Being a poet he exaggerated for effect but the sentiment is clearly one that I would agree with. What I hope to have demonstrated here is that Critical Realism offers a philosophical justification for a single case study and a structured way of arguing for the generality of the result. As with all philosophical approaches it cannot be proved to be the "right answer". It depends on whether you accept its basic assumptions and that acceptance can be based on any number of things. In my own case it is because (a) I think that this is how the world is (b) even if it wasn't, that is the way I behave anyway (c) it is better than the alternatives and (d) it is a well thought through and relatively coherent perspective on the world.

However I have no problems with many kinds of positivist research. Indeed I would argue that the sort of regularities discovered in the former tradition can complement case research, not by trying to generalise from an exploratory case but by using a case to explain why the regularity occurs. Similarly, I believe a pragmatic approach to theory development is useful provided the theory is grounded in a Critical Realist approach. Finally in defending the extreme case I hope I will convince one or two people that case research in general has earned its place in the panoply of other research methods available to us as researchers in marketing and that Critical Realism as a basis for choosing and defending research methods decisions is useful.

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