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POLICY LEARNING VIA CASE ANALYSIS: TOWARDS A MORE SYSTEMATIC APPROACH

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Abstract

The case study method has lost its lustre over the years and is now considered old-fashioned rather than fashionable. Yet, in practice, it still looms large in social science research and features prominently in graduate training, notably in the area of administration, both private and public. Longevity should not be equated with renewal, however. The technique, as applied in management settings, has experienced virtually no evolution. There is considerable scope for rendering its use more systematic, particularly on the policy front.

Social science research methods have experienced dramatic growth in recent years. There has been a proliferation of new techniques and substantial refinement of old ones. While some disciplines within the field have seen faster progress than others, none has lagged significantly behind. Across the board, one can observe a heightened sense of scientific consciousness which manifests itself throughout the research process. This does not necessarily amount to a willingness to embrace unconditionally the positivist approach — indeed, alternative paradigms continue to thrive: (e.g. interpretive social science and critical social science; Neuman, 2000) — and quantitative (as distinct from qualitative) tools of social inquiry. Nevertheless, the quest for methodological sophistication, broadly defined, has gained considerable momentum.

Neither business nor public administration have diverged from this pattern. The former has been in the forefront of the efforts to reinforce the scientific foundations of social research and the latter has been moving in that direction (O'Sullivan, Rassel and Berner, 2002), albeit unevenly (at a healthy pace in the United States, but in a more restrained manner elsewhere). In this area, however, the attention lavished on new techniques has arguably led to a loss of interest in old ones. Specifically, the case study method, which still qualifies as an essential investigative and pedagogical tool, has effectively been relegated to the analytical periphery.

That is not to suggest that this time-honoured approach has been completely abandoned. Quite the contrary, it continues to be relied upon extensively by scholars in the field of administration, in research contexts and in the classroom. In the public policy domain, for example, one of the most admired and pedagogically useful explorations is the (recycled) dissection by Allison (Allison and Zelikow, 1999) of high-level American decision-making during the Cuban missile crisis. In a very inspiring case study, of the purely qualitative variety, Allison has endeavoured to explain strategic adaptation in a bureaucratic setting in terms of

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three conceptual models: the Rational Actor Model, the Organisational Behaviour Model and the Governmental Politics Model.

The problem is not one of abandonment, but rather methodological neglect. Academic business and public administration remains heavily dependent on cases for the generation of theoretical insights and training of post-graduate students (Gummesson, 1991). Indeed, for training purposes they are virtually indispensable, as well as superior to any other technique. The difficulty lies in the fact that conducting case-based research is essentially viewed as an art allowing for a high degree of improvisation. One does not need to follow any established procedures and is not bound by any externally-imposed rules. The open-ended nature of the agenda may well be a cause of professional satisfaction, since it brings a sense of freedom and provides a challenge, yet it may also be a source of frustration (for students, even confusion) and detract from the scientific value of the exercise (science assumes logical structure and maximum transparency, and is not consistent with idiosyncratic practices and ambiguous findings).

The corollary is that the practice and teaching of the case study method should be placed on a firmer footing. The teaching dimension merits particularly careful attention because it is simply inappropriate to advise post graduate-level researchers to embark on a case study without any procedural (as distinct from theoretical) guidelines. The material they are expected to produce should be analysed in a standard fashion and this should be made explicit in the design phase of the project. The author has developed an approach, grounded in the ideas generated by social scientists in other disciplines and geared towards the needs of public policy students in Hong Kong, reflecting that principle. The purpose of this paper is to outline its key features.

**The Role of Theory**

Social science research normally features an interplay between theoretical propositions and empirical observations. Quantitative techniques of data analysis play an increasingly important role in the process. Given the small size of the sample (usually one or two cases), students engaged in case study work are encouraged to adopt the qualitative perspective (Shaw, 1999). Their aim should be to assess the ‘fit’ between the case(s) examined and the theory/theories driving the project. From a broader standpoint, it may be argued that case study method is a vehicle for achieving theoretical generalisation rather than statistical generalisation (Hamel, 1993; Yin, 1993; Yin, 1994; Stake, 1995; Bryman, 2001; De Vaus, 2001).

This is not to imply that case analysis cannot have a quantitative or statistical element. A case can be, and often is, dissected in a quantitative/statistical fashion. A particular region thus might be a case in a policy-oriented project. It can be described in terms of its size, wealth, average age, unemployment rate, crime rate, and the like. The quantitative manipulation of the data in such circumstances, however, seldom leads to statistical generalisation in the formal sense of the word. Rather, the objective would be to identify the relevant factors at work, combine them into a coherent whole, and place the resultant configuration in the appropriate theoretical context.

Two policy studies may highlight for students the role played by theory and quantitative
analysis in case-based research. One study, focusing on intergovernmental relationships, addressed the theoretical proposition that central government funds, beyond having the expected redistributive dollar effects, should also pave the way for new organisational changes at the local level (Yin, 1980). The basic proposition — the creation of a ‘counterpart’ bureaucracy in the form of local planning organisations, citizen action groups, and other new offices within the local government itself, but all attuned to specific central government programmes — was traced in case studies of several cities. For each city, the purpose of the analysis was to illustrate how the formation and modification in local organisations materialised after changes in related central government programmes and to show how these local organisations acted on behalf of these programmes even though they remained an integral part of local government.

The second study had a quantitative component, while maintaining an unambiguously qualitative orientation. The idea was to gain understanding into the process whereby some policy activity is implemented in a particular organisation (Pressman and Wildavsky, 1973). The process is inherently complex and involves numerous individuals, bureaucratic rules, social norms, and mixtures of good and bad intentions. Given the complexity, a qualitative case study offers advantages over an elaborate quantitative design, but there is scope for enhancing the analytical effort through the selective (yet systematic) use of statistics.

Specifically, to the extent that successful implementation can be described as a sequence of decisions, the researcher can generate theoretical insights by counting such decisions. In this case, the authors demonstrated that to implement one public works programme required a total of 70 sequential decisions — project approvals, negotiation of leases, letting of contracts, and so on. The study examined the level of agreement and the time needed to reach agreement at each of the 70 decision points. Due to the normal diversity of opinion and slippage in time, the analysis illustrated — in a quantitative manner — the low probability of implementation success in an intricate administrative setting.

Students of policy, even at the post-graduate level, are at times reluctant to embrace the notion that case descriptions should be embedded in a sound theoretical framework. They invoke claims, rooted in interpretative social science (albeit not firmly), arguably supporting the idea that researchers should merely describe cases, rather than seek to interpret them. This takes the form of the frequently encountered assertion that one should let the ‘facts’ speak for themselves and avoid imposing one’s own interpretation on ‘the facts.’ Such a stance, in addition to having dubious analytical underpinnings, is questionable on practical grounds. A description of a case inevitably entails a selection of facts. This, in turn, must be influenced by the theory/theories that one implicitly brings to bear on the facts. Moreover, when conveying the essence of a case, one needs to order the selected facts. The corollary is that describing a case is invariably a theoretical exercise and should unequivocally be recognised as such.

Theory-Driven Case Description

While, as contended, a case study can never be undertaken in a theoretical vacuum, some cases are largely descriptive, whereas others are mostly explanatory (even if drawing the line between these two categories may present a challenge in practice). Post graduate-level researchers gravitating to the former variety, normally a majority in the policy field, should be
provided with specific tools to ensure that they do not lose sight of the ultimate goal, which is to achieve a fit between theory and facts (Hamel, 1993; Yin, 1993; Yin, 1994; Stake, 1995; Bryman, 2001; De Vaus, 2001). Three such tools are potentially available to them: ideal types, typologies and time-ordered descriptions.

An ideal type may be employed as a template to direct the analysis of an actual case. The objective is to determine the correspondence between the latter and the former, given the expectation that a particular case would represent the characteristics of a particular type. The three models reconstructed by Allison for the purpose of explaining strategic behaviour during the Cuban missile crisis qualify as ideal types and his meticulous exploration of the fit between the historical facts and these constructs serves as a useful example of a theory-driven case description. A more familiar example for students of administration, albeit less relevant from a policy perspective, is the ideal type of bureaucracy as envisaged by Weber (Gerth and Mills, 1946). Using this construct as a template, a budding researcher may focus on a selected government department in order to establish how closely it approximates the ideal type. Of course, it may be appropriate to proceed from the opposite angle and employ the template to identify divergences between the case and the ideal. Repeated case studies, probably extending over a range of government departments, might thus demonstrate that empirical examples consistently diverge from the ideal in several important respects. It should be noted, however, that the ideal type remains intact regardless of the precise nature of the empirical findings from a set of cases. The ideal type constitutes a ‘pure’ idealised abstraction and, strictly speaking, is not fine-tuned whenever gaps between the ideal and empirical realities are observed.

A typology can be thought of as a set of types. The latter may be of the ideal variety or empirically derived. Again, the work of Allison serves to illustrate the concept. The three ideal types form a typology. Another well-known example is the Lindblom classification of policy-making styles. He posited that the amount of change involved and level of available knowledge were the key attributes in this context and combined them to create a typology consisting of four categories: revolutionary policy-making style, analytic policy-making style, rational policy-making style, and disjointed incremental policy-making style (Table 1). The framework as a whole, or components thereof, may be employed as a template in a case study.

Time-ordered description can be relied upon when a case is examined from a historical perspective. In such circumstances, the distinction between description and theoretical insight at times becomes blurred. Even at the micro level (notably, in preparing a biography, or an account of a policy maker’s life), a recourse to theories, whether explicitly or implicitly, is not uncommon. In dissecting policies over time — as Allison endeavoured, for example — one is almost inevitably drawn into the theoretical domain. Rather than merely advise students

\begin{table}[h]
\centering
\caption{Four Policy-Making Styles}
\begin{tabular}{|c|c|c|}
\hline
Amount of Change & Level of Available Knowledge & \\
\hline
High & High & Revolutionary \\
 & Low & Analytic \\
Low & Rational & Disjointed \\
\hline
\end{tabular}
\end{table}

*Adapted from: Braybrooke and Lindblom (1963).*
confronting the problem to clearly delineate the sequence of events, and not to be oblivious to
the interplay between historical fact and theory, it is desirable to introduce them to the essence
of narrative reasoning (Abbott, 1992; Richardson, 1995), which may assume the (‘sophisti-
cated’) form of an idiographic explanation (where the purpose is to systematically identify a
sequence of events leading to a particular outcome; Hage and Meeker, 1988).

Explanatory Research

The theoretical dimension features even more prominently in studies geared towards
explanation rather than description. Ideally, whenever this is the purpose of the exercise, the
scope of the investigation should expand to encompass multiple cases (as distinct from a single
one). The first step in the process is directed at the picture conveyed by each individual case.
Only after that picture has effectively been painted it is appropriate to embark on a comparison
of the cases. Each case should serve as a vehicle for either testing or building theories. By
proceeding in such a fashion, within a common conceptual framework, one is in a position to
use comparative case analysis to arrive at higher level theoretical generalisations, or to provide
a more stringent test of theories (Hamel, 1993; Yin, 1993; Yin, 1994; Stake, 1995; Bryman,
2001; De Vaus, 2001).

Evaluating theoretical propositions and generating them are complimentary, yet inher-
ently different, activities. The distinction is of considerable importance from a broad scientific
standpoint, both in the philosophical and methodological sense of the term. Students engaged
in explanatory case research need to face it at the initial stages of their projects, because opting
for one or the other has unavoidable practical implications. Those who prefer the less risky
strategy of theory testing — obviously a substantial majority — should be encouraged to
employ tools such as pattern matching and time-series analysis (although the latter may
arguably be viewed as a variant of the former). Those sufficiently ambitious to experiment with
theory building have to master the craft of analytic induction (Hamel, 1993; Yin, 1993; Yin,
1994; Stake, 1995; Bryman, 2001; De Vaus, 2001).

Pattern Matching

This approach to evaluating theoretical propositions revolves around a comparison of an
empirically-derived pattern with a predicted one (or with several alternative predictions). The
latter is rooted in a theoretical model, and it is that underlying construct which undergoes
case-based testing. To the extent that alternative predictions are involved, the evaluation
extends into the realm of competing theories. The form and complexity of pattern matching is
subject to considerable variation. The assumption is that the more intricate the predicted
pattern (provided it still follows logically from the theoretical structure), the more stringent
the test of a theory (Trochim, 1989).

Having predicted a particular pattern, a student would then proceed to examine a case, or
a number of cases, in order to determine the fit between the theoretical model driving the
project and policy realities. If the fit is good, the case(s) can be said to support the theory in
the same manner that a successful experiment does. If the empirical pattern does not match
closely the predicted one, however, the theoretical framework may require some fine-tuning. One problem encountered in this context is the tendency of students to go to great lengths to minimise the divergence between the case(s) and the theory. They need to be advised at the outset, therefore, that highlighting such divergences in a productive fashion is a scientifically valuable undertaking.

At its simplest level, pattern matching features one independent variable with two values (e.g. centralisation and decentralisation) and one dependent variable with two possible values (e.g. weak employee commitment and strong employee commitment). In this instance, there are four potential different patterns (Table 2). For a given case with a given characteristic the researcher could predict one of two patterns. The actual prediction would reflect theoretical considerations. The predicted pattern may have value Xa on the independent variable and value Yb on the dependent (outcome) variable. The prediction thus takes the form: If Xa, then Yb.

For example, a student may wish to explore the implications for teacher commitment of educational policy shifts from the centralised to the decentralised end of the structural spectrum, and vice versa. The assumption is likely to be, given the evolution of theories in this area, that decentralisation (whereby appointments, dismissals and promotions are managed at the local school level rather than by a highly bureaucratic, remote and top-down control system; X variable) would normally lead to strong teacher commitment (Y variable). If a decentralised management structure is symbolised as Xa and strong teacher commitment is symbolised as Yb, the prediction is: When Xa (locally-controlled staffing system) exists, then Yb (strong teacher commitment) will follow. One would also posit that when Xb (centralised system) exists, then Ya (weak teacher commitment) will follow.

The evaluation of theoretical propositions in light of policy realities, even in this simple example of pattern matching, would be more meaningful and effective if encompassing alternative theories and, by implication, an array of (different) predicted patterns. One proposition might be consistent with pattern 1, while another could correspond to pattern 3. The purpose of the case study would be to provide empirical validation for the competing claims (e.g. ‘decentralisation will lead to stronger commitment to work because effort and adjustment are observed and rewarded..... and lack of effort and poor adjustment to the school environment are punished’ versus ‘decentralisation will undermine morale, rendering staff vulnerable to local pressures and prejudices, and will result in an erosion of professional standards..... this will lead to a lack of commitment and a deterioration in the organisational climate, as well as a propensity to play politics to win favour rather than pursue professional excellence in a determined fashion’).

**Table 2. Pattern Matching for Two Variables Each with Two Categories**

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Xa</td>
</tr>
<tr>
<td>Ya</td>
<td>Pattern 1</td>
</tr>
<tr>
<td>Yb</td>
<td>Pattern 3</td>
</tr>
</tbody>
</table>

Adapted from: De Vaus (2001).
A somewhat more complex version of basically the same configuration would emerge if either of the variables was extended to include additional categories (e.g. a hybrid of centralised and decentralised staffing systems and medium levels of commitment/perform-
ance). The more values the variables can assume, the greater the number of patterns potentially predicted. For example, if both variables had three possible values, nine possible patterns could be explored/tested in any particular case (Table 3). Nevertheless, the evaluation process still entails the prediction of a specific pattern for a given case.

In some circumstances, students face even greater complexity. This is particularly true at the doctoral level. Here it may be necessary to delve deeply into the subject and display considerable methodological sophistication. The researcher thus often needs to use multiple independent and dependent variables. The overall approach is not materially adjusted to cope with the challenge, but the process is technically far more demanding. For instance, in addition to the degree of centralisation/decentralisation of the educational system as a whole (a macro variable), it might be interesting to examine the impact of the autonomy enjoyed by individual teachers (a micro variable) on their professional commitment. By the same token, teacher morale, rather than merely commitment, may be the focus of the undertaking on the output side.

### Time-Series Analysis

As indicated, this method may be viewed as a variant of pattern matching, even though it is not common practice. The logic is identical — the sole difference stemming from the fact that, rather than predicting a particular pattern for a set of theoretically relevant variables, the researcher predicts, employing theory as a guide, a particular trend or a sequence of events. In essence, the analytical effort is geared towards predicting a particular pattern of change over time. This type of pattern matching can assume one of two forms: trend analysis and chronological (event sequence) analysis (Hamel, 1993; Yin, 1993; Yin, 1994; Stake, 1995; Bryman, 2001; De Vaus, 2001).

Trend analysis focuses on the direction of change in a particular variable or set of variables. The key issue is whether the trend is upwards (gradual or steep), sideways, variable (up and down) or downwards (gradual or steep). Predicted trends can range from the very simple to the highly complex. The simplest type predicts a trend in one dependent variable. Complexity increases as additional variables are brought into play. Shifts in urban policies
might thus induce socio-economic changes at the community level on several fronts (e.g. in family size, school enrollment, turnover in commercial shops, functioning of religious institutions, and quantity/quality of the housing stock; Yin, 1982). The study may track change in such a context from a single perspective or be more ambitious in scope.

As this example illustrates, trend analysis in policy settings is often of the interrupted variety. Put another way, the researcher tends to gravitate towards situations where a specific event (normally a policy shift) takes place somewhere within a sequence of events. This enables her to examine the pattern of events before and after the interruption (or intervention). In that respect, an interrupted times-series analysis is akin to a before-and-after experimental design. Although the absence of a control group detracts somewhat from the effectiveness of the exercise in that it is not possible to control fully for other influences, a determined search for relevant information and a meticulous examination of the case(s) might provide a basis for drawing at least tentative conclusions regarding the impact of factors other than the interruption on the dependent variable(s) of interest (of course, policy-driven time-series analysis need not be of the interrupted type; it may simply predict a trend — e.g., Taiwan-style democratisation in China — that will be anticipated in a particular context).

The classic article by Campbell (1969) offers ample insight for policy students into what trend-oriented case research (in this instance, pattern matching with a simple set of data over time) entails and what it can achieve. He used the 1955 reduction in Connecticut’s speed limit (interruption/intervention) to evaluate two theoretical propositions. One was that the policy adjustment had the effect of reducing the annual number of fatalities, and the other (far more controversial) was that it had no material consequences in this respect. The facts of the case suggested that, while the number of fatalities declined the year following the new speed limit, this apparent downward shift was well within the range of normal fluctuation over a 10-year period. Campbell therefore concluded that the policy adjustment made no tangible impact on road safety.

Chronological analysis differs from its trend counterpart in the fine detail rather than the general conception. The objective here is to array events into a chronology and compare the pattern with that predicted by some explanatory theory. The latter normally specifies one or more of the following kinds of conditions, and this needs to be reflected properly in the work of students choosing to explore a case/cases from that perspective: (1) certain events must always occur before other events, with the reverse sequence being impossible; (2) certain events must always be followed by other events, on a contingency basis; (3) certain events can only follow other events after a prespecified passage of time; (4) certain time periods may be marked by classes of events that diverge substantially from those of other time periods (Yin, 1994). Community responses to major disasters, a subject of considerable interest to policy planners, lend themselves to such chronological assessment and can thus serve as a useful pedagogical tool (Friesama et al., 1979).

**Analytic Induction**

This method, while not tightly structured, is well suited for the purposes of theory building since it moves from individual cases and seeks to identify what they have in common. The common factor(s) provide(s) the basis for theoretical generalisation (Hamel, 1993; Yin,
The process usually consists of six key steps: (1) specify what it is you wish to explain (the dependent variable); (2) formulate an initial and provisional possible explanation of the phenomenon you are seeking to explain (your theory); (3) conduct a study of a case selected to test your theory; (4) review (and revise if necessary) your provisional theory in the light of the case or exclude the case as inappropriate; (5) conduct further case studies to test the (revised) proposition and reformulate it as required; (6) continue with case studies (including looking for cases that might disprove the proposition) and revise the proposition until you achieve a causal proposition that accounts for all the cases (Denzin, 1978; Ragin, 1994; Becker, 1998).

The hypothetical shifts in education policy examined earlier provide an illustration of analytic induction in concrete form. In this context, the quality of education is the phenomenon one wishes ultimately to explain (step 1). The provisional (partial) explanation is that decentralised staffing systems will produce better quality education than centralised ones (step 2). Other things being equal, it might therefore be logical to expect actual cases (schools) to conform to this pattern, both in the positive (for decentralised systems) and negative (for centralised ones) sense of the term. A case would then be selected to test this proposition (step 3).

In practice, that means finding a school which has recently introduced a locally-controlled staffing system. Having developed a definition of what constitutes education quality and established how to operationalise the concept, one would proceed to dissect the case with a view to determining whether the new structure has resulted in the predicted improvements. Should that turn out to be the outcome, the sceptics might not necessarily be won over, however (step 4). They could legitimately argue that one case scarcely proves the point, or that there might have been a general improvement in the quality of education throughout the school network (the implication being that schools which have maintained the old system could have made progress as well). More broadly, they might claim that it could be possible to find centrally-controlled schools showing improvement and ones enjoying managerial autonomy without its putative system-wide benefits.

One would thus have to broaden the scope of the project to encompass additional cases (step 5). During this phase of the investigation, evidence reflecting the sceptics’ concerns might emerge. The challenge facing the researcher would be to interpret it in a sensible fashion. Specifically, the appropriate response in such circumstances is to ask oneself what unique features of the case(s) might have produced a pattern inconsistent with that predicted provisionally (e.g. a decentralised system could conceivably provoke a teacher backlash if imposed without consultation by a strong-willed principal). The unique features, if systematically addressed, should enable the researcher to fine-tune the provisional proposition in a meaningful way (step 6; e.g. ‘when implemented in a climate of consultation, decentralised staffing systems will produce tangible improvements in educational quality’).

Further case studies may be needed to establish the validity of the revised version, potentially leading to more adjustments. As indicated, rather than focus exclusively on cases where a change in the management structure has been implemented, it would be desirable to explore those where the institutional status quo has not been tinkered with. Any evidence pointing to a relative lack of progress in such a setting should, other things being equal, provide reinforcement for the original proposition. Nevertheless, students ought to be encouraged to search for evidence that might challenge the theory. The ‘deviant cases,’ if any, could in fact
have the opposite effect and significantly enhance the analytical process (e.g. one might learn that teachers have persistently resisted heavy-handed attempts to impose the new system on them without any consultation and have thus come to view the status quo as a bulwark against arbitrary top-down action; this insight could play a role in the recycling of the theoretical proposition driving the project).

Conclusion

Impressions to the contrary notwithstanding, the case study method continues to loom large on the policy agenda in the academic environment. As a pedagogical tool it remains virtually without parallel, despite the proliferation of far more sophisticated techniques. However, students cannot reap the full benefits of their exposure to this time-honoured method because it is normally presented to them as an informal procedure, without any solid scientific underpinnings. As the present paper hopefully demonstrates, case analysis may be undertaken in a rigorous and transparent manner. The theoretical dimension is an integral part of the picture, whether description or explanation is the purpose of the exercise. Ideal types, typologies and time-ordered accounts can lend substance to the former. Pattern matching in its various incarnations (including time-series analysis, both the trend type and chronological evaluation) as well as analytic induction may furnish a fertile ground for the latter.

REFERENCES