

The Advantages and Limitations of Single Case Study Analysis

Written by Ben Willis

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BEN WILLIS, JUL 5 2014

As Andrew Bennett and Colin Elman have recently noted, qualitative research methods presently enjoy “an almost unprecedented popularity and vitality... in the international relations sub-field”, such that they are now “indisputably prominent, if not pre-eminent” (2010: 499). This is, they suggest, due in no small part to the considerable advantages that case study methods in particular have to offer in studying the “complex and relatively unstructured and infrequent phenomena that lie at the heart of the subfield” (Bennett and Elman, 2007: 171). Using selected examples from within the International Relations literature[1], this paper aims to provide a brief overview of the main principles and distinctive advantages and limitations of single case study analysis. Divided into three inter-related sections, the paper therefore begins by first identifying the underlying principles that serve to constitute the case study as a particular research strategy, noting the somewhat contested nature of the approach in ontological, epistemological, and methodological terms. The second part then looks to the principal single case study types and their associated advantages, including those from within the recent ‘third generation’ of qualitative International Relations (IR) research. The final section of the paper then discusses the most commonly articulated limitations of single case studies; while accepting their susceptibility to criticism, it is however suggested that such weaknesses are somewhat exaggerated. The paper concludes that single case study analysis has a great deal to offer as a means of both understanding and explaining contemporary international relations.

Principles

The term ‘case study’, John Gerring has suggested, is “a definitional morass... Evidently, researchers have many different things in mind when they talk about case study research” (2006a: 17). It is possible, however, to distil some of the more commonly-agreed principles. One of the most prominent advocates of case study research, Robert Yin (2009: 14) defines it as “an empirical enquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident”. What this definition usefully captures is that case studies are intended – unlike more superficial and generalising methods – to provide a level of detail and understanding, similar to the ethnographer Clifford Geertz’s (1973) notion of ‘thick description’, that allows for the thorough analysis of the complex and particularistic nature of distinct phenomena. Another frequently cited proponent of the approach, Robert Stake, notes that as a form of research the case study “is defined by interest in an individual case, not by the methods of inquiry used”, and that “the object of study is a specific, unique, bounded system” (2008: 443, 445). As such, three key points can be derived from this – respectively concerning issues of ontology, epistemology, and methodology – that are central to the principles of single case study research.

First, the vital notion of ‘boundedness’ when it comes to the particular unit of analysis means that defining principles should incorporate both the synchronic (spatial) and diachronic (temporal) elements of any so-called ‘case’. As Gerring puts it, a case study should be “an intensive study of a single unit... a spatially bounded phenomenon – e.g. a nation-state, revolution, political party, election, or person – observed at a single point in time or over some delimited period of time” (2004: 342). It is important to note, however, that – whereas Gerring refers to a single unit of analysis – it may be that attention also necessarily be given to particular sub-units. This points to the important difference between what Yin refers to as an ‘holistic’ case design, with a single unit of analysis, and an ‘embedded’ case design

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with multiple units of analysis (Yin, 2009: 50-52). The former, for example, would examine only the overall nature of an international organization, whereas the latter would also look to specific departments, programmes, or policies etc.

Secondly, as Tim May notes of the case study approach, “even the most fervent advocates acknowledge that the term has entered into understandings with little specification or discussion of purpose and process” (2011: 220). One of the principal reasons for this, he argues, is the relationship between the use of case studies in social research and the differing epistemological traditions – positivist, interpretivist, and others – within which it has been utilised. Philosophy of science concerns are obviously a complex issue, and beyond the scope of much of this paper. That said, the issue of how it is that we know what we know – of whether or not a single independent reality exists of which we as researchers can seek to provide explanation – does lead us to an important distinction to be made between so-called idiographic and nomothetic case studies (Gerring, 2006b). The former refers to those which purport to explain only a single case, are concerned with particularisation, and hence are typically (although not exclusively) associated with more interpretivist approaches. The latter are those focused studies that reflect upon a larger population and are more concerned with generalisation, as is often so with more positivist approaches[2]. The importance of this distinction, and its relation to the advantages and limitations of single case study analysis, is returned to below.

Thirdly, in methodological terms, given that the case study has often been seen as more of an interpretivist and idiographic tool, it has also been associated with a distinctly qualitative approach (Bryman, 2009: 67-68). However, as Yin notes, case studies can – like all forms of social science research – be exploratory, descriptive, and/or explanatory in nature. It is “a common misconception”, he notes, “that the various research methods should be arrayed hierarchically... many social scientists still deeply believe that case studies are only appropriate for the exploratory phase of an investigation” (Yin, 2009: 6). If case studies can reliably perform any or all three of these roles – and given that their in-depth approach may also require multiple sources of data and the within-case triangulation of methods – then it becomes readily apparent that they should not be limited to only one research paradigm. Exploratory and descriptive studies usually tend toward the qualitative and inductive, whereas explanatory studies are more often quantitative and deductive (David and Sutton, 2011: 165-166). As such, the association of case study analysis with a qualitative approach is a “methodological affinity, not a definitional requirement” (Gerring, 2006a: 36). It is perhaps better to think of case studies as transparadigmatic; it is mistaken to assume single case study analysis to adhere *exclusively* to a qualitative methodology (or an interpretivist epistemology) even if it – or rather, practitioners of it – may be so inclined. By extension, this also implies that single case study analysis therefore remains an option for a multitude of IR theories and issue areas; it is how this can be put to researchers’ advantage that is the subject of the next section.

Advantages

Having elucidated the defining principles of the single case study approach, the paper now turns to an overview of its main benefits. As noted above, a lack of consensus still exists within the wider social science literature on the principles and purposes – and by extension the advantages and limitations – of case study research. Given that this paper is directed towards the particular sub-field of International Relations, it suggests Bennett and Elman’s (2010) more discipline-specific understanding of contemporary case study methods as an analytical framework. It begins however, by discussing Harry Eckstein’s seminal (1975) contribution to the potential advantages of the case study approach within the wider social sciences.

Eckstein proposed a taxonomy which usefully identified what he considered to be the five most relevant types of case study. Firstly were so-called *configurative-idiographic studies*, distinctly interpretivist in orientation and predicated on the assumption that “one cannot attain prediction and control in the natural science sense, but only understanding (*verstehen*)... subjective values and modes of cognition are crucial” (1975: 132). Eckstein’s own sceptical view was that any interpreter ‘simply’ considers a body of observations that are not self-explanatory and “without hard rules of interpretation, may discern in them any number of patterns that are more or less equally plausible” (1975: 134). Those of a more post-modernist bent, of course – sharing an “incredulity towards meta-narratives”, in Lyotard’s (1994: xxiv) evocative phrase – would instead suggest that this more free-form approach actually be advantageous in delving into the subtleties and particularities of individual cases.

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Eckstein's four other types of case study, meanwhile, promote a more nomothetic (and positivist) usage. As described, *disciplined-configurative studies* were essentially about the use of pre-existing general theories, with a case acting "passively, in the main, as a receptacle for putting theories to work" (Eckstein, 1975: 136). As opposed to the opportunity this presented primarily for theory application, Eckstein identified *heuristic* case studies as explicit theoretical stimulants – thus having instead the intended advantage of theory-building. So-called *plausibility probes* entailed preliminary attempts to determine whether initial hypotheses should be considered sound enough to warrant more rigorous and extensive testing. Finally, and perhaps most notably, Eckstein then outlined the idea of *crucial case studies*, within which he also included the idea of 'most-likely' and 'least-likely' cases; the essential characteristic of crucial cases being their specific theory-testing function.

Whilst Eckstein's was an early contribution to refining the case study approach, Yin's (2009: 47-52) more recent delineation of possible single case designs similarly assigns them roles in the applying, testing, or building of theory, as well as in the study of unique cases[3]. As a subset of the latter, however, Jack Levy (2008) notes that the advantages of idiographic cases are actually twofold. Firstly, as inductive/descriptive cases – akin to Eckstein's configurative-idiographic cases – whereby they are highly descriptive, lacking in an explicit theoretical framework and therefore taking the form of "total history". Secondly, they can operate as theory-guided case studies, but ones that seek only to explain or interpret a single historical episode rather than generalise beyond the case. Not only does this therefore incorporate 'single-outcome' studies concerned with establishing causal inference (Gerring, 2006b), it also provides room for the more postmodern approaches within IR theory, such as discourse analysis, that may have developed a distinct methodology but do not seek traditional social scientific forms of explanation.

Applying specifically to the state of the field in contemporary IR, Bennett and Elman identify a 'third generation' of mainstream qualitative scholars – rooted in a pragmatic scientific realist epistemology and advocating a pluralistic approach to methodology – that have, over the last fifteen years, "revised or added to essentially every aspect of traditional case study research methods" (2010: 502). They identify 'process tracing' as having emerged from this as a central method of within-case analysis. As Bennett and Checkel observe, this carries the advantage of offering a methodologically rigorous "analysis of evidence on processes, sequences, and conjunctures of events within a case, for the purposes of either developing or testing hypotheses about causal mechanisms that might causally explain the case" (2012: 10).

Harnessing various methods, process tracing may entail the *inductive* use of evidence from within a case to develop explanatory hypotheses, and *deductive* examination of the observable implications of hypothesised causal mechanisms to test their explanatory capability[4]. It involves providing not only a coherent explanation of the key sequential steps in a hypothesised process, but also sensitivity to alternative explanations as well as potential biases in the available evidence (Bennett and Elman 2010: 503-504). John Owen (1994), for example, demonstrates the advantages of process tracing in analysing whether the causal factors underpinning democratic peace theory are – as liberalism suggests – not epiphenomenal, but variously normative, institutional, or some given combination of the two or other unexplained mechanism inherent to liberal states. Within-case process tracing has also been identified as advantageous in addressing the complexity of path-dependent explanations and critical junctures – as for example with the development of political regime types – and their constituent elements of causal possibility, contingency, closure, and constraint (Bennett and Elman, 2006b).

Bennett and Elman (2010: 505-506) also identify the advantages of single case studies that are implicitly comparative: deviant, most-likely, least-likely, and crucial cases. Of these, so-called deviant cases are those whose outcome does not fit with prior theoretical expectations or wider empirical patterns – again, the use of inductive process tracing has the advantage of potentially generating new hypotheses from these, either particular to that individual case or potentially generalisable to a broader population. A classic example here is that of post-independence India as an outlier to the standard modernisation theory of democratisation, which holds that higher levels of socio-economic development are typically required for the transition to, and consolidation of, democratic rule (Lipset, 1959; Diamond, 1992). Absent these factors, MacMillan's single case study analysis (2008) suggests the particularistic importance of the British colonial heritage, the ideology and leadership of the Indian National Congress, and the size and heterogeneity of the federal state.

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Most-likely cases, as per Eckstein above, are those in which a theory is to be considered likely to provide a good explanation if it is to have any application at all, whereas least-likely cases are 'tough test' ones in which the posited theory is unlikely to provide good explanation (Bennett and Elman, 2010: 505). Levy (2008) neatly refers to the inferential logic of the least-likely case as the 'Sinatra inference' – if a theory can make it here, it can make it anywhere. Conversely, if a theory cannot pass a most-likely case, it is seriously impugned. Single case analysis can therefore be valuable for the testing of theoretical propositions, provided that predictions are relatively precise and measurement error is low (Levy, 2008: 12-13). As Gerring rightly observes of this potential for falsification:

“a positivist orientation toward the work of social science militates toward a *greater* appreciation of the case study format, not a denigration of that format, as is usually supposed” (Gerring, 2007: 247, emphasis added).

In summary, the various forms of single case study analysis can – through the application of multiple qualitative and/or quantitative research methods – provide a nuanced, empirically-rich, holistic account of specific phenomena. This may be particularly appropriate for those phenomena that are simply less amenable to more superficial measures and tests (or indeed any substantive form of quantification) as well as those for which our reasons for understanding and/or explaining them are irreducibly subjective – as, for example, with many of the normative and ethical issues associated with the practice of international relations. From various epistemological and analytical standpoints, single case study analysis can incorporate both idiographic *sui generis* cases and, where the potential for generalisation may exist, nomothetic case studies suitable for the testing and building of causal hypotheses. Finally, it should not be ignored that a signal advantage of the case study – with particular relevance to international relations – also exists at a more practical rather than theoretical level. This is, as Eckstein noted, “that it is economical for all resources: money, manpower, time, effort... especially important, of course, if studies are inherently costly, as they are if units are complex collective individuals” (1975: 149-150, emphasis added).

Limitations

Single case study analysis has, however, been subject to a number of criticisms, the most common of which concern the inter-related issues of methodological rigour, researcher subjectivity, and external validity. With regard to the first point, the prototypical view here is that of Zeev Maoz (2002: 164-165), who suggests that “the use of the case study absolves the author from any kind of methodological considerations. Case studies have become in many cases a synonym for freeform research where anything goes”. The absence of systematic procedures for case study research is something that Yin (2009: 14-15) sees as traditionally the greatest concern due to a relative absence of methodological guidelines. As the previous section suggests, this critique seems somewhat unfair; many contemporary case study practitioners – and representing various strands of IR theory – have increasingly sought to clarify and develop their methodological techniques and epistemological grounding (Bennett and Elman, 2010: 499-500).

A second issue, again also incorporating issues of construct validity, concerns that of the reliability and replicability of various forms of single case study analysis. This is usually tied to a broader critique of qualitative research methods as a whole. However, whereas the latter obviously tend toward an explicitly-acknowledged interpretive basis for meanings, reasons, and understandings:

“quantitative measures *appear* objective, but only so long as we don't ask questions about where and how the data were produced... pure objectivity is not a meaningful concept if the goal is to measure intangibles [as] these concepts only exist because we can interpret them” (Berg and Lune, 2010: 340).

The question of researcher subjectivity is a valid one, and it may be intended only as a methodological critique of what are obviously less formalised and researcher-independent methods (Verschuren, 2003). Owen (1994) and Layne's (1994) contradictory process tracing results of interdemocratic war-avoidance during the Anglo-American crisis of 1861 to 1863 – from liberal and realist standpoints respectively – are a useful example. However, it does also rest on certain assumptions that can raise deeper and potentially irreconcilable ontological and epistemological issues. There are, regardless, plenty such as Bent Flyvbjerg (2006: 237) who suggest that the case study contains no greater bias toward verification than other methods of inquiry, and that “on the contrary, experience indicates that

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the case study contains a greater bias toward falsification of preconceived notions than toward verification”.

The third and arguably most prominent critique of single case study analysis is the issue of external validity or generalisability. How is it that one case can reliably offer anything beyond the particular? “We always do better (or, in the extreme, no worse) with more observation as the basis of our generalization”, as King et al write; “in all social science research and all prediction, it is important that we be as explicit as possible about the degree of uncertainty that accompanies our prediction” (1994: 212). This is an unavoidably valid criticism. It may be that theories which pass a single crucial case study test, for example, require rare antecedent conditions and therefore actually have little explanatory range. These conditions may emerge more clearly, as Van Evera (1997: 51-54) notes, from large-N studies in which cases that lack them present themselves as outliers exhibiting a theory’s cause but without its predicted outcome. As with the case of Indian democratisation above, it would logically be preferable to conduct large-N analysis beforehand to identify that state’s non-representative nature in relation to the broader population.

There are, however, three important qualifiers to the argument about generalisation that deserve particular mention here. The first is that with regard to an idiographic single-outcome case study, as Eckstein notes, the criticism is “mitigated by the fact that its capability to do so [is] never claimed by its exponents; in fact it is often explicitly repudiated” (1975: 134). Criticism of generalisability is of little relevance when the intention is one of particularisation. A second qualifier relates to the difference between statistical and analytical generalisation; single case studies are clearly less appropriate for the former but arguably retain significant utility for the latter – the difference also between explanatory and exploratory, or theory-testing and theory-building, as discussed above. As Gerring puts it, “theory confirmation/disconfirmation is not the case study’s strong suit” (2004: 350). A third qualification relates to the issue of case selection. As Seawright and Gerring (2008) note, the generalisability of case studies can be increased by the strategic selection of cases. Representative or random samples may not be the most appropriate, given that they may not provide the richest insight (or indeed, that a random and unknown deviant case may appear). Instead, *and properly used*, atypical or extreme cases “often reveal more information because they activate more actors... and more basic mechanisms in the situation studied” (Flyvbjerg, 2006). Of course, this also points to the very serious limitation, as hinted at with the case of India above, that poor case selection may alternatively lead to overgeneralisation and/or grievous misunderstandings of the relationship between variables or processes (Bennett and Elman, 2006a: 460-463).

Conclusion

As Tim May (2011: 226) notes, “the goal for many proponents of case studies [...] is to overcome dichotomies between generalizing and particularizing, quantitative and qualitative, deductive and inductive techniques”. Research aims should drive methodological choices, rather than narrow and dogmatic preconceived approaches. As demonstrated above, there are various advantages to both idiographic and nomothetic single case study analyses – notably the empirically-rich, context-specific, holistic accounts that they have to offer, and their contribution to theory-building and, to a lesser extent, that of theory-testing. Furthermore, while they do possess clear limitations, any research method involves necessary trade-offs; the inherent weaknesses of any one method, however, can potentially be offset by situating them within a broader, pluralistic mixed-method research strategy. Whether or not single case studies are used in this fashion, they clearly have a great deal to offer.

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[1] The paper follows convention by differentiating between 'International Relations' as the academic discipline and 'international relations' as the subject of study.

[2] There is some similarity here with Stake's (2008: 445-447) notion of *intrinsic* cases, those undertaken for a better understanding of the particular case, and *instrumental* ones that provide insight for the purposes of a wider external interest.

[3] These may be unique in the idiographic sense, or in nomothetic terms as an exception to the generalising suppositions of either probabilistic or deterministic theories (as per deviant cases, below).

[4] Although there are "philosophical hurdles to mount", according to Bennett and Checkel, there exists no *a priori* reason as to why process tracing (as typically grounded in scientific realism) is fundamentally incompatible with various strands of positivism or interpretivism (2012: 18-19). By extension, it can therefore be incorporated by a range of contemporary mainstream IR theories.

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Written by: Ben Willis
Written at: University of Plymouth
Written for: David Brockington
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