

POLITICAL SCIENCE METHODOLOGY AND THE ROMANCE OF RESEARCH

REFLECTION PAPER I

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Introduction

The articles summarized in this paper relate to the various methodologies used in contemporary International Relations research. Three main methods are discussed in the readings relating to case studies, statistical research and modeling methodologies. The main thrust of the readings is to display the strengths and weaknesses of each method as compared to the alternatives. Bueno de Mesquita (1985) argues for a more quantitative statistical approach coupled with a strong theoretical base, whereas Krasner (1985) agrees but asks for a more realistic approach in light of the difficulties faced by this methodology in International Relations research. Jervis (1985) maintains a stance similar to Krasner in that he argues for the importance of “small-*N*” studies as well as the large observational statistical methodology. As Bueno de Mesquita (1985) notes, however, that all three researchers are in agreement over the utilization of “deductive reasoning” in International Relations research. The remaining articles each describe a particular methodology utilized in International Relations research in depth, with Bennett (2004) focusing on case studies, Braumoeller et al. (2004) focusing on statistical methodologies, Powell (2002) on game theoretical models and Cameron et al. (2002) on formal empirical work.

As stated in the title, this article is a reflection on the romance of each research methodology, in its utilization, execution and outcome. Every research article necessarily begins with a question (or a research hypothesis) that needs to be answered over the course of the research. The aforementioned research methodologies are but various tools that the researcher can utilize to arrive upon a conclusion. Taking a rather broad view, every bit of research can be said to broaden our understanding of the particular discipline. On the narrower spectrum, the tool utilized to answer the research question is motivated by several factors: the nature of the research, the availability of data, the feasibility of the study, and the methodological preference

of the researcher, among others. The choice of research, then, is the idea of what, if any, research methodology is most preferential in the eyes of the researcher, and thus (in the researchers estimation), can best address the research hypothesis. For this article, romance in research is defined as the preference of the research method that would strive to further the understanding of the researcher while tackling the question (in other words, *why* is a particular event or a relationship taking place). Each of the three research methods described below is then attempted to be analyzed from an aesthetic point of view, fully acknowledging the pitfalls that would plague each methodology (as described in the literature). It is also important to mention that the opinions expressed below are the sole reflections of the writer. The technical aspects of the methods have been described in the articles and while they will be mentioned, they do not form the main basis of comparison between the methods.

Statistical Methodology

Braumoeller et al. (2004) discuss the pros and cons of statistical methodology in their article "*The Promise and Perils of Statistics in International Relations*". Perhaps the biggest advantage this method has over the others is in sheer scale of analysis. As our computing power and speed of information transferability has increased over recent times, so has this method gained popularity in allowing us to make and test hypotheses that were impossible to achieve earlier. Bueno de Mesquita (1985) is unequivocal in his preference of this method stating "A commitment to science seems to argue strongly in favor of emphasizing general understanding, rather than particularistic understanding", stemming from the idea that a large number of cases analyzed quantitatively is preferable to "empahiz[ing] details not likely to recur". Braumoeller et al. (2004) states that while a particular case can provide an interesting question, what a researcher would like to know is whether the case is alluding to a "widespread pattern of

behavior”. This question can then be addressed with statistical methodology. Generally speaking, statistics can provide external validity to the model and thus form the basis for a strong theory (or the revision of an existing theory), specifically in the case of causal inferences.

Braumoeller et al. (2004) alludes to the pitfalls of statistical inference as well, discussing the importance of the theory underlying the analysis. This is of particular importance because of the importance in the details of statistical analysis. Usually, with a large number of observations, the data are usually never overwhelmingly in favor of a particular relationship. Therefore, the outliers in the data (i.e. the exceptions to the theory) may carry as much information as the relationship itself. To illustrate this point, an example from the economics discipline is given; economic rationality would necessitate the absence of altruism, in that a consumer would not spend his or her income in any endeavor where they could not extract some form of utility. However, an economic actor may choose to spend some fraction of his or her income towards a particular charity that has no bearing on their personal life (for example, a single individual with no children, donating money to starving African children). Now, we understand that the economic actor does indeed derive utility from engaging in charitable donations, but this understanding comes from analyzing the decision-making process of the actor itself. In this example, the single childless person donating money to starving children would tend to get lost among the data which would seemingly point towards parents engaging in this form of charity.

The use of statistical methodology is widespread and quite important. It is, however, rather cold and calculating in practice and perhaps the least romantic of the three methods. Running a regression on some particular dataset and then using the statistics to imply causality without analyzing the actual data and striving to explain *why* the relationship exists is the major peril of utilizing this method. Therefore, if research is conducted to further our understanding of

the discipline, statistical methods (in isolation) can indeed display the causality between the dependent and independent variables, and can be used to forecast future outcomes, but may not be able to adequately address *why* the event happened, or will happen again.

Modeling (Game Theory)

The modeling methodology in political science uses a game theoretical approach to research, as Powell (2002) writes "...focuses on understanding the relations between actors and groups that interact in an anarchic political system..." meaning that the relationship between the actors is of primary importance and thus the outcomes of an event is studied with respect to interactions between players. The prisoner's dilemma is a classic example of a 2 x 2 game with each player having two distinct choices and the expected payoffs (or utilities gained) are hypothesized.

Therefore, the outcomes of the events are necessarily reactions to the perceptions of each player in regards to the opposing players' expected payoffs. This is a powerful research tool that distills complicated events into mathematical form, and thus can lend simplicity to an event. "Filtering" events into expected outcomes and stratagem allows us to analyze the event in isolation, disregarding the noise from various other independent variables that may not be relevant to the model. Using the game theoretical approach implies simplicity, and thus the players are seen as reacting to certain independent variables along with their perceptions of the outcomes for the opposing players.

While the game theoretical approach necessitates a deeper understanding of the issue in order to formalize the outcomes and generate expected payoffs based on the independent and dependent variables, there is room for a cautious approach. Most International Relations analyses are vastly complex given the anarchic nature of the political landscape; therefore studying an event by distilling it down to the primary causes must have a solid theoretical foundation.

Furthermore, this approach would be difficult to classify as far as romance in research is concerned specifically because the *why* must be answered before the formalization of the model can take place. Therefore, the strength of this research methodology directly depends on the effort put forth by the researcher in determining the causal nature of the relationship.

Case Studies

Bennett (2004) analyzes the case study methodology in order to provide an insight into the advantages of its use in research. By its very nature, case study methodology provides an in-depth analysis of International Relations research, and has been used since the inception of the discipline. Oftentimes it pertains to a single observation (or a set of observations) on a particular dependent variable. The strength of this form of research comes from the depth of analysis and the importance placed on a singular event. This naturally implies that there is particular difficulty in proving the external validity of the research, and thus generalizability of the outcomes may not be possible. It is useful, however, in displaying the range of outcomes that can be found for similar events.

Bennett states “Many influential research findings in political science have come from single-case studies that presented anomalies for accepted theories.” For example, let’s focus on the notion of democratic peace where it is hypothesized that no two democracies have ever gone to war. The Kargil war of 1999 between India and Pakistan is an anomaly that refutes the notion of democratic peace because both India and Pakistan were democracies at that time (Pakistan went into military dictatorship shortly after the war). However, it would be foolish to disregard the notion of democratic peace based on a single outcome without an in-depth understanding of the cause of the Kargil conflict. Herein lies the strength of the case study, specifically in looking at the event, the causes and the outcomes, we can focus on how the case fits in line with the

underlying assumptions of the theory and thus, whether the case has the strength to refute the overall hypothesis.

Of the three research methodologies, the case study is the most romantic of all, motivating all manner of questions with regards to the case, including the all-important *why* dimension of the research. In the quest to understand all aspects of the case, the question of “why the event took place” is inescapable, and can lead to further questioning and/or refinements of the underlying theory.

Conclusion

I have presented a comparative approach to analyze the three major research methodologies in terms of the romantic nature of the methods outlined above. Bennett (2004) wrote that “research programs advance more effectively through the iterative and collaborative use of different research methods”, and I would strongly agree with this notion. Ideally, a study would utilize (1) the statistical method to identify causality, then (2) a case study analysis of the outliers in order to establish the range of outcomes or any refinements to the underlying theory (in which case we would adjust the theory and start over), and then finally (3) a formal model using the information gained in order to display outcomes of the event. That would represent the most romantic study of all, studying the *why* component from all directions, and thus possible obtaining both internal and external validity as well as establishing causal inference. The strength of deductive reasoning would apply here, as well as satisfying Lakatos’ reasoning that no theory is true as long as there is a counterexample, which is then analyzed using step (2) in order to refine the theory as necessary. In this way, we would be able to further our understanding of the event(s) as well as increase the knowledge of the discipline. While this would be difficult to achieve in practice, it would be my example of a true romance between the researcher and the discipline.

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