# Government 601, Fall 1998: Final Exam

This exam is due 48 hours (or so) after you pick it up. If your native language is not English, you may work on the exam for 72 hours rather than 48 hours (an extra day). Return completed exams to my office (121 McGraw Hall). If you pick the exam up on Thursday or Friday, you must stop working on the exam by the appropriate time on Saturday or Sunday, but can turn it in first thing Monday morning.

**Do any three of the following four parts.**

## Part 1

Think of a research problem of interest to you. In 2500 words or less, critically compare and contrast the implications *three* of the following quotations have for theory and empirical research design regarding that problem. Which approaches are more appropriate, and which less? Can strengths of various approaches be combined usefully? Note that quotes that are grouped together do not always agree with one another. As part of your discussion you should address the most important and relevant of such differences.

1. "An explanation is an adequate description of underlying causes helping to bring about the phenomenon to be explained." (Miller 1987, 60). "Scientists and philosophers of science want to know when a given set of propositions, if true, explain why something happened. They also want to know when a given body of data confirm a proposition, a proposition which might, then, be used to explain. The answer to the second question that I will be developing is causal, comparative and historical. Confirmation, I will argue, is the fair causal comparison of a hypothesis with its current rivals" (Miller 1987, 155). "Varying degrees of 'confirmation' are conferred upon a theory through the number of *plausible rival hypotheses* available to account for the data. The fewer such plausible rival hypotheses remaining, the greater the degree of 'confirmation'" (Campbell and Stanley 1966, 36).

2. "As interworked systems of construable signs (what, ignoring provincial usages, I would call symbols), culture is not a power, something to which social events, behaviors, institutions, or processes can be causally attributed; it is a context, something within which they can be intelligibly—that is, thickly—described" (Geertz 1973, 14). "There is no reason why the conceptual structure of a cultural interpretation should be any less formulable, and thus less susceptible to explicit canons of appraisal, than that of, say, a biological observation or a physical experiment—no reason except that the terms in which such formulations can be cast are, if not wholly nonexistent, very nearly so. We are reduced to insinuating theories because we lack the power to state them" (Geertz 1973, 24). "Theoretical ideas are not created wholly anew in each study; as I have said, they are adopted from other, related studies, and, refined in the process, applied to new interpretive problems" (Geertz 1973, 27).

3. "We do not wish to suggest that quantitative empirical research is of minor importance for the sociological enterprise. Quite the contrary: Quantitative research is essential both for descriptive purposes and for testing sociological theories. We do, however, believe that many sociologists have had all too much faith in statistical analysis as a tool for *generating* theories, and that the belief in an isomorphism between statistical and theoretical models, which appears to be an integral feature of the causal-modeling approach, has hampered the development of sociological theories built upon concrete explanatory mechanisms" (Hedström

and Swedborg 1998, 17). "The distinctive feature of a mechanism is not that it can be universally applied to predict and control social events, but that it embodies a causal chain that is sufficiently general and precise to enable us to locate it in widely different settings. It is less than a theory, but a great deal more than a description, since it can serve as a model for understanding other cases not yet encountered" (Elster 1993, 5).

4. "I would now like to turn to the fundamental assumption of the revealed preference approach, viz., that people do reveal their underlying preferences through their actual choices. Is this a reasonable presumption?" (Sen 1997, 60). "Many issues remain unresolved, including the empirical importance of commitment as a part of behaviour, which would vary, as I have argued, from field to field. I have also indicated why the empirical evidence for this cannot be sought in the mere observation of actual choices, and must involve other sources of information, including introspection and discussion. There remains, however, the issue as to whether this view of man amounts to seeing him as an irrational creature. Much depends on the concept of rationality used, and many alternative characterizations exist. In the sense of *consistency* of choice, there is no reason to think that admitting commitment must imply any departure from rationality. This is, however, a weak sense of rationality" (Sen 1997, 104). "My approach incorporates experiences and social forces into preferences or tastes through two basic capital stocks. *Personal capital*, $P$, includes the relevant past consumption and other personal experiences that affect current and future utilities. *Social capital*, $S$, incorporates the influence of past action by peers and others in an individual's social network and control system (Becker 1996, 4).

5. "To generalize about social revolutions, to develop explanations of their causes and outcomes, one can employ comparative historical analysis with selected slices of national historical trajectories as the units of comparison.... There are two main ways to proceed. First, one can try to establish that several cases having in common the phenomenon one is trying to explain also have in common a set of causal factors, although they vary in other ways that might have seemed causally relevant. This is what Mill called the 'Method of Agreement.' Second, one can contrast the cases in which the phenomenon to be explained and the hypothesized causes are present to other cases in which the phenomenon and the causes are both absent, but which are otherwise as similar as possible to the positive cases. This procedure Mill labeled the 'Method of Difference.' ... In practice, though, it is often possible, and certainly desirable, to combine these two comparative logics. This is done by using at once several positive cases along with suitable negative cases as contrasts" (Skocpol 1979, 35–37). "Apparent causes that all the selected cases have in common may turn out to be just as common among cases in which the effect they were supposed to have caused has not occurred. Relationships that seem to exist between causes and effects in a small sample selected on the dependent variable may disappear or be reversed in a sample uncorrelated with the position on the dependent variable" (Geddes 1991, 149).

6. "Good experimental design is separable from the use of statistical tests of significance. It is the art of achieving interpretable comparisons and as such would be required even if the end product were to be graphed percentages, parallel prose case studies, photographs of groups in action, etc. In all such cases, the interpretability of the 'results' depends upon control over the factors we have been describing. If the comparison is interpretable, then statistical tests of significance come in for the decision as to whether or not the obtained difference rises above the fluctuations to be expected in cases of no true difference for samples of that

size. Use of significance tests presumes but does not prove or supply the comparability of the comparison groups or the interpretability of the difference found" (Campbell and Stanley 1966, 22). "In everyday life, three possible decisions about causal effects are available. They may be strong, weak, or simply undecidable. Traditional significance testing as practised in the social sciences has the peculiar feature that it groups all effects into just two classes—present and absent. Not only does it fail to differentiate the important from the trivial; it also takes no account of uncertainty" (Achen 1982, 46).

## Part 2

In 2500 words or less, use notions of strategic behavior, psychological or social mechanisms, and pseudo-experimental design (as appropriate) to explain and evaluate the explanatory contributions in two of the following: Goldhagen versus Browning; Davidson and Grofman; Putnam. Briefly outline what theoretical issues are at stake, describe the approach used to engage the issues empirically, and evaluate the strengths and weaknesses of the resulting empirical analysis.

## Part 3

Write out in equation form the regression model that corresponds to the results reported in Table 12.2 of Verba, Scholzman and Brady [VSB] (1995, 340). Explain how (or whether) the reported results support the interpretations they make in the text. Explain the similarities and differences between the results of Table 12.2 and those of Table 12.5 (VSB 1995, 352). Explain the following assertion in the text, "Using the coefficients from Table 12.5 [...], we calculate that the exercise of a single civic skill in each of the three non-political domains leads to an increase in political activity of roughly a third of a political act..." (VSB 1995, 352).

## Part 4

Consider a researcher named J, who is interested in the relations between congressional campaign finance and benefits provided to special interests. J likes formal models, and is in particular a fan of game theory. So J would like to know if there is a fairly simple game that captures some interesting essence of the interactions between a member of the U.S. Congress and special interests who might contribute money to the member's campaign.

J decides to study a game with three players: an incumbent running for reelection; a challenger; and a political action committee (PAC) representing some special interest. The incumbent moves first, by promising to deliver some amount of benefits to the special interest if he wins reelection. Having heard the incumbent's promise, the challenger then announces a benefit amount she will give to the special interest if she wins. Having heard both candidates' promises, and believing they are credible, the PAC then decides how it is going to allocate its support between the incumbent and the challenger. The PAC can decide to favor the incumbent, to be neutral, or to favor the challenger.

Each candidate wants to maximize the probability that he or she wins the election. The PAC wants to maximize the amount of benefit the special interest can be expected to receive after the election. The expected benefit depends on the probability that the incumbent is reelected. Let $p$ denote this probability. Then the probability that the challenger wins, defeating the incumbent, is $q = 1 - p$. Let $B_I$ denote the benefit amount promised by the incumbent, and let $B_C$ denote the benefit amount promised by the challenger. The expected benefit amount is computed using the expected value formula, $EB = pB_I + qB_C$.

The incumbent's probability of winning reflects three kinds of reactions by voters. First, because of his reputation for effectiveness over many years, the incumbent begins with a slight but significant advantage. Second, because voters do not share in the benefit to be given to the special interest, they tend to prefer the candidate who makes the smallest promise. But, third, the PAC launches a negative campaign against the candidate who promises the smallest amount, as well as against the candidate it is not supporting. The campaign is effective: the more the PAC spends on the campaign, the less likely voters are to support the candidate the PAC is attacking. In formal terms,

$$p = \frac{A_I + B_C + N_C}{A_I + B_I + N_I + B_C + N_C}$$

where $A_I > 0$ represents the incumbent's baseline advantage, $N_C$ denotes the size of the negative campaign directed against the challenger, and $N_I$ denotes the size of the negative campaign directed against the incumbent. The PAC uses the following rules to determine the sizes of the negative campaigns.

| | relative size of candidates' promises | | | | | |
|---|---|---|---|---|---|---|
| | incumbent's is bigger | | same size | | challenger's is bigger | |
| PAC's stance | $N_C$ | $N_I$ | $N_C$ | $N_I$ | $N_C$ | $N_I$ |
| pro-incumbent | $1 + (B_I - B_C)/4$ | 0 | 1 | 0 | 1 | $2(B_C - B_I)$ |
| neutral | $(B_I - B_C)/3$ | 0 | 0 | 0 | 0 | $(B_C - B_I)/2$ |
| pro-challenger | $2(B_I - B_C)$ | 1 | 0 | 1 | 0 | $1 + B_C - B_I$ |

When the PAC is supporting the incumbent and the incumbent promises an amount smaller than the challenger, the PAC mounts an especially severe negative campaign against the incumbent due to feelings of betrayal. On the other hand, a pro-incumbent PAC's negative campaign against a challenger whose promises less than the incumbent is not that severe.

The cost of the negative campaign is subtracted from the PAC's payoff; i.e., the PAC's payoff is $EB - N_I - N_C$. Researcher J assumes that the challenger cannot match the incumbent's highest promised benefit levels, due to the inferior seniority the challenger will have if she wins. So J lets the incumbent choose from the set $\{1, 5\}$, while the challenger chooses from the set $\{1, 4\}$. Finally, J assumes the incumbent's baseline advantage is $A_I = 1/2$. The payoffs associated with the possible combinations of candidate and PAC choices are shown in Table 2. That table would be the normal form of the game if the three players moved simultaneously instead of sequentially.

Identify the Nash equilibrium (or equilibria) in this game (supply a demonstration). Does the assumption that the players move sequentially rather than simultaneously make any difference? What would happen if the special interest made its decision about how to allocate its support before either of the candidates were assumed to make their promises about benefits? What conclusions should researcher J draw from this modeling effort? What are the major strengths and weaknesses of this particular exercise?

Table 2: Payoffs for game of Part 4

payoff ordering: (incumbent's, challenger's, PAC's) = $(p, q, EB - N_I - N_C)$

challenger's promise

| incumbent's promise | | 1 | 4 | |
|---|---|---|---|---|
| | 1 | .71, .29, 0 | .44, .56, −4.32 | pro-incumbent PAC |
| | 5 | .41, .59, .65 | .53, .47, 3.28 | |

challenger's promise

| incumbent's promise | | 1 | 4 | |
|---|---|---|---|---|
| | 1 | .6, .4, 1.0 | .64, .36, .57 | neutral PAC |
| | 5 | .36, .64, 1.11 | .49, .50, 4.16 | |

challenger's promise

| incumbent's promise | | 1 | 4 | |
|---|---|---|---|---|
| | 1 | .43, .57, 0 | .47, .53, −1.42 | pro-challenger PAC |
| | 5 | .61, .39, −5.55 | .52, .48, 1.52 | |