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Gene M. Grossman
Elhanan Helpman



INSTITUT FÜR HÖHERE STUDIEN
INSTITUTE FOR ADVANCED STUDIES
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Gene M. Grossman, Elhanan Helpman

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Gene M. Grossman
Woodrow Wilson School
Princeton University
NJ 08544 Princeton
U.S.A.
Phone: ++1 / 609-258-4823
Fax: ++1 / 609-258-5533

Elhanan Helpman
The Eitan Berglas School of Economics
Tel Aviv University
69978 Tel Aviv
ISRAEL

**Institut für Höhere Studien (IHS), Wien
Institute for Advanced Studies, Vienna**

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Abstract

We study the electoral competition between two parties vying for seats in a legislature. The electorate includes knowledgeable voters and impressionable voters, the latter susceptible to electioneering activities. A special interest group provides campaign financing in exchange for influence over the platforms. The parties take positions on two issues, one on which their divergent platforms are fixed and another *pliable* issue where their announcements are used to woo dollars and votes. The interest group contributes with the knowledge that the final policies will be a *compromise* between the positions of the two parties.

We examine two modes of voting behavior. When knowledgeable voters vote sincerely, the parties' positions on the pliable issue diverge, and the more popular party caters more to the special interest group. When knowledgeable voters vote strategically, the interest group often induces the parties to announce identical pliable platforms. We investigate the determinants of the platforms, contributions, vote counts, and policy compromise, and consider how changes in legislative institutions might affect these outcomes.

Keywords

electoral competition, special interest groups, voting behavior

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Comments

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1 Introduction

The policy process in democratic countries usually involves compromise. In settings where no single political party controls a majority of seats in the legislature, compromise reflects the give-and-take of coalition formation. In settings where an independent executive has enforcement responsibility or veto power, compromise is needed for legislation to become law or for policies to be enforced. Even in parliamentary settings where one party holds a majority of seats and representatives observe strict party discipline, institutional rules (such as, for example, rules regarding amendments and cloture, and procedures for assigning members to committees) often prevent the ruling party from ignoring the preferences of the opposition. Indeed, many legislative procedures were developed precisely to preserve some influence for minorities.

Yet much of the literature on policy formation—including most voting models in the “Downsian” tradition, as well as more recent writings that admit a role for campaign contributions and other actions by special interest groups—proceeds as if policies are set by unitary actors. The problem with this, as Austen-Smith (1986,1989) has emphasized, is that political behavior that would be optimal were an election designed to name a “policy dictator” may not be so when policy outcomes depend on the composition of a heterogenous policy-making authority. Voters may choose not to vote for their most preferred candidates or party if they anticipate that the composition of the government will affect the process leading to compromise. And interest groups must decide whom to support and where to exert pressure in the light of their expectations about how the legislative deliberations will play out.

Recently, several authors have investigated the electoral competition that precedes a non-degenerate policy-making process. The usual approach has been to develop a model rich in institutional detail. For example, Austen-Smith and Banks (1988) examine a model of three-party competition with proportional representation. It is assumed that parties are given the opportunity to form a government in the order of their vote tallies. In forming a coalition, a party can share with its potential partner the “spoils” of office (e.g., portfolios in the government) and can offer to endorse policies intermediate between its own most-preferred position and that of its partner.

Alesina and Rosenthal (1991) construct a model of two-party competitions wherein parties have fixed policy positions and the policy outcome depends on the affiliation of the executive and the composition of the legislature (which has proportional representation). Their focus is on “split-ticket voting”, whereby some voters cast their ballots for one party in the legislative contest and for the other in the presidential election, hoping that each part of the government will “moderate” the tendencies of the other. Austen-Smith (1984) considers a two-party, multi-district election in which the majority party implements its platform but the platform derives from an aggregation of the positions of the party’s heterogeneous candidates.

In this paper, we take a slightly different approach. We commit ourselves rather less to the particular institutions by which policies are determined, assuming only that the final policy is a compromise among the positions supported by the two parties and that the weight that each party’s position receives in forming the compromise increases monotonically with its vote share. In so doing, we are able to expose some of the implications of policy compromise that are shared by a variety of institutional structures.¹

Perhaps because our policy process is simpler than others in the literature, we are able to enrich the model of political competition by incorporating the activities of special interest groups. We follow Baron (1994), Morton and Myerson (1992), and Grossman and Helpman (1996) in examining how campaign contributions by an interest group affect political outcomes when contributions are used by the parties to sway a group of “impressionable” voters. The interest group here, as in our earlier paper, can contribute resources to either or both of the political parties, and can give in order to influence a party’s position or to further its election prospects. Unlike in our previous work or the other papers cited, the interest group must take into account that the final policy will not be exactly one or the other of the parties’ platforms, but something between the two.

¹However, since we limit ourselves to a two-party system, we cannot deal with the subtleties of coalition formation. These subtleties (such as a non-monotonic relationship between a party’s vote share and its influence on policy) are what make Austen-Smith and Bank’s analysis so interesting, but also a bit fragile.

In our model, there are two political parties contesting a single parliamentary election. The parliament will be called upon to set two policies. On one of the issues, the parties have predetermined positions. These positions might reflect the parties' ideological leanings or they may be inherited from the past. The latter situation could arise, for example, if the parties have made prior pronouncements on the issue and perceive that repudiating their earlier positions would be costly to their reputations. The parties' positions on the second issue are taken to be *pliable*; that is, they have no prior stakes and no explicit preferences.

There are two types of voters. Knowledgeable voters are aware of the parties' positions on the issues and base their votes (only) on these positions. Impressionable voters are susceptible to campaign advertising and other forms of electioneering. Due to the presence of this second type of voter, the parties are keen to raise resources to spend on their campaigns. An "interest group" is a collection of voters who share similar views on the pliable policy issue. These individuals have somehow overcome the free-rider problem associated with collective political action (Olson, 1965) and are willing to make political contributions to further their cause. The interest group offers contributions to one or both of the political parties, asking in return that the parties endorse particular policy positions. More generally, the interest group can offer the parties *schedules* of contributions, associating with each policy position a specific gift. This treatment of campaign contributions borrows from the literature on *common agency* (see, for example, Bernheim and Whinston, 1986, or Grossman and Helpman, 1994), and has been applied recently in a model of electoral competition by Grossman and Helpman (1996).

We envision a political equilibrium as follows. First, the interest group offers contributions to one or both parties. If a gift is linked to a policy position, then we say that the group has exercised an *influence motive* for political giving. If the group gives something more to a party than what it must to ensure its cooperation, then we say that the group also has exercised an *electoral motive* for giving. Next, the parties announce their positions on the pliable issue. In so doing, they may choose a position that elicits a positive contribution from the interest group or choose some

other position and thereby reject the group's offer of support. The parties set their platforms simultaneously, with the aim of maximizing their votes. This objective can derive from a pure preference for being in office, from a desire to maximize the patronage that can be delivered to party loyalists (which presumably increases with the size of the legislative delegation), or from an ideological preference over outcomes on the one policy issue where their position are predetermined.

Next comes the election. Here, we consider the possibility that knowledgeable voters will vote "sincerely" and also that they will vote "strategically". In our model it is never rational for voters to vote sincerely (Austen-Smith, 1989). But the voters may have reasons for doing so that come from outside the model. If not, then these voters will take into account that the policy outcomes will ultimately be determined by compromise. Unlike the knowledgeable voters, the impressionable voters respond to the campaign spending of the two parties. In particular, the shares of these votes that go to each party depend on the difference in the parties' campaign expenditures. The election determines the composition of the legislature via proportional representation. Finally, the policy outcome is a compromise among the position vectors of the two parties, with weights that depend on the sizes of the parties' legislative delegations. We assume rational expectations for all players (where the knowledgeable voters may or may not be considered to be "players") and seek a sub-game perfect Nash equilibrium.

2 The Model

Two political parties, A and B , vie for seats in a legislature. In the course of the campaign, the parties will announce positions on two policy issues. On one of these, which we term the *pliable* issue, the parties have no prior commitments and no preferences, and so they are free to endorse any positions they like. We denote the positions by p^A and p^B , representing points on the real line. On the other issue the parties have fixed positions, given either by their ideologies or by their previous announcements. We normalize these positions so that $q^A = 0$ and $q^B = 1$ (where q^j is the position of

party j).

Once the election has been completed, the parties will have no reason (within the model) to pursue their platforms. But it is reasonable to take the announced positions as starting points for inter-party negotiation, because in most realistic situations a party will suffer a loss of reputation if the enacted policies differ too greatly from what it promised to deliver. As we noted in the Introduction, we will not commit ourselves to any particular model of the legislative process.² Rather, we make the minimal assumption that the final policies reflect a compromise between the two platforms. In particular,

$$p = \psi(s)p^A + [1 - \psi(s)]p^B \quad (1)$$

and

$$q = 1 - \psi(s) \quad (2)$$

where p and q are the policy outcomes, $\psi(\cdot)$ is the weight attached to the position of party A in forming the compromise, and s is the fraction of seats held by this party in the newly-elected parliament. We assume that $\psi(0) = 0$, $\psi(s) = 1 - \psi(1 - s)$, $\psi'(s) \geq 0$ for all s , and $\psi''(s) \leq 0$ for $s \geq \frac{1}{2}$. In words, neither party has an advantage in the negotiation except what comes from the size of its delegation, and bargaining strength increases with the size of the majority, but with diminishing marginal returns. A plausible shape for $\psi(s)$ is depicted in Figure 1.

The voting population has measure one. Of these, an exogenous fraction α are “impressionable voters” while the remainder are “knowledgeable voters”. As in Baron (1994) and Grossman and Helpman (1996), the impressionable voters are susceptible to electioneering activities such as party rallies and campaign advertising. This may be because the electioneering gives these voters a (desired) sense of familiarity and contact with the politicians (as suggested by Morton and Myerson, 1992) or because the voters do not understand the issues at stake, or the parties’ positions on them. In any event, we assume that a fraction

²See Baron and Ferejohn (1989) for a model of legislative deliberations, and Austen-Smith and Banks (1988) for a model in which a coalition government forms after an election takes place.

$$s_I = \frac{1}{2} + b + h(C^A - C^B) \quad (3)$$

of these voters cast their ballots for party A (and the rest for party B), where h is a positive constant and C^j is the campaign spending by party j , $j = A, B$. In this formulation, a party can win votes by outspending its rival. If the two parties happen to spend the same on their campaigns, then party A captures a fraction $\frac{1}{2} + b$ of the impressionable votes; the constant b , which may be positive or negative, is a measure of the party's *ex ante* popularity among this portion of the electorate.

The knowledgeable voters have heterogeneous preferences about the policy issues. The preferences of voter i are described by two parameters, π_i and β_i . π_i is the voter's ideal choice for the pliable policy, while β_i is her marginal valuation of a change in the fixed policy. For any policy outcome vector (p, q) , the utility of voter i is given by³

$$u^i(p, q) = -a(p - \pi_i)^2 + \beta_i q. \quad (4)$$

There is little agreement among political scientists about what motivates voters or even about why anyone bothers to vote. One obvious possibility is that voters strive in the polling booth to further their interests; this is the usual presumption of "rational-choice" theorists. However, voters undoubtedly realize that their single ballots can have but a minuscule effect on the final policy outcome. The utility differential associated with this effect is bound to be small in comparison to the cost to the voter of visiting the polls. So voters might have other reasons for voting which may be associated with alternative voting objectives. For example, a knowledgeable voter might wish to "define herself" or "express herself" by pulling the lever for whichever party she feels is most meritorious.

In this paper, we consider two alternatives. First, we entertain the possibility of *sincere* voting, whereby each knowledgeable voter casts her ballot for the party whose policies, if adopted, would leave her with higher utility. With sincere voting, i votes

³More generally, one could specify a symmetric, convex function $L(p - \pi_i)$ as the loss to voter i from any pliable policy outcome p . In addition to the quadratic, we have worked out the model for the case where $L(p - \pi_i) = |p - \pi_i|$ and have derived identical results.

for party A if and only if

$$\begin{aligned}\beta_i &\leq a \left[(p^B - \pi_i)^2 - (p^A - \pi_i)^2 \right] \\ &= 2a(p^B - p^A)(\bar{p} - \pi_i),\end{aligned}\tag{5a}$$

where $\bar{p} \equiv (p^A + p^B)/2$.

As Austen-Smith (1989) has noted, such voting behavior is not strictly rational here, if by rational we mean the furthering of ones (narrowly defined) utility metric. Consider, for example, Figure 2, which shows utility as a function of the pliable policy outcome for a voter with $\beta_i = 0$ and $\pi_i = \pi$. This voter prefers the fixed platform of party A . Yet, if she anticipates a compromise policy of p (because she expects party A to win a majority of the seats in the legislature) she can benefit slightly by pulling the lever for party B , thereby marginally strengthening that party's position in the ensuing legislative deliberations. More generally, a *strategic* voter will vote for party A if by augmenting that party's vote share she raises her own utility, considering the effect the vote is expected to have on the weights used to form the compromise p and q . With proportional representation (and rational expectations), the strategic voter i votes for party A if and only if $du^i(p, q)/ds \geq 0$, or

$$\beta_i \leq 2a(p^B - p^A)(p - \pi_i),\tag{5b}$$

in view of (1), (2), and (4). Comparing (5a) and (5b), we see that the sincere voter compares her ideal point on the pliable issue to the mid-point between the parties' positions, whereas the strategic voter compares her ideal point to the anticipated compromise.

We assume that the ideal points π_i are distributed uniformly in the population of knowledgeable voters on the unit interval $[0, 1]$, and that the marginal valuations β_i are distributed uniformly on the interval $[-\frac{1}{2f} - \frac{b}{f}, \frac{1}{2f} - \frac{b}{f}]$. Moreover, we assume that the distributions of π_i and β_i are statistically independent and that the diversity of views on the fixed policy issue is wide enough (i.e., the density f is small enough) that for every possible value of π_i and every pair of pliable policies that might emerge

in equilibrium, there is at least one voter who votes for party A and one who votes for party B .⁴ We find that party A captures a fraction

$$s_K = \frac{1}{2} + b + fa(p^A + p^B - 1)(p^B - p^A) \quad (6a)$$

of the knowledgeable votes with sincere voting, and a fraction

$$s_K = \frac{1}{2} + b + 2fa \left[\psi(s)p^A + [1 - \psi(s)]p^B - \frac{1}{2} \right] (p^B - p^A) \quad (6b)$$

of these votes with strategic voting. In either case, the party tallies $\frac{1}{2} + b$ of the knowledgeable votes when the two parties happen to endorse the same pliable policies; again, b measures the *ex ante* popularity of party A . Notice that we have made party A equally popular among both segments of the voting population. Nothing essential hinges on this assumption, but it does ease the exposition, by allowing us to speak of *the popularity* of the party.

The total number of votes for each party is a weighted average of the impressionable votes and the knowledgeable votes, with the population fractions α and $1 - \alpha$ serving as weights. Thus,

$$s = \frac{1}{2} + b + (1 - \alpha)fa(p^A + p^B - 1)(p^B - p^A) + \alpha h(C^A - C^B) \quad (7a)$$

with sincere voting, and

$$s = \frac{1}{2} + b + 2(1 - \alpha)fa \left[\psi(s)p^A + [1 - \psi(s)]p^B - \frac{1}{2} \right] (p^B - p^A) + \alpha h(C^A - C^B) \quad (7b)$$

with strategic voting. Party A chooses p^A to maximize s , in the light of any contribution offers from special interest groups and its expectations about p^B , while party B chooses p^B to minimize s in the light of its own offers from special interest groups and its expectations about p^A .

Let's pause for a moment to consider a benchmark situation. Suppose there are no special interest groups and only exogenous sources of campaign funding. With sincere voting, party A would maximize s in (7a) by setting $p^A = \frac{1}{2}$, no matter what

⁴This assumption is not essential for the logic of our results, but it simplifies the computations significantly.

p^B , C^A and C^B happened to be. A movement away from the center would win the party some extra votes among a group of nearly-indifferent knowledgeable voters, but would cost it support from an even larger group of voters who prefer a pliable platform of $\frac{1}{2}$ to one on the opposite side of the policy spectrum from their ideal positions. In short, it is a dominant strategy for party A to locate in the center of the pliable policy spectrum, and the same is true for party B . The Nash equilibrium with sincere voting and no organized special interests has $p^A = p^B = p = \frac{1}{2}$.

With strategic voting, it is no longer a dominant strategy for each party to announce a pliable platform of $\frac{1}{2}$. But, using (7b), we can easily show that it remains a best response for each party to locate in the center when its rival is expected to do so. Thus, $p^A = p^B = p = \frac{1}{2}$ constitutes a Nash equilibrium with strategic voting. Moreover, this equilibrium is unique. We record these findings for later comparison.

Proposition 1 *Suppose $C^A = \bar{c}^A$ and $C^B = \bar{c}^B$, where \bar{c}^A and \bar{c}^B are any non-negative constants. Then the unique Nash equilibrium with sincere voting or strategic voting has $p^A = p^B = p = \frac{1}{2}$ and $s = \frac{1}{2} + b + \alpha h(\bar{c}^A - \bar{c}^B)$.*

Now we introduce a special interest group. The group represents a set of voters with similar feelings about the pliable policy issue. In particular, let all knowledgeable voters with $\pi_i \in [\pi_1, \pi_2]$ be members of the group.⁵ A question one could ask is, How have these individuals managed to overcome the free-rider problem associated with collective political action, while others have not? We do not provide an answer to this important question in this paper. Another question is, What will be the objective of the leaders of the interest group when it comes time to engage in political action? There are two plausible answers here. First, the leaders might be asked to maximize the joint total welfare of the group members, considering their views on the pliable policy (on which their interests are similar) and their views on the fixed

⁵An alternative interpretation is possible. The members of the interest group may include both knowledgeable and impressionable voters, as long as the latter have similar underlying preferences to the former and the group's leaders take their true interests into account. In other words, the impressionable voters may be poorly informed or for some other reason susceptible to campaign spending, but may nonetheless belong to an interest group that looks after their well-being.

policy (on which their interests are disparate). Alternatively, the leaders might be asked to concentrate their efforts on securing a pliable policy that is to the group's liking, while ignoring the consequences for the fixed-policy outcome. To know which of these objectives will be pursued, we would need to specify in detail a political decision-making process for the interest group. Rather than doing so, we allow for either possibility by specifying the following objective function for the interest-group leaders:

$$W(p, q, c^A, c^B) = - \int_{\pi_1}^{\pi_2} a(p - \pi)^2 d\pi - \zeta(\pi_2 - \pi_1) \frac{b}{f} q - c^A - c^B, \quad (9)$$

where c^j is the group's contribution to party j , $j = A, B$, and ζ is an indicator variable that takes the value 0 if the leaders' mandate includes welfare derived only from the pliable policy and the value 1 if the leaders' mandate encompasses all sources of member welfare. In writing the objective this way, we assume that the group has fully solved its internal conflicts of interest and acts to maximize joint surplus. This may require some side-payments within the group, or at least some differential membership dues, if all members are to benefit from the group's activities.

The interest group confronts the political parties with campaign contribution offers. The offers take the form of schedules, $c^j(p^j)$, which give the sizes of the contributions as functions of the platforms announced by the parties. In reality, these offers are more likely to be implicitly communicated than explicitly stated, as an explicit offer of a *quid pro quo* might alienate politicians and voters alike. The offers that an interest group makes are gleaned from its public pronouncements and thus are observed by both parties. We assume only that $c^j(p^j) \geq 0$ for all p^j ; thus, the group might make positive offers to one or both parties and it might link the contributions to the platform choices or not, but it cannot "tax" the parties in any way.

In our model, even unorganized voters might wish to make (small) contingent contribution offers to the politicians. If these voters could move the pliable policies a little bit, this could compensate them for the small cost of an individual contribution. However, the parties are unlikely to be able to receive and process a myriad of small (contingent) offers. Indeed, we see the ability to communicate contingent support as one *raison d'être* for organized interest groups. Accordingly, we do not allow

contingent contributions from voters who are not members of the special interest group. We denote by \bar{c}^A and \bar{c}^B the total receipts of (non-contingent) contributions from individual voters for party A and party B , including any sums the parties may have held over from prior elections.⁶ Then, $C^A = c^A + \bar{c}^A$ and $C^B = c^B + \bar{c}^B$. For simplicity, we take $\bar{c}^A = \bar{c}^B = \bar{c}$. Without this assumption, party A would not tally the fraction $\frac{1}{2} + b$ of the votes when the interest group made equal contributions to both parties. Then we would need to redefine the “popularity” of party A to include not only the *ex ante* appeal of the party but also its *ex ante* advantage from having access to a larger exogenous source of funds.

An equilibrium in our model consists of (i) a pair of contribution schedules that are optimal for the interest-group leaders considering their objective function in (9) and the anticipated behavior of parties and voters; (ii) a pair of pliable policies for the two parties that maximize their respective seat counts given the announced contribution offers from the interest group and the vote totals given in (7a) or (7b); (iii) voting rules for the knowledgeable voters described either by (5a) or (5b); and (iv) final policy compromises given by (1) and (2).

3 Equilibrium Policies with Sincere Voting

We now proceed to derive the parties’ equilibrium pliable policy platforms, the associated campaign contributions, and the policy outcomes when knowledgeable voters vote sincerely. One way to proceed is to imagine that the special interest group chooses the two platforms and then pays the parties enough to ensure that each accedes to its wishes. In other words, we can identify the equilibrium with the solution to a control problem which has two participation constraints.

If party A were to receive no contribution offer from the interest group, it would choose its pliable position p^A to maximize s in (7a), with $C^A = \bar{c}^A$ and p^B and C^B

⁶The model gives no motivation for small individual voters to make unconditional gifts to the parties. Thus, \bar{c}^A and \bar{c}^B might well be zero. But they may be positive if individuals derive some direct utility from supporting candidates and parties.

taken as given. In the event, its best strategy would be to announce a pliable policy position of $\frac{1}{2}$. We will refer to this as party A 's "optimal deviation" and denote it by \tilde{p}^A ; notice that it does not depend on p^B or C^B . It follows that, if the interest group wants the party to endorse some platform different from $\tilde{p}^A = \frac{1}{2}$, it will have to compensate the party for the attendant loss of seats. This constrains the interest group to pay at least

$$c^A \geq \delta a \left(p^A - \frac{1}{2} \right)^2, \quad (10)$$

where $\delta \equiv \frac{(1-\alpha)f}{\alpha h}$, if it wants the party to endorse the policy p^A . Similarly, it must offer party B at least

$$c^B \geq \delta a \left(p^B - \frac{1}{2} \right)^2, \quad (11)$$

if it wants that party to choose p^B instead of its own optimal deviation of $\tilde{p}^B = \frac{1}{2}$. The equilibrium policies can now be found as the p^A and p^B that maximize (9) subject to (1), (2), (7a), (10) and (11).

Let's assume for the moment that both participation constraints bind; that is, the interest group gives to each party exactly what is needed to induce its choice of the desired platform, but nothing more. Then the first-order conditions for the interest-group leaders' maximization imply

$$p^j = \frac{1}{2} + \frac{\psi^j}{\delta} n(\pi_m - p), \quad j = A, B, \quad (12)$$

where ψ^j is the equilibrium weight attached to party j 's positions in the policy compromise, $n \equiv \pi_2 - \pi_1$ is the size of the interest group, and $\pi_m \equiv (\pi_1 + \pi_2)/2$ is the mean (and median) ideal policy position among interest-group members. Multiplying p^A by ψ^A and p^B by ψ^B , adding, and rearranging terms, we find

$$p = \frac{1}{2} \left(\frac{1}{1 + \Phi} \right) + \pi_m \left(\frac{\Phi}{1 + \Phi} \right) \quad (13)$$

where $\Phi \equiv n[(\psi^A)^2 + (\psi^B)^2]/\delta$. The contributions are just enough to restore the vote counts that would obtain absent any campaign giving. Thus, $s = \frac{1}{2} + b$, $\psi^A = \psi(\frac{1}{2} + b)$, $\psi^B = 1 - \psi(\frac{1}{2} + b)$ and, from (2),

$$q = 1 - \psi\left(\frac{1}{2} + b\right). \quad (14)$$

We can now describe the equilibrium outcome when the interest group perceives only an influence motive for contributing; i.e., when its contributions to the two parties are no greater than what is needed to induce the desired platforms. The equilibrium pliable policy compromise is a weighted average of the ideal positions of the median voter and median interest group member. The weight on the latter is larger the greater is the size of the interest group (large n), the greater is the fraction of impressionable voters (large α), the more responsive are these voters to campaign spending (large h), and the more diverse are the knowledgeable voters in their views on the fixed policy issue (small f). Also, the weight on the median interest-group member's ideal point is larger the more biased is the electorate toward one party or the other; i.e., the further is b from zero. The measure of the intensity of preferences on the pliable policy issue, a , does not affect the equilibrium compromise, nor does it matter what mandate the interest-group leaders are given.

As for the fixed policy issue, the outcome is greater than one-half (i.e., closer to party B 's fixed position) if the average voter values an increase in q and is less than one-half (i.e., closer to party A 's fixed position) if the average voter values a decrease in q . Only the popularity parameter b and the shape of the compromise function $\psi(\cdot)$ affect q ; the outcome is not affected by the size of the interest group, its views on the pliable policy, or the mandate that it gives its leaders. Nor is it affected by the number of impressionable voters or their susceptibility to campaign spending.

Combining (12) and (13), we have that

$$p^j = \frac{1}{2} + \frac{\psi^j}{\delta} \frac{n}{1 + \Phi} \left(\pi_m - \frac{1}{2} \right), \quad j = A, B. \quad (15)$$

From this we may conclude that the influence-motivated interest group induces both parties to shift their platforms away from one-half in the direction of the bliss point of its median member. But the more popular party (i.e., party A if $b > 0$ and party B if $b < 0$) caters more to the special interest group. In return, the group makes a larger contribution to this party. This result—which is similar to one we derived

in Grossman and Helpman (1996)—reflects the fact that the interest group sees the more popular party as a better investment vehicle. It expects that party's position to receive greater weight in the anticipated legislative negotiations.

We summarize our findings up to this point in the following proposition. For concreteness, the proposition describes a situation where party A is the more popular party and the median interest-group member prefers a pliable policy greater than one-half. Analogous results hold for other cases.

Proposition 2 *Suppose $b > 0$, $\pi_m > \frac{1}{2}$, and voters vote sincerely. If the interest group exercises only an influence motive for campaign giving then: (i) $\pi_m > p^A > p^B > \frac{1}{2}$; (ii) $c^A > c^B$; (iii) $s = \frac{1}{2} + b$; (iv) $q = 1 - \psi(\frac{1}{2} + b) < \frac{1}{2}$; (v) p is a weighted average of $\frac{1}{2}$ and π_m ; and (vi) the weight on π_m in the compromise p increases with n, α, h , and b , decreases with f , and is independent of a and ζ .*

Next we investigate the circumstances under which the special interest group would choose to exercise not only an influence motive, but also an electoral motive for political giving. An electoral motive is present whenever the group's contribution to some party exceeds what is required to induce that party to support the specified platform. First observe that the interest group would never give extra donations to both political parties, because then its dollars would be working at cross purposes. Moreover, if the interest group does give something extra to one of the parties, it must be the party that is *ex ante* more popular. The group's members prefer this party's fixed policy (in aggregate) and they also prefer its pliable policy in view of the policy separation induced by the influence giving. Thus, the interest group would benefit from having the more popular party capture a greater number of seats.⁷

We can check whether an electoral motive will be operative by examining whether the interest-group leaders' objective function improves when its gift to the more popular party rises above the level prescribed by the (hypothesized) equilibrium in which both participation constraints bind. For concreteness, let party A be the more

⁷The text gives a local argument as to why the interest group would always concentrate its electorally-motivated giving on the more popular party. A global proof is provided in the appendix.

popular party; i.e., $b \geq 0$. Then, we can calculate $\partial W/\partial c^A$ using (9) and the values of p and q determined by (1), (2), (13), and (14). We find that the interest group will give to party A beyond what is required for influence if and only if

$$\alpha h \psi' n \left[\frac{an}{\delta + n[(\psi^A)^2 + (\psi^B)^2]} \left(\frac{1}{2} - \pi_m \right)^2 (\psi^A - \psi^B) + \frac{\zeta b}{2f} \right] > \frac{1}{2}, \quad (16)$$

where $\psi'(\cdot)$, $\psi^A(\cdot)$ and $\psi^B(\cdot)$ are evaluated at $s = \frac{1}{2} + b$. Notice that the electoral motive never operates when $b = 0$, because then $\psi^A = \psi^B$ and the left-hand side of (16) is zero. Electorally-motivated giving requires a sufficiently large difference in the *ex ante* popularity of the two parties. The electoral motive is most likely to be exercised when the interest group is large (large n), when its members hold an extreme position on the pliable policy issue (π_m near zero or one), when their welfare is quite sensitive to changes in this policy (a large), and when the group-leaders' mandate is a broad one ($\zeta = 1$).

What policies emerge when the electoral motive is active (and $b > 0$)? We can answer this question by imagining the interest group as choosing p^A , p^B , and c^A to maximize (9), subject to (1), (2), (7a), and $c^B = \delta a(p^B - \frac{1}{2})^2$. The first-order condition with respect to party B 's platform gives the same condition for p^B as in (12). Those for party A 's platform and its contribution can be combined to give also the same condition for p^A as in (12).⁸ Thus, (15) continues to describe the pliable policy platforms and (13) the policy outcome, but with ψ^A and ψ^B (and therefore Φ) evaluated at the equilibrium s , which now exceeds $\frac{1}{2} + b$.

In other words, the two pliable platforms will again lie between the bliss points of the median knowledgeable voter and the median interest-group member, with the more popular party catering more to the special interest group. Although the less popular party is influenced less, it too receives contributions, and chooses a policy

⁸The first-order condition for c^A implies $(\partial W/\partial s)(\partial s/\partial c^A) = 1$, or $\partial W/\partial s = 1/\alpha h$, in view of (7a). The first-order condition for p^A implies $(\partial W/\partial s)(\partial s/\partial p^A) + \partial W/\partial p^A = 0$. Combining these two, and using (1) and (7a), gives

$$\frac{(1-\alpha)f}{\alpha h} (1 - 2p^A) - 2\psi^A n(p - \pi_m) = 0,$$

which is equivalent to (12).

different from $\frac{1}{2}$, as long as $\psi^A < 1$; i.e., unless the party's platform will play no role in determining the ultimate compromise. Comparing the policy platforms that emerge when an electoral motive is operative with those that emerge when the interest group seeks only influence, we find that the disfavored party caters less to special interests when its rival receives an electoral gift, but the favored party may cater more or less. To see this, first note that $s > \frac{1}{2} + b$ when party A receives an electorally-motivated campaign gift. This makes Φ larger, and ψ^B smaller, than if only an influence motive were to be exercised. From (15) we see that p^B must be closer to $\frac{1}{2}$. This same equation implies that p^A will move toward π_m if and only if $\psi^A/(1 + \Phi)$ increases with ψ^A , which in turn depends on whether ψ^A is less than or greater than $1/\sqrt{2}$. Of course, the final policy outcome must be more to the interest group's liking with electoral giving, or else the group would not have decided to increase the size of its gift.⁹

We can summarize the main conclusions as follows.

Proposition 3 *Suppose $b > 0$ and $\pi_m > \frac{1}{2}$ and voters vote sincerely. Then (i) the participation constraint (11) always binds for party B and (ii) the interest group exercises an electoral motive for giving to party A if and only if (16) is satisfied at $\psi^A = \frac{1}{2} + b$. When an electoral motive is exercised, (iii) $s > \frac{1}{2} + b$, (iv) $c^A > c^B$, (v) $c^B > 0$ if and only if $\psi^B > 0$; and (vi) $\pi_m > p^A > p > p^B \geq \frac{1}{2}$.*

The two propositions together imply that, with sincere voting, the more popular party always garners greater campaign support from the special interest group and it always caters more to the group in return. The interest group generally contributes to both parties, unless one of them can be expected to win enough seats to dictate policy. The strength of the interest group in the policy process is governed by its size and the extent to which its members hold extreme positions, as well as by the diversity of opinions among knowledgeable voters about the parties' fixed positions, by the fraction of impressionable voters in the electorate, and by the ease with which these voters can be swayed by electioneering activities.

⁹The shift of p toward π_m can be seen from (13), together with the fact that Φ rises with s .

4 Equilibrium Policies with Strategic Voting

We examine next the possibility that knowledgeable voters will vote strategically. A strategic voter—as we have seen—anticipates the legislative process and assesses the parties' platforms in the light of the relationship between her *desirata* and the expected compromise. To understand what difference this alternative mode of voting behavior makes, it is necessary to investigate the incentives facing the parties and the interest group when the relationship between platforms and vote shares is as given in (7b). For convenience, we reproduce that equation here, after replacing $C^A - C^B$ by $c^A - c^B$, in view of our assumption that $\bar{c}^A = \bar{c}^B$:

$$s = \frac{1}{2} + b + 2(1-\alpha)fa \left[\psi(s)p^A + [1 - \psi(s)]p^B - \frac{1}{2} \right] (p^B - p^A) + \alpha h (c^A - c^B). \quad (7b)$$

Consider the incentives facing party A . If the party were to decline the contribution offer made by the interest group, it would announce the pliable platform that maximized s in (7b), taking $c^A = 0$, and p^B and c^B as given. The first-order condition for this maximization implies

$$\tilde{p}^A = p^B + \frac{\frac{1}{2} - p^B}{2\psi(s^A)} \quad (17)$$

where s^A is the number of seats that party A would capture were it to act unilaterally, which is given by

$$s^A = \frac{1}{2} + b + \frac{(1-\alpha)fa}{2\psi(s^A)} \left(p^B - \frac{1}{2} \right)^2 - \alpha h c^B. \quad (18)$$

Similarly, were party B to refuse the interest group's offer, it would set the platform

$$\tilde{p}^B = p^A + \frac{\frac{1}{2} - p^A}{2[1 - \psi(s^B)]} \quad (19)$$

to minimize s given p^A, c^A and $c^B = 0$, and it would capture

$$1 - s^B = \frac{1}{2} - b + \frac{(1-\alpha)fa}{2[1 - \psi(s^B)]} \left(p^A - \frac{1}{2} \right)^2 - \alpha h c^A \quad (20)$$

seats. With strategic voting (unlike sincere voting) the optimal deviations depend on the campaign strategies of the rival party, and therefore so do the costs to the parties from failing to set the (unilaterally) optimal platforms.

The special interest group wishing to influence the platforms must compensate the parties for the votes that catering costs them. Contributions to party A must leave the party with at least s^A seats, while contributions to B must leave that party with at least $1 - s^B$ seats. In an equilibrium where influence is the only motivation for campaign giving, the group leaders choose p^A and p^B to maximize (9), subject to the compromise rules (1) and (2), the vote tally (7b), and the participation constraints $s = s^A$ and $s = s^B$.

It helps to write the interest group leaders' problem in terms of two new variables. We define $d \equiv p - \frac{1}{2}$ as the "deviation" of the final policy compromise from the median voter's preferred policy and $g \equiv p^A - p^B$ as the "gap" between the pliable platforms of the two political parties. Then the contribution that satisfies the participation constraint $s = s^A$ can be written as

$$c^A = \frac{a\delta}{2\psi(s)} [d + \psi(s)g]^2, \quad (21)$$

while that which satisfies the constraint $s = s^B$ can be written as

$$c^B = \frac{a\delta}{2[1 - \psi(s)]} (d - [1 - \psi(s)g])^2. \quad (22)$$

Summing these, and substituting the result, as well as the definitions and (2), into the group leaders' objective function, the latter can be expressed as

$$W(d, g, \psi) = - \int_{\pi_1}^{\pi_2} a(d + \frac{1}{2} - \pi)^2 d\pi - \zeta n \frac{b}{f} (1 - \psi) - \frac{a\delta}{2} \left[\left(\frac{1}{\psi} + \frac{1}{1 - \psi} \right) d^2 + g^2 \right]. \quad (23)$$

Now re-write the seat count (7b) using (21), (22), the new definitions, and the inverse function $\sigma(\psi) \equiv \psi^{-1}(s)$, as

$$\frac{1}{2} + b + \frac{\alpha h a \delta}{2} \left[\left(\frac{1}{\psi} - \frac{1}{1 - \psi} \right) d^2 + (2\psi - 1)g^2 \right] - \sigma(\psi) = 0. \quad (24)$$

Then the interest-group leaders' problem is to maximize $W(d, g, \psi)$ in (23), subject to (24).

We begin the analysis with the case in which the leaders have a narrow mandate; i.e., $\zeta = 0$. Then the leaders' optimal choice of g satisfies

$$-a\delta[1 - \mu\alpha h(2\psi - 1)]g = 0, \quad (25)$$

where μ is the Lagrange multiplier on the constraint (24). In the appendix we show that when $\zeta = 0$, μ and $(2\psi - 1)$ must have opposite signs. This means that the term in square brackets is always positive, and so g must be set equal to zero. In other words, with influence-motivated giving and leaders who pursue only the common interest of their members, the (pliable) platforms of the two parties converge. This result contrasts with the outcome for sincere voting, where we found that the parties' platforms differ whenever the popularity of one party exceeds that of the other.

With $g = 0$, the equilibrium seat count in (24) can be expressed as

$$\sigma(\psi) - \frac{1}{2} = b + \frac{\alpha h a \delta}{2} \left[\frac{1 - 2\psi}{\psi(1 - \psi)} \right] d^2. \quad (26)$$

If $b > 0$, this can be satisfied only if $\frac{1}{2} < \sigma(\psi) < \frac{1}{2} + b$, while if $b < 0$, this can be satisfied only if $\frac{1}{2} - b < \sigma(\psi) < \frac{1}{2}$. In other words, while the more popular party always wins a majority of seats, its representation in the parliament is less than what it would have been without the campaign giving. Recall that, with sincere voting, the more popular party wins at least as many seats as it would have won were there no possibility of endogenous campaign support. Evidently, the minority side fares better with strategic voting than with sincere voting.

Next consider the contributions that the two parties collect. With $g = 0$, (21) and (22) imply $c^A/c^B = (1 - \psi)/\psi$. Since $\psi > 1 - \psi$ if and only if $b > 0$, it follows that the less popular party always garners the larger donation. This is exactly the opposite from what we found to be true with sincere voting.

Why would the interest group grant a larger contribution to the less popular party, knowing that its position will receive less weight in the ultimate compromise? The answer has to do with the parties' different incentives to deviate. If voters could be expected to cast their ballots sincerely, then each party would deviate to the same point (namely, the median voter's ideal point) in the absence of a sufficient inducement from the special interest group. But with strategic voting, the optimal deviations depend on the parties' relative popularity. Comparing (17) and (19), we see that if $p^A = p^B$ and both lie between $\frac{1}{2}$ and π_m , the less popular party is tempted to announce a pliable platform farther from the interest-group's bliss point than

the more popular party. Such an announcement would be more damaging to the interest group, even considering the smaller weight it would receive in the ensuing compromise. The group leaders recognize the unpopular party's credible threat to bring more harm to its members, and so are willing to pay it more handsomely in order to keep it in the fold.

The policy compromise with strategic voting has no closed-form solution. From the first-order condition with respect to d we can derive

$$p = \left(\frac{n}{n + \Omega} \right) \pi_m + \left(\frac{\Omega}{n + \Omega} \right) \frac{1}{2}, \quad (27)$$

where $\Omega \equiv \delta[1 + \mu\alpha h(2\psi - 1)]/2\psi(1 - \psi)$. In the appendix we show that $\mu\alpha h(2\psi - 1) > -1$. Thus, $\Omega > 0$, and the equilibrium compromise lies between the ideal points of the median voter and the median interest-group member. Moreover, from (27) we see that, for a given ψ and μ , the policy outcome will be closer to π_m and further from $\frac{1}{2}$ the larger is n and the smaller is δ . This is the same as with sincere voting; i.e., the interest group's influence rises with its size, with the fraction of impressionable voters and their responsiveness to campaign advertising and with the diversity of views on the fixed issue. However, changes in n and δ also change the equilibrium seat count and the shadow value of the constraint, and so the total effects of parameter changes can only be derived from the full set of first-order conditions.

The equilibrium compromise does have a simple solution when the parties are equally popular ($b = 0$). Then $\mu = 0$ and $\psi = \frac{1}{2}$ and so $\Omega = 2\delta$. In this case, the equilibrium pliable policy moves toward the median interest-group member's bliss point and away from the median voter's bliss point as n increases and δ decreases. Moreover, with $b = 0$ the compromise that results from strategic voting is identical to that which results from sincere voting, as can be seen by comparing (27) with (13).

One might wonder whether the special interest group fares better in a tightly fought election or in a lopsided election. We can readily address this question here, still focusing for the moment on the case where the leaders have a narrow mandate and influence is their only motive for campaign giving. The parameter b is our measure of the one-sidedness of a contest. However, care is needed in examining the effects of

a change in b on the welfare of interest-group members, inasmuch as this change may reflect a shift in the distribution of voter tastes on the fixed policy issue, and so also a change in the preferences of some group members. A calculation of the change in total group welfare would not make much sense across regimes where preferences are not held fixed. However, it is perfectly appropriate to ask how a change in b affects the part of utility that interest-group members derive from the pliable policy, net of the contributions they make. This component of welfare coincides with the group leaders' objective for the case when $\zeta = 0$.

Observe from the interest-group leader's maximization problem that $dW/db = \mu$, when $\zeta = 0$.¹⁰ We have already indicated that $\mu < 0$ for all $b > 0$. It follows that, whatever the direction of change in the compromise pliable policy in response to an increase in the bias, the effect of this change (including the associated change in contributions) on the welfare of group members is negative. With strategic voting, interest-group members fare best *qua* special interests in close political contests. Interestingly, just the opposite is true when voters vote sincerely. Then the interest-group members get a more desirable pliable policy the larger is the bias, and although they may pay more in total contributions as the bias increases, the net effect is always positive.¹¹

Let's pause to summarize in

¹⁰We refer here to a change in b that derives from a change in b_I or a change in b_K , not one that reflects a change in the fractions of impressionable and knowledgeable voters in the voting population. The latter change would alter δ as well as b .

¹¹We calculate from (9) that, when $\zeta = 0$,

$$dW = 2an(\pi_m - p)dp - dc^A - dc^B.$$

Then using (10), (11) and (12) we can find dc^A and dc^B , and, with (13), show that

$$dW = an(\pi_m - p)(\pi_m - \frac{1}{2})d\Phi.$$

Now since p lies between π_m and $\frac{1}{2}$, dW has the same sign as $d\Phi$. Finally, Φ increases as b grows in absolute value and ψ diverges from $\frac{1}{2}$.

Using (10), (11), (12), and (13), one can also show that, with sincere voting, total contributions rise with an increase in $|b|$ if and only if the compromise p is closer to $\frac{1}{2}$ than to π_m .

Proposition 4 *Suppose $b > 0$, $\pi_m > \frac{1}{2}$, and voters vote strategically. If the interest-group leaders have a narrow mandate ($\zeta = 0$) and they exercise only an influence motive for campaign giving, then: (i) $\pi_m > p^A = p^B > \frac{1}{2}$; (ii) $c^A < c^B$; (iii) $\frac{1}{2} < s < \frac{1}{2} + b$; and (iv) $dW/db < 0$.*

Now consider the case in which the group leaders have been granted a broad mandate to maximize members' joint welfare. Equation (25) still gives the first-order condition for the optimal choice of g . When the parties are equally popular, $\mu = 0$ and $\psi = \frac{1}{2}$. Then the term in square brackets is equal to one and so again we must have $g = 0$. Moreover, the term in square brackets remains positive for a range of values of b close to zero (by continuity). It follows that the influence-motivated interest group induces the two parties to announce the same pliable platforms even if one party happens to be somewhat more popular than the other and if the group's leaders recognize that this extra appeal holds (on average) for their members as well. Only if the difference in popularity is large might the interest-group leaders wish to encourage divergence between the parties' pliable platforms.

For values of b that imply $g = 0$, the seat count will be given by (26), and so the more popular party will capture more than half of the seats. But its legislative delegation will be smaller than it would have been absent the interest group's intervention. This implies, as before, that larger group contributions go to the less popular party. The pliable compromise again is given by (27), and an increase in the popularity of the more popular party reduces the component of members' welfare deriving from the pliable policy net of contributions. In short, the qualitative properties of an equilibrium are invariant to the scope of the leaders' mandate, provided the difference in the *ex ante* appeal of the two parties is not too large. We report these conclusions more formally in

Proposition 5 *Suppose $b \geq 0$, $\pi_m > \frac{1}{2}$, and voters vote strategically. If the interest-group leaders have a broad mandate ($\zeta = 1$) and exercise only an influence motive for campaign giving, then there exists a $\bar{b} > 0$ such that for $b \leq \bar{b}$: (i) $\pi_m > p^A = p^B > \frac{1}{2}$; (ii) $c^A < c^B$; (iii) $\frac{1}{2} < s < \frac{1}{2} + b$; and (iv) $dW/db|_{\zeta=0} < 0$.*

We examine next the circumstances under which, with strategic voting, the interest-group leaders might perceive an electoral motive for campaign giving. Note that with $p^A = p^B$ the interest group has no reason to give something extra to either party in order to augment the weight its position receives in forming the compromise pliable policy. There remain only two reasons why the leaders might contribute to a party beyond what is needed to exert the desired influence over its platform. First, by contributing more to one party, they might be able to improve their bargaining position vis-à-vis the other party and thereby achieve their desired outcome at lesser total cost. Second, if the leaders have been granted a broad mandate by their membership, they might wish to strengthen the hand of the party whose fixed policy position their average member prefers.

In fact, only the second of these can add a new motive for political contributions in our model. In the appendix we consider the general maximization problem facing the interest-group leaders, which is to maximize $W(d, g, \psi)$ in (9), subject to the participation constraints $s \geq s^A$ and $1 - s \geq 1 - s^B$. We can in fact assume, without loss of generality, that the participation constraint binds for one party; say, party B .¹² Then we can ask whether the participation constraint binds with respect to party A for different values of $b \in (-\frac{1}{2}, \frac{1}{2})$. Suppose that the leaders have a narrow mandate ($\zeta = 0$). Then, if we hypothesize an electoral motive for contributions to party A , the appendix shows that this implies $g = 0$ and $\psi = \psi_{\min}$ at the optimum. In other words, if the interest group gives extra to party A it will ask the parties to set identical pliable platforms, and it will prefer on the margin that the weight given to party A 's position be as small as possible. But a small weight for party A 's position requires a small number of seats for this party, which contradicts the assumption that party A is the one receiving the electorally-motivated contributions. We conclude that the electoral motive is never operative when voting is strategic and the interest-group leaders focus only on the pliable policy issue.

This result may seem counterintuitive. If one party already is quite popular,

¹²As before, it cannot pay to give extra contributions to both parties, because then these contributions could be cut by equal amounts without affecting the policy outcome.

it would appear to be sensible for the interest group to concentrate its efforts on influencing the platform of that party alone, and then give it enough to ensure that its position receives most or all of the weight in the final compromise. But this simple intuition misses the interaction that exists with strategic voting between each party's position and the cost of influencing the other. If the interest group were to give only to the more popular party, then the less popular one would choose a pliable policy platform far from the interest group's *desiratum*. This would create a strong temptation for the favored party to close the gap between itself and its rival. As a consequence, the interest group would have to pay dearly to dissuade its partner from jumping ship. In our model, the interest-group leaders always find an incentive to give to the less popular party in order to reduce the cost of influencing the more popular one. Moreover, total costs are minimized when the platforms are the same, and then beneficence toward one party cannot generate enough in savings from the other to prove worthwhile.

If the interest-group leaders have a broad mandate ($\zeta = 1$) they might give something extra to the more popular party, because this would increase its seat count and thus its weight in the fixed policy compromise. However, with a small bias, the electoral motive cannot operate even in this case. The reason is that any extra contribution given to either party reduces the net benefit that the interest group captures from exerting influence over the pliable policy. The interest-group members must prefer the fixed position of one party by sufficiently much (in aggregate) to compensate for this loss.¹³

The analysis of the general maximization problem in the appendix establishes

Proposition 6 *Suppose that voters vote strategically. If $\zeta = 0$ (narrow mandate for group leaders), then the participation constraints $s \geq s^A$ and $1 - s \geq 1 - s^B$ will both be satisfied as equalities. If $\zeta = 1$ (broad mandate for group leaders), then the participation constraints will both be satisfied as equalities unless $b > \hat{b}$ for some $\hat{b} > \delta^2 \alpha n f(\pi_m - \frac{1}{2})^2 / (n + \delta)^2 > 0$.*

¹³In the appendix we show that a sufficient condition for the electoral motive for campaign giving to be dormant even with $\zeta = 1$ is $b < \delta^2 \alpha n f(\pi_m - \frac{1}{2})^2 / (n + \delta)^2$.

Our results suggest that political outcomes may vary dramatically under different modes of voting behavior. With sincere voting, an interest group concentrates its giving on the more popular political party, and sometimes gives this party more than it must to induce its cooperation. In exchange, the popular party tilts its platform much in the direction of the group's desired policy. The interest group and the popular party fare at least as well as they would in the absence of influence payments, gaining at the expense of the less popular party and the general electorate. The sizes of these gains and losses increase with the disparity between the popularity of the parties.

But with strategic voting by knowledgeable voters the results are nearly the opposite. Larger contributions go to the less popular party, which wins at least as many seats as it would without the endogenous campaign giving. The parties typically choose the same pliable platform, and often one that is not so favorable to the interest group. Excess contributions arise only in special circumstances. And the wider is the ex ante gap between the parties' appeal, the less beneficial is the outcome to the special interest group and the more favorable is it to the average voter.

5 Effects of Legislative Institutions

Much has been written about the role that political institutions play in determining policy outcomes. Our model captures legislative institutions in a reduced form. If, for example, the rules of the legislature make it difficult to close debate on a bill, then the majority party may need to grant concessions to the minority in order to bring proposed laws to a vote. Similarly, if the rules grant the minority party the right to head up a certain number of committees, then compromise may emerge from deliberations over what bills come to the floor. If a supermajority of votes is required to implement certain types of policies, then the minority party may have power to impede change. In all these cases, political institutions affect the relationship between the parties' positions and the policy outcomes.

We can investigate how certain types of institutional changes affect policy by ex-

examining alternative forms for the compromise function $\psi(\cdot)$. Let us write that function now as $\psi(s, \theta)$, where θ parameterizes the impact of parliamentary procedures. We will consider changes $d\theta > 0$ that give more say to the majority party for any given size of its delegation; that is, we'll assume $\psi_\theta \geq 0$ for $s > \frac{1}{2}$ and $\psi_\theta \leq 0$ for $s < \frac{1}{2}$.

Take first the case of sincere voting. In an equilibrium in which influence is the only motive for campaign giving, party A wins a fraction $s = \frac{1}{2} + b$ of the seats both before and after any changes in the parliamentary rules. This means that an increase in θ increases the equilibrium weight attached to the position of the majority party. In the event, we see from (15) that the pliable platform of the more popular party moves closer to the bliss point of the median interest-group member, while that of the less popular party moves closer to the bliss of the median voter. The contributions going to the majority party grow, while those directed to the minority party shrink. The compromise p settles closer to the interest group's ideal point (see (13)), and the aggregate welfare of interest-group members unambiguously rises.¹⁴ Meanwhile, the average voter suffers a loss in welfare unless $|b|$ happens to be large.¹⁵ So, with sincere voting and influence-motivated campaign giving, rules that give more power to the majority party typically do so at the expense of the average voter.

The inequality in (16) continues to give the necessary and sufficient condition for electorally-motivated campaign giving, except that $\psi'(s)$ now is replaced by $\psi_s(s, \theta)$. Suppose that $\psi_{s\theta} > 0$; that is, a change in rules that strengthens the hand of the majority party has a greater impact on the compromise when the party's seat advantage is already large. An easing of cloture rules and a reduction in supermajority requirements are examples of such changes. They would have little impact if the parliament were almost evenly divided, but could make the difference between passage and not for many bills if the size of the majority were close to the designated margins. With

¹⁴Note that the welfare of the interest group would rise as more weight was attached to its favorite party's positions, even if its contributions offers were to remain fixed. With an optimal restructuring of contributions, its welfare will rise even more.

¹⁵The average voter loses from the movement in p away from $\frac{1}{2}$ but gains from the shift in the fixed policy toward the more popular party's position. For small biases b , the former effect must dominate.

$\psi_{s\theta}$ positive, it becomes ever more attractive to the interest group to contribute something extra to the more popular party as θ rises. Thus, a change in rules favoring the majority in parliament increases the likelihood that special interests will exercise an electoral motive for campaign giving. With electorally-motivated contributions, an increase in θ again shifts the equilibrium pliable policy toward π_m and benefits special interests, usually at the expense of the general public.¹⁶

Now consider an election with strategic voting. Here, the effects of institutional change are less clear-cut. We know that, when the interest-group's leaders have a narrow mandate ($\zeta = 0$), all campaign giving will be influence-motivated. Moreover, the interest group will induce both parties to announce the same pliable platform. Panel (a) of Figure 3 shows the typical relationship between the policy outcome and the parameter θ when the compromise function takes the form $\psi(s, \theta) = \frac{1}{2} + \theta(s - \frac{1}{2})^{1/2}$.¹⁷ For small values of θ , changes in parliamentary rules that give more weight to the majority shift the equilibrium compromise toward the bliss point of the median voter. But once the rules already favor the majority position substantially, further increases in θ shift the pliable policy toward the interest group's most desired outcome. Panel (b) shows that the minority party fares better in the legislative election when voters anticipate that the policy compromise will be closer to the majority position. Finally, panel (c) depicts a non-monotonic relationship between θ and the equilibrium weight that attaches to the majority platform in the policy deliberations. The direct impact of an increase in θ is to increase ψ , but this can be outweighed by the equilibrium response of the vote share, s .

These findings reflect the complex way in which a tilt in the compromise function alters the bargaining position of the interest group vis-à-vis the two parties. As the weight on the minority position declines, the less popular party can credibly threaten to endorse a platform even further from the interest group's *desiratum*. The group must increase its tribute to this party in order to keep it in the fold. At the same

¹⁶Again, there is a possibility of gain for the average voter, if she much prefers the fixed policy position of one of the parties to that of the other.

¹⁷The figure is drawn for the following parameter values: $\alpha = .3$, $f = 1$, $h = 10$, $a = 1$, $n = .15$, $\pi_m = .85$, and $b = .02$.

time, the majority party has less incentive to deviate far from π_m , and so the interest group can influence its platform at lesser cost. Evidently, the overall marginal cost of influence can rise or fall, and so the group may choose to purchase more or less of it.

One thing is clear, however. When the interest group's leaders have a narrow mandate to pursue only a favorable p , a change in procedures that gives more power to the majority party reduces the net welfare that members derive from this policy.¹⁸ In those circumstances where an increase in θ happens to result in a pliable policy more to the interest group's liking, the size of the total contribution will grow to an extent that outweighs the direct gain. Thus, with strategic voting, group members fare best as special interests when the legislative rules give substantial weight to the minority; this is just the opposite of what we found to be true when voters vote sincerely.

6 Concluding Remarks

We have developed a model of electoral competition in which special interests contribute resources to political parties, parties tailor their platforms to win funding and votes, and voting determines policy as a compromise between the positions of the parties. Two modes of voting behavior were examined. Under sincere voting, knowledgeable voters cast their ballots for the party that announces a platform more to their liking. Under strategic voting, knowledgeable voters anticipate the legislative deliberations, and vote for the party whose platform they would like to see more heavily weighted in the final compromise.

Special interests fare best when voters vote sincerely. Then the interest group targets its more generous donations to the party that is more popular, and the party returns the favor by catering more to the group's wishes. In contrast, the less popular party collects the larger contribution when voters vote strategically, and the pliable

¹⁸The result follows by application of the envelope theorem to the outcome of the interest group's maximization: $dW/d\theta|_{\zeta=0} = -\mu\sigma_\theta$, where $\sigma(\psi, \theta)$ is defined by $\psi(\sigma(\cdot), \theta) \equiv \psi$. We have seen already that the Lagrange multiplier μ is negative when $\psi > \frac{1}{2}$, while $\psi_\theta > 0$ implies $\sigma_\theta < 0$. Thus, $dW/d\theta|_{\zeta=0} < 0$.

platforms of the two parties typically converge in this case. With sincere voting, an increase in the popularity gap between parties or a change in legislative institutions that gives more weight to the majority generates a gain for the special interest group that typically comes at the expense of the average voter. With strategic voting, these same changes in the bias and the compromise benefit the average voter at the expense of the special interest.

Throughout the paper we have assumed that only a single interest group can make platform-contingent offers to the political parties. Competing groups could be introduced in the manner suggested by Grossman and Helpman (1996). There we allowed multiple groups to make simultaneous offers to the two parties and examined sub-game perfect Nash equilibria in the contribution schedules. We established the existence of multiple equilibria—a situation that applies as well in the current model with policy compromise. Consider, for example, an equilibrium when many lobbies pursue only an influence motive for giving and voters vote sincerely. It is easy to establish that the equilibrium pliable policy has a similar form to (13), namely

$$p = \frac{1}{2} \left(\frac{1}{1 + \Phi} \right) + \bar{\pi}_m \left(\frac{\Phi}{1 + \Phi} \right)$$

where $\Phi \equiv \bar{n}[(\psi^A)^2 + (\psi^B)^2]/\delta$, $\bar{\pi}_m$ is the average ideal point among members of all interest groups, and \bar{n} is the total membership of all these groups. However, it is no longer necessary that $\psi^A = \frac{1}{2} + b$ and $\psi^B = \frac{1}{2} - b$, as was the case with a single lobby. In fact, multiple values for ψ^A and ψ^B are consistent with equilibrium giving by the various interest groups.

The multiplicity of equilibria when there is more than one interest group reflects the groups' assumed inability to coordinate their contribution decisions. If, for example, all groups were to concentrate their giving on party A , then that party would be in a position to win many of the seats in the legislature. This would give the party's platform a large weight in the policy compromise, and so each group would be well justified in its decision to target its greater support to party A . On the other hand, if the groups were to offer their support mostly to party B , then that decision could be justified as well. Only if the groups form a single coalition can they eliminate the potential for coordination failure.

The potential for coordination failure remains when many lobbies vie for influence in a setting with strategic voters. We have been unable to derive a simple formula relating the policy outcome to the underlying preferences and sizes of the interest groups for this case. It seems that it will be necessary to restrict the set of admissible contribution schedules in some way if one wishes to derive specific predictions.

Finally, we have restricted attention to settings with only two political parties. Many parliamentary democracies have many small parties, none of which may win a majority of seats in the election. This raises the question of coalition formation, which has been ably addressed by Austen-Smith and Banks (1988), but not in a model that allows a role for organized special interest groups. The modeling of multi-party elections with voters and special interests remains a goal of our future research.

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APPENDIX

Electoral Motive with Sincere Voting

We establish that, with sincere voting, a special interest group might exercise an electoral motive for campaign giving only with respect to the more popular party. For concreteness, we consider the case where party A is more popular ($b > 0$) and $\pi_m > \frac{1}{2}$. The other cases are analogous.

Suppose, to the contrary, that the interest group contemplates contributions such that the participation constraint binds with respect to party A but not party B . In the event, the desired p^A , p^B , and c^B maximize (9), subject to (1), (2), (7a), and $c^A = \delta a(p^A - \frac{1}{2})^2$. The optimal platforms satisfy (12) and thus (13) and (15). Also, the first-order condition with respect to c^B implies

$$\alpha h \frac{\partial W}{\partial s} = -1.$$

This can be satisfied with $b > 0$ only if $\psi^B > \psi^A$, because

$$\text{sign} \left[\frac{\partial W}{\partial s} \right] = \text{sign} \left[\frac{na (\psi^A - \psi^B) \left(\frac{1}{2} - \pi_m \right)^2}{\delta + n (\psi^B)^2 + n (\psi^A)^2} + \frac{\zeta}{f} b \right].$$

This means that the interest group must give sufficiently to party B to enable it to win a majority of seats, even though party A is *ex ante* more popular. Note that $\psi^B > \psi^A$, together with (13) and (15) implies that

$$\pi_m \geq p^B \geq p > p^A \geq \frac{1}{2}$$

for the proposed equilibrium platforms and policy.

Now consider the following alternative strategy for the interest group. Let it offer to party A the contribution c^B from above, and let it ask that party to endorse the platform p^B in return. Meanwhile, let it offer to party B the contribution c^A from above, and let it ask the party to announce the platform p^A in return. These

offers will be accepted by both parties. The resulting election would yield party A (which is more popular) more seats than party B wins in the proposed equilibrium above. Thus, the compromise would give more weight to p^B and less to p^A . Since $\pi_m \geq p^B > p^A$, this shift in the compromise contributes to higher welfare for the interest group. Moreover, the interest group would benefit from having greater weight placed on party A 's fixed policy position. It follows that the alternative strategy will be adopted by the interest group's leaders, no matter what their political mandate.

Interest Group Maximization with Strategic Voting

We begin the analysis with the hypothesis that the lobby gives only what it must to influence the platforms; i.e., the participation constraints bind for both parties. The lobby maximizes

$$W(d, g, \psi) = - \int_{\pi_1}^{\pi_2} a(d + \frac{1}{2} - \pi)^2 d\pi - \zeta n \frac{b}{f} (1 - \psi) - \frac{a\delta}{2} \left[\left(\frac{1}{\psi} + \frac{1}{1 - \psi} \right) d^2 + g^2 \right]$$

subject to

$$\frac{1}{2} + b + \frac{\alpha h a \delta}{2} \left[\left(\frac{1}{\psi} - \frac{1}{1 - \psi} \right) d^2 + (2\psi - 1)g^2 \right] - \sigma(\psi) = 0.$$

The first-order conditions with respect to g , d , and ψ are

$$-a\delta[1 - \mu\alpha h(2\psi - 1)]g = 0, \quad (A1)$$

$$2n(d + \frac{1}{2} - \pi_m) - \frac{\delta d}{\psi(1 - \psi)}[1 + \mu\alpha h(2\psi - 1)] = 0, \quad (A2)$$

$$\frac{\zeta n b}{f} + \frac{a\delta d^2}{2} \left[\frac{1}{\psi^2} - \frac{1}{(1 - \psi)^2} - \mu\alpha h \left(\frac{1}{\psi^2} + \frac{1}{(1 - \psi)^2} \right) \right] - \mu[\sigma'(\psi) - \alpha h a \delta g^2] = 0, \quad (A3)$$

where μ is the Lagrange multiplier on the seat constraint.

Let $\zeta = 0$. If $b = 0$, the solution to (A1), (A2), (A3), and the seat constraint has $g = 0$, $\psi = \frac{1}{2}$, $\mu = 0$, and $d = n(\frac{1}{2} - \pi_m)/(n + 2\delta)$. By continuity, for b close to zero (A1) can be satisfied only if $g = 0$. Moreover, when $g = 0$, (A3) can be satisfied only if μ and $(2\psi - 1)$ have opposite signs. Now suppose that for some b sufficiently different from zero, μ and $(2\psi - 1)$ have the same sign. Then there must exist a \hat{b} for which

$\mu(2\psi - 1) = 0$. But then (A1) implies $g = 0$ for $b = \hat{b}$, and so (A3) requires $\mu = 0$ and $\psi = \frac{1}{2}$. However, the seat constraint cannot be satisfied for $b \neq 0$ and $\psi = \frac{1}{2}$. Therefore, $\zeta = 0$ implies $g = 0$ and $\mu(2\psi - 1) < 0$. The seat constraint requires $\psi > \frac{1}{2}$ and $\mu < 0$ when $b > 0$, and $\psi < \frac{1}{2}$ and $\mu > 0$ when $b < 0$.

We next show that $\mu\alpha h(2\psi - 1) > -1$. Suppose not. Then (A1) implies $g = 0$, and (A3) can be satisfied only if $1 - 2\psi - \mu\alpha h[\psi^2 + (1 - \psi)^2]$ has the same sign as μ . But $\mu\alpha h(2\psi - 1) \leq -1$ implies that $1 - 2\psi - \mu\alpha h[\psi^2 + (1 - \psi)^2]$ has the sign of $2\psi - 1$.¹⁹ This is a contradiction, since μ and $2\psi - 1$ cannot have the same sign.

Now suppose the participation constraint does not bind for one of the parties. Assume without loss of generality that this is party A. Then the problem facing the lobby is to choose d , g , ψ , and c^A to maximize the Lagrangian $L(d, g, \psi, c^A) \equiv W(d, g, \psi, c^A) + \lambda F(d, g, \psi, c^A)$, where

$$W(d, g, \psi, c^A) = - \int_{\pi_1}^{\pi_2} a(d + \frac{1}{2} - \pi)^2 d\pi - \zeta n \frac{b}{f}(1 - \psi) - \frac{a\delta}{2(1 - \psi)} [d - (1 - \psi)g]^2 - c^A$$

and

$$F(d, g, \psi, c^A) = \frac{1}{2} + b + \alpha h c^A - \frac{\alpha h a \delta}{2(1 - \psi)} [d + (1 - \psi)g]^2 - \sigma(\psi) .$$

With an active electoral motive, $c^A > 0$. Therefore, $L_c = 0$, or

$$\lambda \alpha h = 1 . \tag{A4}$$

The optimal choice of g must satisfy $L_g = 0$, or $L_g < 0$ and $g = g_{\min}$, or $L_g > 0$ and $g = g_{\max}$. But $g_{\min} < 0$ and $g_{\max} > 0$, and since $L_g = -2a\delta(1 - \psi)g$, the inequalities are not possible. It follows that $L_g = 0$, which implies

$$(1 - \psi)g = 0 . \tag{A5}$$

¹⁹Note that

$$1 - 2\psi - \mu\alpha h[\psi^2 + (1 - \psi)^2] = \frac{1}{2\psi - 1} \{ 2\psi(1 - \psi) - [1 + \mu\alpha h(2\psi - 1)] [\psi^2 + (1 - \psi)^2] \} ,$$

and that the right-hand side has the same sign as $2\psi - 1$ when $\mu\alpha h(2\psi - 1) < -1$.

Next we calculate L_ψ , and, using (A4) and (A5), write it as

$$L_\psi = -\frac{\zeta bn}{f} - \frac{a\delta d^2}{(1-\psi)^2}. \quad (\text{A6})$$

Now suppose that the group leaders have a narrow mandate; i.e., $\zeta = 0$. Then we cannot have $L_\psi = 0$, because d cannot be zero (the lobby could achieve $d = 0$ with no contributions, and we have assumed $c^A > 0$). Therefore, the leaders must set $\psi = 0$ and so, from (A5), $g = 0$. Next we use the first-order condition for d and the constraint $F(d, g, \psi, c^A) = 0$ to solve for d and c^A , from which it follows that

$$d = \left(\frac{n}{n+\delta}\right) \left(\pi_m - \frac{1}{2}\right) \quad (\text{A7})$$

and

$$c^A = \frac{1}{\alpha h} \left[\sigma(0) + \frac{\alpha h a \delta}{2} \left(\frac{n}{n+\delta}\right)^2 \left(\pi_m - \frac{1}{2}\right)^2 - \frac{1}{2} - b \right]. \quad (\text{A8})$$

If the right-hand side of (A8) is negative, then we have a contradiction, because c^A must be positive. If the right-hand side of (A8) is positive then we can use it (and the equilibrium values of ψ, g , and d) to calculate s^A , which gives

$$s^A = \frac{1}{2} + b + \frac{\alpha h a \delta}{2} \left[\frac{1}{\psi(s^A)} - 1 \right] \left(\frac{n}{n+\delta}\right)^2 \left(\pi_m - \frac{1}{2}\right)^2.$$

It follows that $s^A \geq \frac{1}{2} + b$. But then $s^A > s = \sigma(0)$, which violates the participation constraint for party A . We conclude that, if $\zeta = 0$, the assumption that the lobby pursues an electoral motive for to party A leads to a contradiction.

Finally, suppose the group leaders have a broad mandate; i.e., $\zeta = 1$. If the bias b is small, again we will have $L_\psi < 0$ in (A6), hence $\psi = 0$. Using the equilibrium value for d from (A7), we see that this will be the case whenever

$$b < \frac{\delta^2 a n f (\pi_m - \frac{1}{2})^2}{(n+\delta)^2}.$$

For such values of b , the assumption of an electoral motive for contributions to party A again generates a contradiction.

Figure 1
Compromise Function

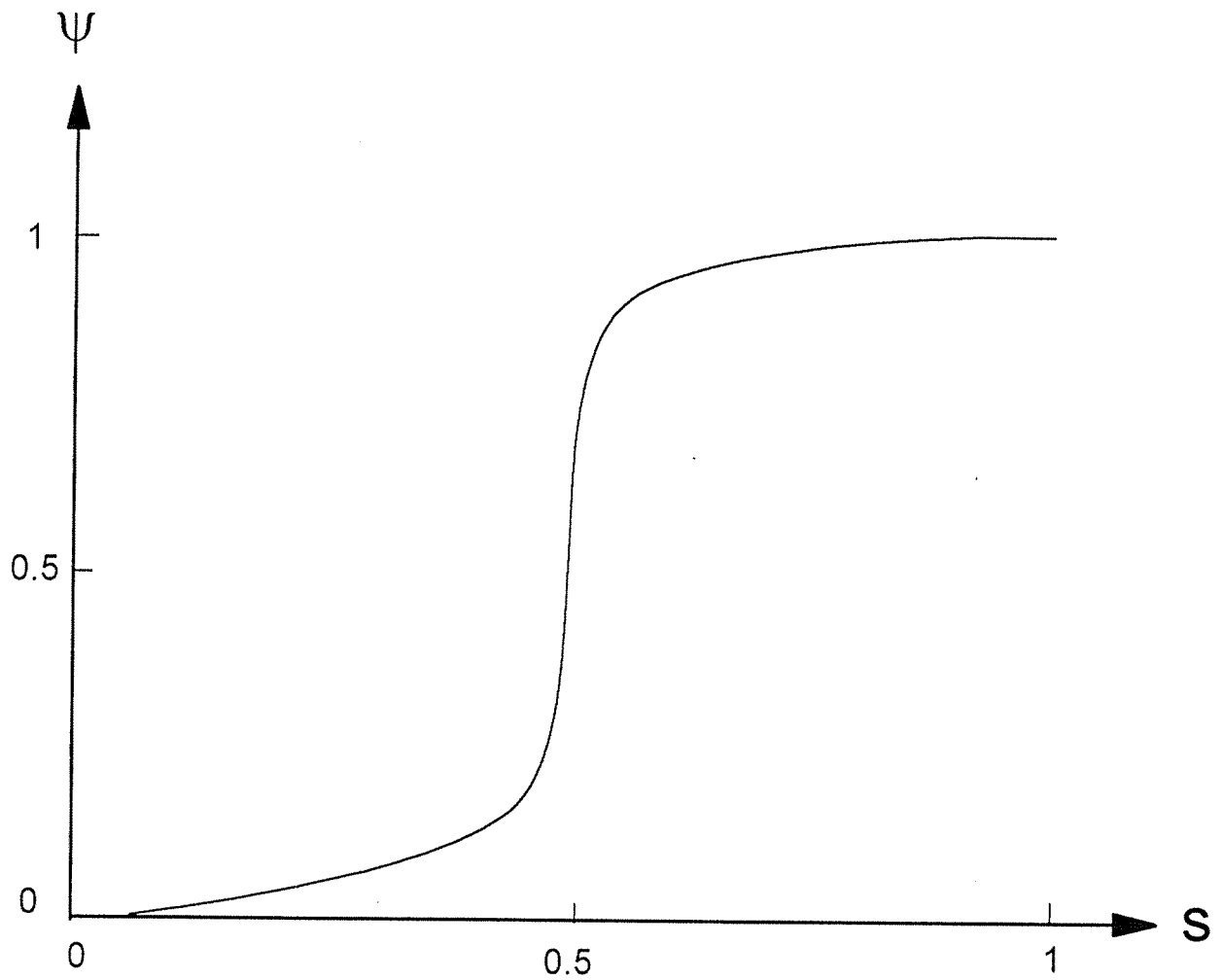


Figure 2
Utility of voter with $\beta=0$ and $\pi=0.4$

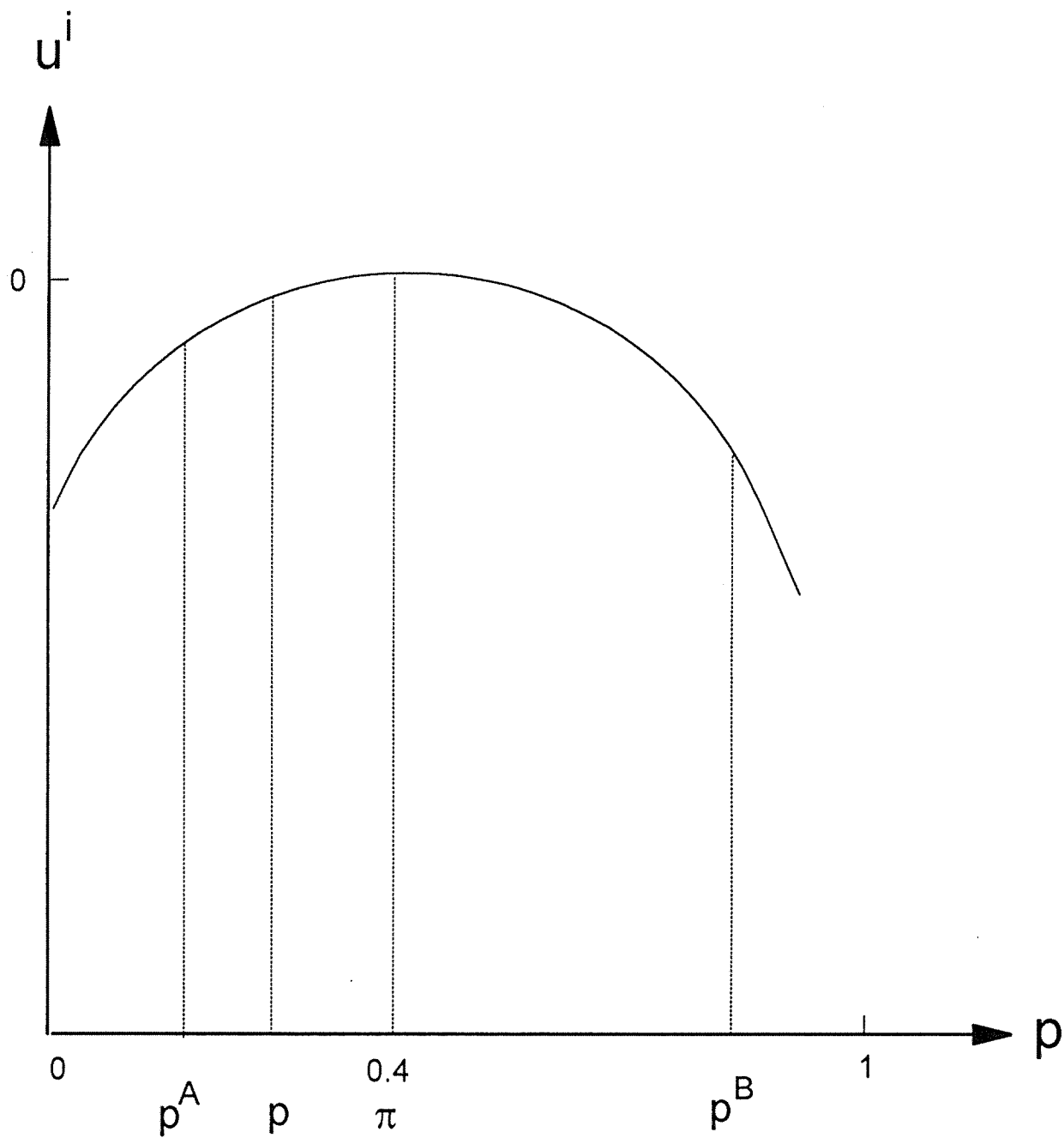
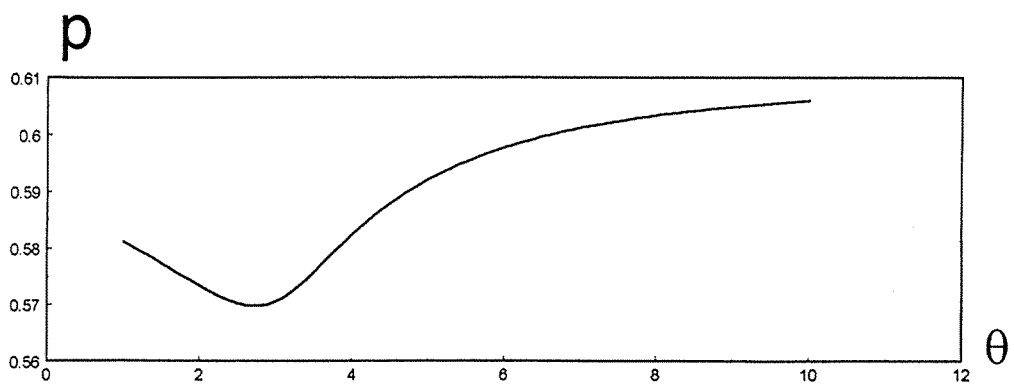
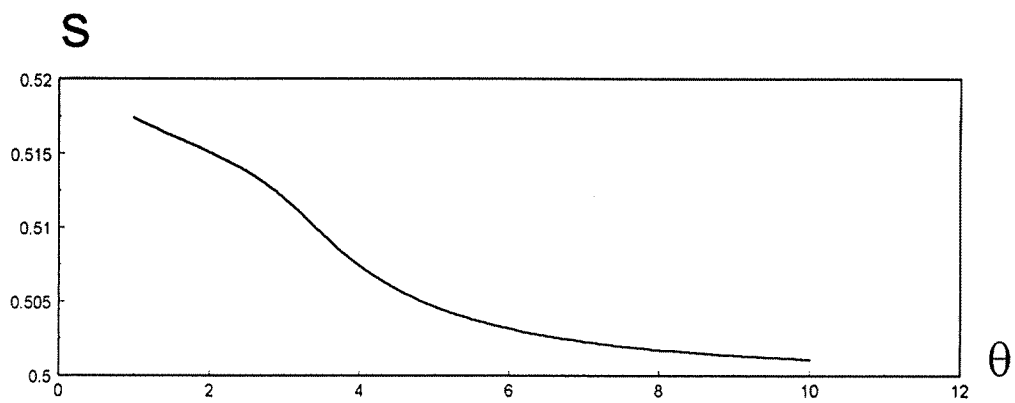


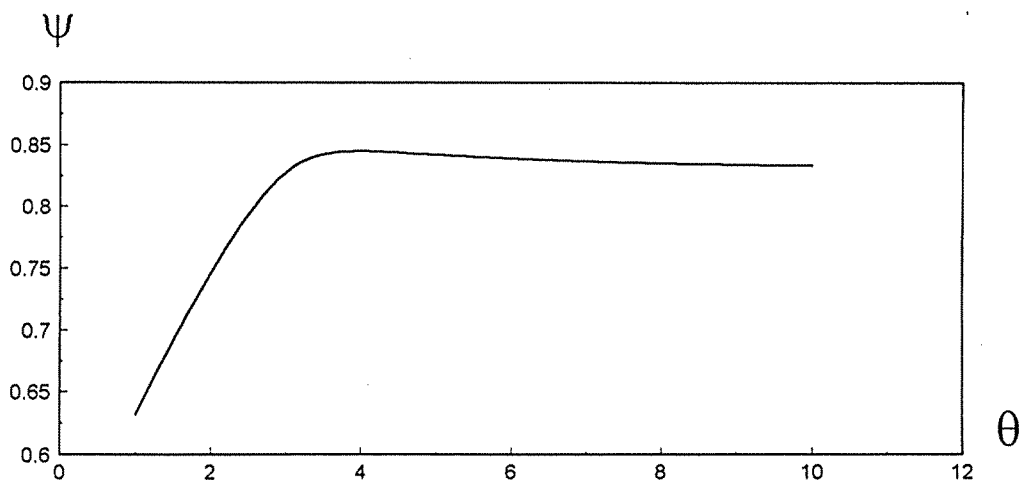
Figure 3
Effects of Institutional Change



(a)



(b)



(c)

Institut für Höhere Studien
Institute for Advanced Studies

Stumpergasse 56

A-1060 Vienna

Austria

Phone: +43-1-599 91-145

Fax: +43-1-599 91-163