# Expert Captured Democracies

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**Abstract**

Do experts hurt or benefit the average voter? We examine this question in a model of electoral competition where voters have state-contingent, single peaked policy preferences, political parties compete for office rents by committing to policy platforms, and an expert with preferences different from the median voter tries to manipulate platform and ballot choices through cheap talk messages about the state-of-the-world. By itself, partisan endorsement—a recommendation to voters regarding which platform to vote for—makes a majority worse off, while policy advocacy—a message about the intrinsic merits of different policies aimed at influencing platforms—makes all voters better off. In conjunction, endorsements and advocacy generate higher welfare than either form of communication alone, and office seeking politicians serve the public interest better than decision makers who are motivated by the public interest per se. The key insight is that electoral competition can produce de facto delegation of decision making power to biased experts, making policy choices distorted but also more informed.

**JEL Classification:** C72, D72, D82.

**Keywords** experts, endorsements, advocacy, electoral competition, inidrect democracy, cheap talk, intermediation, delegation.

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# 1 Introduction

Democratic decision making in modern societies increasingly relies on critical scientific input. The following questions are instantly recognizable from contemporary policy debates. Is there anthropogenic global warming? If so, how large an economic cost should we bear to reduce carbon emissions? Are genetically modified foods safe to eat? Does austerity prolong a recession or does it revive economies by restoring fiscal health? Are self driving cars safe? Is net neutrality necessary?

These kinds of questions are central to the design of environmental policy, food and drugs regulation, business cycle management, technology policy and international relations. Voters and politicians must turn to a small minority of specially trained experts to learn the answers. Yet, incorporating expert advice into policy making is not straightforward because experts are often perceived as biased. Scientists who certify GM foods as safe are accused of being funded by large agribusiness companies. Climate scientists who warn of climate change do not face the economic burden of abatement the way coal miners and steel workers do. Advocates of austerity are thought to have other right wing goals such as keeping government small or resisting redistribution. When most economists warned that there will be significant economic costs of Britain leaving the European Union, Michael Gove, a Tory politician campaigning for 'Brexit' famously said, "People in this country have had enough of experts."

Optimal policy is usually a function of both objective information and subjective preferences. When the expert's preferences are known to be different from that of the average member of the public (perhaps due to differences in economic interest or ideology), the public and the expert would disagree as to what the best policy is even under symmetric information. In processing expert advice under asymmetric information, the public and the politicians face a signal extraction problem – to what extent is the advice derived from the expert's scientific knowledge and to what extent is it shaped by her non-scientific preferences or values?

This paper studies how representative democracy is affected by expert opinion in the presence of such credibility constraints. We present a simple Downsian model in which policy outcomes result from the interaction between three sets of actors: voters, office seeking politicians and an expert. Voters and the expert have state-contingent single peaked preferences, with only the expert privately informed about the 'state-of-the-world.' Competing politicians commit to policy platforms in order to maximize their chances of getting elected. The expert may communicate her private information through public cheap talk messages throughout the electoral process, before and/or after platforms are chosen. The model combines in a natural way two canonical frameworks of economic theory: the Hotelling (1929) model of spatial competition and the Crawford-Sobel (1982) model of strategic communication between an informed but biased expert and an uninformed decision maker.

What is the value of an expert in such a setting? To the extent policy choices incorporate the expert's information, she serves the public interest. To the extent they are influenced by her preference bias, she may impose harm on the average voter. How these two forces will play out is the central concern of the paper. Since policies are not directly chosen by the voter but mediated by third parties (politicians) with their own motives, Blackwell's theorem cannot be invoked to infer that the value of experts in a democracy must be non-negative.

The expert's information can be incorporated into policies through two potential channels: (a) the expert enables political parties to make informed platform choices by credibly revealing some relevant scientific information in the pre-electoral stage (what we call *policy advocacy*) (b) platform divergence among parties creates genuine choice for voters and the expert helps them elect the more suitable platform at the voting stage (what we call *partisan endorsement*). As it turns out, voter welfare critically depends on which form(s) of communication the expert can engage in.

First, consider the case where the expert can only issue partisan endorsements. The first channel is then shut down by assumption. Due to usual reasons that arise in spatial voting, equilibrium platforms must converge, endogenously foreclosing the second channel too. The policy outcome in the model becomes completely insensitive to the expert's information in this scenario.

However, since the expert's endorsement can influence electoral outcomes for *off-the-equilibrium-path* platform choices, this convergence happens not at the expected ideal point of the median voter but closer to the expected ideal point of the expert. The median voter (and by extension a majority of voters) reaps no informational advantage from the expert's presence but suffers a loss in welfare due to the break down of the median voter theorem. Experts are a democratic liability if their engagement with public policy is purely partisan and short term, comprising of nothing more than political endorsements during campaign season.

Interestingly, the magnitude of platform distortion is related to the expert's bias in a non-monotonic fashion. For a given level of uncertainty about the underlying state, maximum distortion is caused by moderately biased experts. Extremely biased experts have little or no influence on platforms because their endorsements are more indicative of their bias than their information.

Suppose next that the expert cannot do endorsements but can engage in policy advocacy, i.e., express opinions about the merits of alternative policies *before* election campaigns are launched. Since there is no last minute partisan endorsement to influence voter choice, equilibrium platforms will always converge to the policy that is optimal for the median voter conditional on the expert's policy message. The outcome in this scenario is as if the expert is playing the standard Crawford-Sobel (1982) game with the median voter, where the latter always chooses her expected utility maximizing policy following the expert's recommendations. This induces the familiar partitioning of the state space in equilibrium, with increased coarsening of information in the direction of the expert's bias. Since platforms maximize the median voter's expected payoff conditional on available information, it follows that the expert's presence can only be welfare enhancing for the median voter, and strictly so when the game has a non-babbling equilibrium.

The *timing* of the expert's communication—whether pre-campaign and aimed at influencing platforms, or pre-election and aimed at influencing voters' ballot choices—has dramatically opposite effects on voter welfare, therefore. The natural question is what happens when experts practice both advocacy *and* endorsements. The key result of the paper is that in all interesting cases, there is a synergy between the two forms of communication. The median voter is better off when the expert practices both policy advocacy and partisan endorsements, rather than just one or the other. In particular, while the endorsement reduces welfare *in itself* by distorting platforms, in conjunction with policy advocacy, it actually raises voter payoffs beyond what policy advocacy alone could achieve.

The key intuition behind this result is related to the delegation literature for cheap talk games (Holmstrom (1984), Dessein (2002)). An uninformed decision maker, in deciding whether to delegate decision making to an informed but biased advisor, faces a trade-off between tolerating distorted choices (in the case of delegation) versus less informed choices (when relying on cheap talk advice). For small biases of the advisor, the trade-off is resolved in favor of delegation. A similar force is at play here. The expert assumes *de facto* decision making power through her ability to pull electoral outcomes towards her preferred policies using her endorsements, which incentivizes her to reveal more information before campaigns rather than withholding information to manipulate choices. The median voter is better off gaining information at the cost of policy distortion.

The delegation like quality of political competition under expert influence is however limited. It does not lead to full revelation with policies fine tuned to the underlying state-of-the-world. The ability of the expert to manipulate platforms in the direction of her bias depends on sufficient residual uncertainty in voters' minds at the electoral stage *after* platforms have been chosen. Experts will therefore reveal information subject to retaining this influence. As a result, policy advocacy combined with endorsements reveals coarse information and leads to a partitioning of the state space, albeit a finer and more uniform partition relative to policy advocacy alone.

This *de facto* delegation property of electoral competition is further illustrated in an extension of the model where experts are endowed not just with the power of making public statements but are assumed to dictate the platform choice of one party to promote their policy objectives. We show that under such direct, albeit partial, capture of the democratic process by experts, average voter welfare is even higher. Indeed, there exists an equilibrium where the optimal mechanism (Holmstrom (1984), Goltsman et al. (2009)) from the median voter's perspective is replicated through electoral competition. This optimal mechanism takes the form of capped delegation, i.e., the expert's preferred policy is chosen in equilibrium subject to an upper (lower) bound if the expert has an upward (downward) bias.

Several broad lessons emerge from our analysis. First, for expertise to improve democratic outcomes, it is necessary that experts have a long term engagement with the political process and public debate, conveying their opinion about the intrinsic merits of different policies and shaping the political agenda before elections, not merely throwing their support behind particular parties and candidates.

Second, the institution of representative government formed by narrowly office seeking parties plays an important commitment role in aggregating policy relevant information. These parties distort platforms and pander to experts to win their endorsement, but in the process, incentivize those biased experts to reveal more information ex ante. If policies were chosen by a utilitarian social planner, parties motivated by the public interest rather than electoral prospects, or some form of direct democracy, the slant of policies towards the expert's bias would be absent, as would the consequent gain in information, leading to lower welfare for most voters.

This commitment role of representative democracy arises from the inability of the expert to commit to revealing her information truthfully. Since imperfect information transmission also hurts the expert, the expert would like to commit to revealing all her information when policies are chosen in the public interest. Such incentives for full revelation are weaker under representative democracy, exactly because political parties choose policies that serve the expert's ideological interests to a greater extent.

Finally, it is important even in representative democracies that parties are able to commit to specific policy platforms rather than commit merely to a *policy stance* by nominating a candidate with the appropriate preference. In the latter case, electoral competition leads to convergence on candidates who share the median voter's preference, and who will therefore not pander to experts and elicit more information from them. Programmatic politics dominates personality centred politics in our framework.

Our paper is broadly related to a theoretical literature on media bias which examines selective or distorted presentation of information to the voting public. The media, like the expert in our framework, is assumed to have an informational advantaged over the public, which can be leveraged for profit or influence. One set of papers investigates the causes rather than consequences of information suppression, asking why it may not be in the interest of profit maximizing information providers to supply the best available information (Mullainathan and Shleifer (2005), Baron (2006), Gentzkow and Shapiro (2006), Burke (2008), Besley and Prat (2006), Bernhardt, Krasa and Polborn (2008) and Anderson and McLaren (2012)). Unlike a disinterested commercial media assumed in these papers, the expert in our model has an intrinsic motivation to manipulate policy choices. More pertinently, our focus is on how biased information shapes platforms, policy outcomes and voter welfare, i.e., its electoral consequences.

Other papers on media bias endogenize electoral competition and find that biased information providers can have policy influence and welfare implications even if their bias is common knowledge. In some papers, the conclusion rests on the assumption that the informed manipulator can restrict her message to a subset of voters (Grossman and Helpman (1999), Stromberg (2004), Chan and Suen (2008)). In others, voting behavior (Andina-Diaz (2004)) or media strategy (Carrilo and Castanheinra (2008)) is exogenously given and not derived from purposive, strategic considerations. Wittman (1983), Calvert (1985), and Gul and Pesendorfer (2011) differ from our paper in terms of both assumptions and conclusions. These papers assume policy motivated parties or candidates as opposed to office motivated ones, and the departure from the median voter theorem takes the form of platform divergence rather than convergence of platforms to a policy that does not maximize the median voter's utility.

There is a literature on spatial voting where voters have state dependent preferences and political parties have private information about the state-of-the-world. This literature investigates to what extent private information is revealed through platform choices (Martinelli (2001), Martinelli and Matsui (2002), Heidhues and Lagerlof (2003), Laslier and Van de Straeten (2004), Kartik, Squintani and Tinn (2015)) or cheap talk messages, i.e., non-binding campaign promises (Harrington (1992), Schnakenberg (2016), Panova (2017), Kartik and Van Weelden (2017)). In contrast, in our framework, political parties have no informational advantage over voters. Rather, an ideologically biased expert or media outlet conveys policy relevant information and influences electoral outcomes. Gilligan and Krehbiel (1987, 1989; see also Krishna and Morgan (2001)) study policy advice under asymmetric information, but in a legislative rather than electoral setting. A committee, whose members have different preferences from the median member of a legislature but superior information about the consequences of various policies, strategically conveys its information to the legislature through cheap talk. Unlike in our framework, the legislature's choice set, upon receiving policy advice, is given by pre-determined rules (open, closed and modified) rather than platform choices of self-interested office seekers.

Finally, there is a literature on candidate valence, which may be a source of asymmetric information and electoral manipulation but of a fundamentally different kind. In our framework, voters do not know their policy preference since it is state-contingent. In the valence literature, voters have deterministic preference over policies but also care about a second dimension—the ability or character of elected candidates. Groseclose (2001) and Aragones and Palfrey (2002) examine policy outcomes when one candidate has a *known* valence advantage, while Kartik and McAfee (2007), Boleslavsky and Cotton (2015) and Chakraborty and Ghosh (2016) look at asymmetric information. In particular, the results in Chakraborty and Ghosh (2016) suggest that private information about *valence* can give substantial manipulative powers to the media or expert that can reduce voter welfare. The message of this paper is that private information on *policy* can lead to manipulation but the welfare effect on the average voter is generally positive if communication possibilities are rich enough.

The rest of the paper is organized as follows. In Section 2 we present our model of indirect capture in which an informed expert influences the political process purely through public speeches. Sections 2.1 and 2.2 characterize the effect of partisan endorsements and policy advocacy on electoral competition. Section 2.3 compares voter welfare across alternative institutional arrangements and the role of various commitment assumptions. Section 3 analyzes situations where the expert has directly captured policy making by one or both of the two parties. Section 4 contains our concluding remarks. All proofs are in the Appendix.

## 2 A model of indirect capture

A unit mass of *voters*, indexed by $b \in [-1, 1]$, face an uncertain state of the economy captured by a random variable $y \in [0, 1]$ where $y$ follows the uniform distribution. The utility of voter $b$ in state $y$ from a policy $x$ is given by a quadratic loss function

$$u(x; y, b) = -(y + b - x)^2 \tag{1}$$

Thus, the ideal policy of voter $b$ in state $y$ is $y + b$, where $b$ is the voter's ideological bias. Let $G$ be the (atomless) distribution of voters when they are ordered according to their ideology and let $b_{mv} = 0$ be the ideology of the median voter.

Policies are not directly chosen by the voters. Instead they are determined via electoral competition. Two office-seeking parties commit to platforms $x_L$ and $x_R$ respectively that they will implement if elected to office. The parties do not know the realization of $y$ and neither do any of the voters, except for one. One voter, the *expert*, with ideological bias $b_e > 0$, privately learns the realization of $y$. The two political parties and all voters apart from the expert hold uniform priors about $y$.[1]

The expert can publicly communicate with the electorate and with the parties via cheap talk. We allow for two stages of communication. The first stage of communication takes place before the parties have made their platform choices. We call this the *policy advocacy* stage and denote the expert's message at this stage by $m_a$.[2] The message $m_a$ may contain information about the state $y$ and influence the platform choices of the parties and the subsequent voting behavior of the electorate.

The second stage of communication takes place after the parties have committed to their platforms but before voters vote. We call this the *platform endorsement* stage and denote the corre-

[1] In what follows, we focus on the case $b_e < \frac{1}{2}$. If $b_e \geq \frac{1}{2}$, the expert's presence has no effect on outcomes. Equilibria are identical to the classical Hoteling-Downs model without an informed voter and both parties located at the expected ideal policy of the median voter.

[2] As is standard in cheap talk games, messages have no intrinsic cost or benefit associated with them or even any meaning. Rather meaning is derived in equilibrium after taking into account incentives. We assume that the underlying message space is rich enough so that information transmission is constrained only by incentives and not the availability of messages.

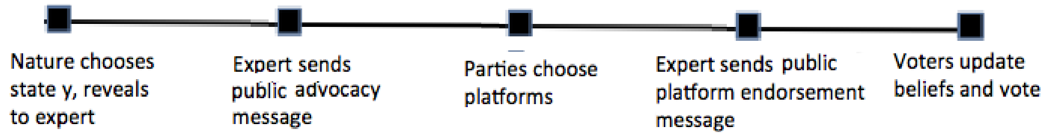


Figure 1: Timing of moves

sponding message by $m_e$. Since $m_e$ arrives after parties have committed to platforms, endorsements can only affect the behavior of voters (although anticipated future endorsements can affect platforms). In the final stage of the game, each voter votes in favor of her preferred platform after taking into account all available information. The party that wins a majority of votes is elected and implements its platform. Ties in votes are resolved uniformly. Figure 1 describes our timing structure.

This simple model of electoral competition among two office seeking parties differs from the canonical Hotelling-Downs framework in two ways. First, we introduce an uncertain state of the world that is relevant to determine the ideal policies of all voters. Second, we suppose that one particular voter, the expert, is privately informed about this state. The expert only uses public communication to influence the electoral process but does not directly control any other aspect of the elections. For this reason, we call this a model of indirect capture, to contrast with the direct capture of one or more political parties or any other institution.[3]

While we model the expert as a single agent, this assumption should not be taken literally. The expert in our model represents a particular interest group, such as the scientific community or an elite who have an informational advantage over the average voter and are able to exploit this advantage because of their access to scientific journals and media outlets. A common theme heard both from the left and the right about the functioning of modern democracies is that its proper operation is distorted by the concerted actions of an ideologically biased elite. Our formulation allows us to evaluate this kind of critique in its bleakest form.[4]

We proceed by first characterizing equilibrium behavior in the platform endorsement stage,

[3] We consider a version of such direct capture in Section 3.

[4] As we show, even with a monopolist expert, the overall welfare effect of indirect capture is quite beneficial for voters because the electoral process results in significant information revelation. With multiple ideologically distinct and competing groups of experts, this information revelation effect should only be enhanced (see, e.g., Krishna and Morgan (2001)). In this sense we look at the worst case scenario from the perspective of average voter welfare.

assuming that voters and parties hold interval beliefs on the distribution of $y$ at this stage (i.e., $y$ is believed to be uniformly distributed over a sub-interval $[y_l, y_h] \subset [0,1]$).[5] This serves two purposes. First, it establishes what happens under electoral competition if experts only have short term and partisan engagement with the policy debate, i.e., they can only send the message $m_e$. In that case, the interval $[y_l, y_h]$ will coincide with $[0,1]$. Second, it sets the stage for analyzing the extended game described above where experts have long term engagement that allows them to engage in policy advocacy as well, i.e., send both messages $m_a$ and $m_e$.

## 2.1 Platform endorsements

Suppose that at the platform endorsement stage the expert has revealed that the state $y$ lies in an interval $[y_l, y_h] \subset [0,1]$. Suppose further that the contesting parties have chosen platforms $x_L, x_R$ with $x_L \leq x_R$. Applying backward induction, we first identify the equilibrium properties of the endorsement message $m_e$ and subsequent voting behavior given arbitrary platforms $x_L, x_R$. We then characterize equilibrium platform choices by the political parties over the interval $[y_l, y_h]$.

Let $x_{\text{mid}} = \frac{x_L + x_R}{2}$ be the midpoint of the platforms. If $x_L = x_R$, the expert's second message cannot affect voting behavior and each party wins the election with probability 1/2. Otherwise, whenever $E[y|m_e] > x_{\text{mid}}$, the median voter strictly prefers the right platform and whenever $E[y|m_e] < x_{\text{mid}}$, the median voter strictly prefers the left platform.

The following two lemmas are straightforward and they prove useful in characterizing equilibrium behavior in the endorsement stage. The first says the median voter is decisive for the electoral outcome. The second says the expert's endorsement must reflect her true preference. It also identifies conditions under which the expert is influential (i.e., her endorsement affects voting outcomes).

**Lemma 1** *Fix $[y_l, y_h]$ and $x_L$, $x_R$. When the median voter strictly prefers one platform, that platform is elected.*

Since voters have single-crossing single-peaked preferences and identical information, if the median voter strictly prefers one candidate, so does a majority of the electorate. It is then enough to focus on the behavior of the median voter to determine electoral outcomes. We will do so in

[5] We show later that in any pure strategy equilibrium, the expert partitions the state space into intervals at the policy advocacy stage so that voter beliefs in the endorsement stage must always take this form.

what follows and often refer to the median voter simply as *the voter*. Our next result describes the effect of the expert's message $m_e$ on voting behavior.

**Lemma 2** *Fix $[y_l, y_h]$ and suppose $x_L < x_R$. If $m_e$ influences voting, it can only reveal the platform the expert prefers, i.e., whether $y > x_{mid} - b_e$ or $y < x_{mid} - b_e$; and the platform the expert prefers is elected. The message $m_e$ is influential iff*

$$E[y|y > x_{mid} - b_e] \geq x_{mid} \tag{2}$$

*When $m_e$ is not influential, the platform closest to $E[y]$ is elected regardless of $m_e$.*

Lemma 2 is a standard result for binary action cheap talk games. When the message $m_e$ influences voting behavior, the expert has an incentive to send the message that elects the expert's more favored platform. Voters account for this incentive and so the message $m_e$ can only convey the expert's preferences to the voter, i.e., whether or not $y + b_e > x_{\text{mid}}$.

The message $m_e$ is influential if the (median) voter has an incentive to follow the expert's advice. Since $b_e > 0$, whenever the expert endorses the left platform $x_L$, the voter also prefers the left candidate $x_L$. The inequality (2) provides the condition under which the median voter (and so a majority of voters) prefers to follow the expert's endorsement of the right candidate $x_R$.[6]

To understand when (2) might hold, define $y^* \in \mathbb{R}$ to be such that

$$E[y|y \geq y^*] = y^* + b_e \tag{3}$$

The state $y^*$ is a fixed point— the expected value of the true state, given that it is at least $y^*$, equals the expert's ideal point $y^* + b_e$ when the state is $y^*$. Since $y$ is uniformly distributed on $[y_l, y_h]$, we can solve (3) and obtain

$$y^* = y_h - 2b_e. \tag{4}$$

So (5) holds and the expert is influential and if and only if

$$x_{\text{mid}} \leq y^* + b_e = y_h - b_e \tag{5}$$

[6]In any cheap talk game, there is always a babbling equilibrium where voters refuse to ascribe any meaning to the message $m_e$ and so the expert can do no better than be uninformative. When an influential equilibrium also exists, it yields higher expected payoff to both the expert and the voter (conditional on $m_a$ and the platforms). Following the literature, we select the Pareto dominant influential outcome whenever it exists. In the statement of Lemma 2 we also break ties by assuming that the voter follows the expert's advice when she is indifferent. This is in the spirit of selecting the efficient outcome and has no effect on our results.

The voter is willing to follow the expert's endorsement for the right platform if and only if the "average" platform $x_{\text{mid}}$ is not too high. The interval $[y_l, y_h - b_e]$ is the expert's "zone of influence". His endorsement determines the electoral outcome if and only if the average platform lies in this interval.

We turn now to the determination of equilibrium platform choices. Let $v = y_h - y_l$ measure the uncertainty about the state faced by the general public at the time platforms are chosen. Proposition 1 shows that this uncertainty is a key determinant of equilibrium platforms.

**Proposition 1** *Suppose $y \in [y_l, y_h]$. In equilibrium the two parties choose a common policy platform, $x_L = x_R = x^*$ given by:*

$$x^* = \begin{cases} E[y] + b_e & \textit{if } v \geq 4b_e \textit{ (full expert pandering)} \\ y^* + b_e & \textit{if } 2b_e < v < 4b_e \textit{ (partial expert pandering)} \\ E[y] & \textit{if } v \leq 2b_e \textit{ (voter pandering)} \end{cases} \quad (6)$$

Platform convergence occurs in this model for essentially the same reason as in the classical median voter theorem. Suppose $x_L \neq x_R$. If the expert's endorsement is influential, the party which is winning with probability less than $\frac{1}{2}$ can gain by matching its platform with the other party's platform. If, on the other hand, the expert's endorsement is not influential, the right party wins with 0 probability, which implies it will want to deviate at least to the other party's platform.

Proposition 1 states that whether parties pander to the median voter or the expert depends on the range of uncertainty $v$ about the state variable $y$. Greater uncertainty leads to equilibrium platforms being pulled closer to the expert's ideal policy rather than the median voter's. Figure 2(a) depicts this correspondence between the degree of uncertainty $v$ and equilibrium platforms, for fixed bias of the expert.[7]

To understand Proposition 1, recall that the expert's endorsements are influential if and only if the average platform lies in the expert's zone of influence $[y_l, y_h - b_e]$. If the uncertainty about the state is small enough ($v \leq 2b_e$), both the median voter's and the expert's ideal policies lie above the zone of influence. In this case, both parties will pander to the voter and locate at $E[y]$. If any party deviates towards the expert, the expert's endorsement for that party will not be influential and so its rival will win the election for sure. In contrast, if the uncertainty about the state is large

[7] In Figure 2(a) , we set $y_l = \frac{1}{2} - \frac{v}{2}$ and $y_h = \frac{1}{2} + \frac{v}{2}$, so that $E[y] = \frac{1}{2}$ and vary $v = y_h - y_l$, fixing $b_e = 1/4$. In Figure 2(b) , we fix $[y_l, y_h] = [0, 1\} = \frac{1}{2} - \frac{v}{2}$ and vary $b_e \in [0, 1/2]$.

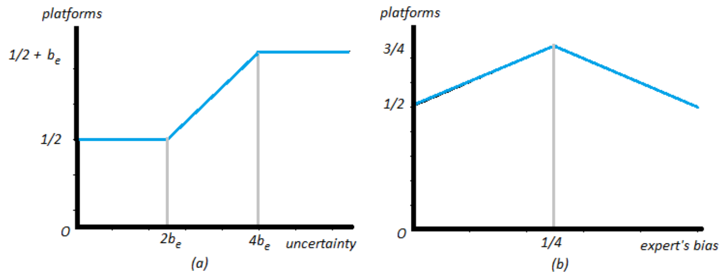


Figure 2: Platforms, uncertainty & bias

enough ($v \geq 4b_e$), both the median voter's and the expert's expected ideal policies lie in the zone of influence. An expert endorsement for any party decides the election and both parties pander completely to the expert.

In the intermediate case ($2b_e < v < 4b_e$), only the voter's expected ideal policy lies in the zone of influence. In this case, parties will choose platforms at the edge of the zone of influence, i.e., at $y^* + b_e = y_h - b_e$. Moving platforms closer to the expert's expected ideal policy always increases the probability of being endorsed. However, if platforms leave the zone of influence, the endorsement will not translate into electoral victory, so parties pander to the expert subject to remaining in the zone.

This relationship between uncertainty about the state and the degree of expert (or voter) pandering plays a key role in the analysis of the next section where we allow the expert to also influence platforms through policy advice. As long as political parties are going to pander to the expert in their platform choices, she has no incentive to withhold information during advice, but that influence is lost if too much information is revealed at this stage. This trade off is the key determinant of the incentives that determine the expert's equilibrium policy advice.

Proposition 1 also identifies an interesting non-monotonicity in the expert's influence on policy as a function of her bias. This is depicted by Figure 2(b) which plots equilibrium platforms as a function of the expert's bias $b_e$ for fixed uncertainty about the state. For $b_e < 1/4$, both parties pander to the expert. If the expert's bias increases slightly, equilibrium platforms move further away from what is ideal for the median voter. The voter's welfare is decreasing in the expert's bias in this zone. For $b_e > 1/4$ however, the voter's welfare is increasing in the expert's bias. This is because extremely biased experts struggle to issue credible endorsements, reducing the incentive of political parties to pander to them and reverting platforms closer to the voter's ideal policy.

Experts lose influence when they desire to change the course of public policy substantially rather than modestly, making such ambitions self-defeating. Overall, experts of intermediate bias exert the most distortionary influence on policies and impose the most harm on the average voter.

If the expert's public communication is only limited to partisan endorsements, Proposition 1 shows that the welfare effect of an informed expert on a majority of voters is unambiguously negative. There is a potential channel for incorporating expert information into policy choices even with this limited form of communication. However, this requires the creation of a non-trivial menu of policy choices for voters through platform differentiation, with the expert subsequently enabling them to choose "horses for courses" depending on the state-of-the-world. Unfortunately, due to platform convergence in response to electoral incentives, expertise produces no useful information *in equilibrium.* The expert still exerts a distortionary effect on platforms, which move away from the median voter's expected ideal $E[y]$, due to her ability to influence choices off-the-equilibrium-path.

The zero informational benefit, coupled with a negative platform distortion effect, implies the median voter (and by extension, a majority of voters) suffers welfare losses due to the biased expert. Indeed, the median voter's welfare is driven below the level where the expert is banned from issuing endorsements and platforms are chosen without any access to information. In what follows, we show that this effect of an expert on voter welfare is reversed in most interesting cases when the expert is allowed to provide policy advice in addition to partisan endorsements.

## 2.2 Policy advocacy

We now allow the expert to send the additional public message $m_a$ before party platforms are chosen, potentially revealing some information about $y$. The expert faces a trade-off between making policies more informed and making them more aligned with her own preferences, inevitably leading to some coarsening of information in equilibrium. For instance if the expert perfectly reveals the value of $y$, the parties will locate at $y$, the ideal policy of the median voter. This cannot be an equilibrium since the expert then has an incentive to overstate the value of $y$ in order to get policies that are closer to her own ideal policy.

In general, there are multiple equilibria corresponding to different partitions of the state space $[0, 1]$. Our next result identifies the most informative equilibrium. To present the result concisely, define $\widehat{N} \geq 0$ to be the integer part of $1/4b_e$ and let $R = 1 - 4b_e\widehat{N}$ be the "remainder." Note $R \in [0, 4b_e)$.

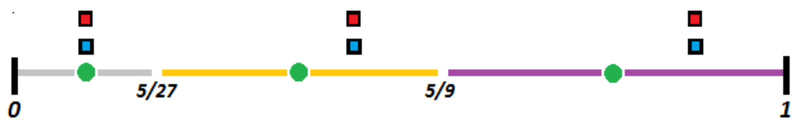


Figure 3: The full equilibrium

**Proposition 2** *In every pure strategy equilibrium, the expert's policy advocacy message $m_a$ discloses an interval $[c_{i-1}, c_i]$ that contains $y$, where $0 = c_0 < c_1 < ... < c_N = 1$, $i = 1, ..., N$. There is a finite upper bound $N^*(b_e) \geq 1$ such that $N \leq N^*(b_e)$. When $b_e > \frac{1}{3}$, $N^*(b_e) = 1$ and policy advocacy is uninformative. Otherwise, $N^*(b_e) > 1$ and policy advocacy is informative. The most informative equilibrium with $N^*(b_e)$ number of intervals is given by the following:*

1. *If $R > 3b_e$ then $N^*(b_e) = \widehat{N} + 2$ with cutoffs $c_1 = \frac{2}{3}R - 2b_e$, $c_2 = R$, and $c_i = c_{i-1} + 4b_e$, $i \geq 3$.*

2. *If $2b_e \leq R \leq 3b_e$ then $N^*(b_e) = \widehat{N} + 1$ with cutoffs $c_1 = R$ and $c_i = c_{i-1} + 4b_e$, $i \geq 2$.*

3. *If $R < 2b_e$ then $N^*(b_e) = \widehat{N}+1$ with cutoffs $c_1 = \frac{2}{3}(R + b_e)$, $c_2 = R+4b_e$, and $c_i = c_{i-1}+4b_e$, $i \geq 3$.*

Proposition 2 completely characterizes the partition corresponding to the most informative equilibrium as a function of the expert's ideological bias $b_e$. For each interval, the parties choose common platforms in accordance with Proposition 1.

Figure 3 depicts a case where $b_e = \frac{1}{9}$ and $N^* = 3$. The left most interval is the smallest, with length 5/27 which is less than $2b_e$. Consistent with Proposition 1, the parties locate at 5/54, the expected ideal policy of the median voter conditional on the expert's policy advocacy message corresponding to this interval. The next interval to the right is larger and of length in between $2b_e$ and $4b_e$. The parties locate at 4/9 which is the right boundary of the expert's zone of influence conditional on $y$ belonging to this interval. The third interval from the left is of length exactly $4b_e$. Both parties fully pander to the expert and locate at 8/9, the expected ideal policy of the expert given that the state $y$ lies in this interval.

The most informative equilibrium always has the qualitative features depicted in Figure 3. As $b_e$ falls, the number of intervals $N^*$ rises, with the interval lengths increasing as one moves from left to right. The left most interval is smallest and of length at most $2b_e$. In this interval, the parties locate at the voter's expected ideal point conditional on all available information. If $N^* \geq 2$, the second from left interval has length in between $2b_e$ and $4b_e$. Both parties locate at the edge of the expert's zone of influence corresponding to this interval. When $N^* \geq 3$, every interval further to the right is exactly of length $4b_e$. The parties pander fully to the expert in every such interval. While the expert gets her expected ideal policy in each such interval, the residual uncertainty created by coarse information transmission has a harmful effect on the welfare of the expert and all other voters.

### 2.3 Welfare

What is the social value of representative democracy with office seeking career politicians, in our model of multi-stage communication by an expert? What is the social value of expertise? Would a majority of voters be worse off if the expert was absent from the model so that policy choice was guesswork by necessity? Are the welfare effects driven by policy advocacy by the expert or by her partisan endorsements?

To answer these questions, we compare the equilibrium of our model (which we will call *representative, or indirect democracy*) to a benchmark case where median voter chooses the policy after hearing the expert's message (we will call this *direct democracy*). This benchmark will be obtained in a citizen-candidate model preceded by expert cheap talk where the cost of running for office and the intrinsic benefit of being elected are small. This leads to the median voter emerging as an uncontested winner (Osborne and Slivinski (1996), Propositions 1 and 2).[8] There are some other plausible scenarios which are outcome equivalent to direct democracy. We discuss these cases further down.

The equilibrium outcome of direct democracy corresponds to that of the Crawford-Sobel (1982, henceforth CS) game of strategic information transmission between a sender (the expert in this case) and a receiver (the median voter). In the CS model, for the uniform-quadratic version that we consider, the equilibrium partition is uneven, with intervals i*increasing* by the length $4b_e$ in the direction of bias. In contrast, in our model of representative democracy, the equilibrium partition

[8] In Osborne and Slivinski (1996), office is sought not by professional politicians but by citizen candidates who are primarily motivated by the desire to affect policy outcomes. Citizens have a cost $c$ of running for office and an intrinsic benefit $b$ of being elected themselves, in addition to policy payoffs.

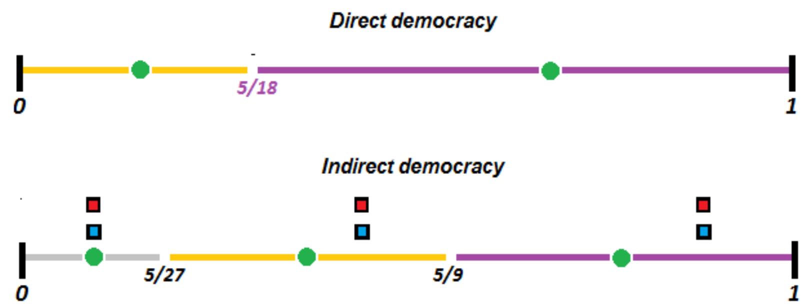


Figure 4: Indirect vs. direct democracy

produces intervals that are more even in size and each interval is at most of length $4b_e$. So indirect democracy produces a greater number of more evenly sized intervals compared to direct democracy, for any value of the expert's bias $b_e$. In other words, indirect democracy leads to better information transmission. This benefits all voters.

The improvement in information transmission under indirect democracy comes at a cost to the median voter. Under indirect democracy, platforms are distorted away from what the median voter would like towards what the expert would like for all but the left most interval. Under direct democracy, policies are always optimal for the median voter for each message of the expert. Figure 4 illustrates this trade off between informed decisions and distorted decisions when $b_e = 1/9$, as in Figure 3. Under indirect democracy, there are three intervals, in two of which the parties choose platforms that are distorted away from the expected ideal policy of the median voter given all available information. Under direct democracy, there are only two intervals but policies are always ex post optimal for the median voter. The next result identifies conditions under which the beneficial effect of better information transmission under indirect democracy dominates the harmful effect of platform distortions.

**Proposition 3** *Suppose the expert can provide both policy advocacy and platform endorsements. The ex-ante welfare of the median voter is higher under indirect democracy compared to direct democracy iff* $b_e < \frac{5}{18}$.

To understand the result, recall that under direct democracy the expert is informative only when $b_e < 1/4$. Since $5/18 > 1/4$, Proposition 3 shows that when direct democracy does better, the outcome is equivalent to shutting down communication with the expert. As long as communication reveals any information under direct democracy, the median voter does better under indirect democracy.[9]

As noted by Holmstrom (1982) and Dessein (2002), partial or complete delegation of decision making authority to an informed expert often serves the interest of an uninformed receiver of information. In our model of expert captured democracies, electoral competition serves in effect as a *delegation* mechanism, albeit an imperfect one.[10]

The threat of influential platform endorsements distorts equilibrium platforms towards what the expert would like. Considered by itself, such expert pandering reduces voter welfare. But it provides voters with some commitment power to delegate platform choice to the expert. This results in the expert providing informative policy advice, raising voter welfare above what would be obtained under direct democracy. The interaction effect of multi-stage communication delivers the welfare gains of indirect democracy.[11]

Indirect democracy does not always dominate direct democracy. When the expert is quite biased, $b_e > 5/18$, direct democracy must be better than indirect democracy according to Proposition 3. To understand this, note that when $b_e > 1/3$, the expert provides no information under either direct or indirect democracy. Direct democracy must then be strictly better since it avoids the distortions created by the threat of platform endorsements under indirect democracy. When $5/18 < b_e < 1/3$, direct democracy still results in uninformed policy choices while policy advocacy is informative under indirect democracy. But the gains from such limited information transmission are not enough to overcome the losses created by expert pandering. Direct democracy, although uninformative, does better in such cases as well.

[9] When the median voter prefers indirect democracy, so do a majority of voters. A minority may prefer the alternative institution. However, as long as the mean of the distribution $G$ of voter ideologies equals its median, the utilitarian sum of voter welfare under indirect democracy is greater than that under direct democracy. Indeed, this is true of the welfare comparison of any two institutions that we consider in this section because of our specification of voter preferences.

[10] The delegation benefits in our model of indirect capture fall short of the benefits of optimal delegation identified by Holmstrom (1982). In the next section, we consider the possibility of direct capture of a political party by the expert and show that the voter welfare is equal to that under optimal delegation.

[11] If we shut down the platform endorsement stage and allowed only policy advocacy, the equilibrium outcome under indirect democracy would coincide with that of direct democracy. If we allowed only platform endorsements, voter welfare would be reduced below the uninformative benchmark without any information transmission, as shown by Proposition 1.

What light does Proposition 3 shed on the social value of expertise? Can voters gain from silencing the expert and forsaking access to her information? When $b_e > 5/18$, and indirect democracy is the inferior institution, it does worse than uninformed decision making. So the social value of expertise under indirect democracy is negative for a sufficiently biased expert. The median voter would be better off from silencing the expert. In contrast, by Blackwell's theorem, the social value of expertise can never be negative under direct democracy. So when indirect democracy is the superior institution, the social value of expertise must also be positive. We conclude that the social value of expertise is positive under indirect democracy if and only if indirect democracy dominates direct democracy.

Proposition 3 drives home the important role played by electoral competition among office seeking politicians (as opposed to public spirited decision makers or direct citizen participation in policy making). The agency problem latent in *representative* democracy may actually help to counteract the welfare loss arising from expert bias and informational manipulation. It does so by providing a *de facto* delegation instrument to voters, who can leverage the pandering motive of politicians to partially commit to policy choices serving the expert's interests, thereby inducing him to reveal more.

To shed further light on the underpinnings of our main welfare result, we now consider two modifications of our baseline model of indirect democracy. The first modification varies the commitment available to the parties and provides insight into what exactly allows voters to obtain the benefits of delegation under indirect democracy. The second modification varies instead the commitment power available to the expert when she chooses her information disclosure strategies. These two benchmarks identify necessary conditions for the welfare result in Proposition 3.

Consider first a scenario where political parties cannot commit to *policy* platforms. Instead, they can achieve a degree of commitment by nominating *candidates* with known preferences (captured by their own biases $b_L$ and $b_R$) from the full set of voters. As before, the parties are office-seeking and choose a candidate to maximize their probability of winning the election. As before, the expert provides advice before the parties choose candidates and endorsements after they do so. Subsequently voters vote. The winning candidate chooses a policy to maximize her own payoff given all available information. Our next result shows that the equilibrium outcome in this model of candidate commitment (as opposed to platform commitment) yields the same outcome as direct democracy.

**Proposition 4** *In the model of candidate commitment, both parties choose candidates that are ideologically identical to the median voter, $b_L = b_R = 0$ and so the welfare of the voter is identical to that under direct democracy.*

Proposition 4 identifies a necessary condition underlying our main welfare result in Proposition 3. It underscores the benefits of programmatic politics over personality centric ones. To reap the delegation benefits of indirect democracy, it is important that parties commit through platforms rather than personalities.

We turn now to the second modification of our baseline model. This has to do with the commitment power (or lack thereof) on the part of the expert. So far we have assumed that the expert has no commitment power and engages in cheap talk. The information she can reveal in equilibrium depends entirely on her incentive and credibility constraints. To gain further insight into the comparison between indirect and direct democracy, we now ask how it depends on expert's ability to commit to various kinds of information disclosure policies, reverting back to our baseline assumption that parties commit to platforms.

We begin by considering a particular power of commitment power on the part of the expert. We suppose that at the ex-ante stage the expert can commit to delegating her messaging to a voter with ideological bias $b_s$. Call this voter the surrogate. The surrogate obtains the expert's information and engages in strategic information transmission given her own incentives . Who is the ideal surrogate from the ex-ante perspective of the expert? Our next result compares the expert's incentives to choose a surrogate under indirect democracy with her incentives to do so under direct democracy.

**Proposition 5** *Suppose at the ex-ante stage the expert with ideology $b_e > 0$ can commit to provide her information to a surrogate with ideology $b_s$ who subsequently plays the role of the expert. Under direct democracy, the expert will choose $b_s = 0$ while under indirect democracy the expert will choose $b_s \neq 0$.*

The incentives of the expert to choose a surrogate is determined by a trade-off between minimizing losses due to coarse information transmission by the surrogate versus losses arising from policies that serve the surrogate's interests and not the expert's. A surrogate who is more closely aligned with the voter and less with the expert will reveal finer information. This will result in policies that are more finely tuned to the underlying state of the world. This benefits the expert in expected terms. However, these policies will also serve more closely the surrogate's (and voter's) interests and less the expert's interests. This hurts the expert.

The trade-off between better information transmission and more distorted decisions exists both under direct and indirect democracy. However, under direct democracy the benefit from improving information transmission dominates the cost of more distorted policies. It is in the expert's interest to fully reveal all information to the voter by choosing a surrogate $b_s = 0$ who is perfectly aligned with the voter. The median voter will obtain his ideal, symmetric information payoffs.

The situation is different under indirect democracy. Compared with direct democracy, a surrogate with the same bias reveals more precise information at the advocacy stage. As a result, the marginal gain to the expert from choosing a more voter-aligned surrogate and improving information flows falls faster. These gains are dominated by the marginal loss from policies that arise from choosing such a surrogate even when the surrogate is not perfectly aligned with the voter. While the expert may choose a surrogate who is more aligned with the voter than the expert, Proposition 5 shows that she will never find it optimal to choose a surrogate who is perfectly aligned with the voter. Under indirect democracy, the optimal surrogate will always have an ideological conflict with the voter.

Although Proposition 5 only considers a particular kind of commitment power on the part of the expert, it shows what will happen if the expert can commit to more general information disclosure policies or persuasion mechanisms (Gentzkow and Kamenica, 2011). It implies that under indirect democracy, the optimal persuasion mechanism must involve noisy information transmission. This follows from observing that even when the expert has limited commitment and can only choose a surrogate with ideology $b_s$, it is feasible for the expert to perfectly reveal all information by choosing a perfectly voter aligned surrogate. But she prefers to choose a surrogate who is not perfectly voter aligned and does not reveal all information.

What happens under direct democracy and expert commitment to persuasion mechanisms? For our quadratic preference specification, the expert prefers to commit to a policy of revealing all information under direct communication with the median voter. The welfare comparison between indirect and direct democracy described in Proposition 3 therefore depends therefore on the expert's commitment ability. We state this formally as a corollary to Proposition 5.

**Corollary 1** *Suppose the expert can commit to a persuasion mechanism. Then direct democracy is strictly better than indirect democracy for the median voter*

Proposition 3 shows that indirect democracy may be better for the voter if the expert is not too biased and engages in cheap talk. Proposition 5 and its corollary shows that lack of commitment on the part of the expert is necessary for such a welfare result to obtain. If the expert can commit to a persuasion mechanism, direct democracy is always strictly better for the voter. Under expert commitment, the voter will obtain her symmetric information outcome under direct democracy but not under indirect democracy.

# 3 Direct capture

Our model in Section 2 describes situations where the expert influences electoral outcomes purely through public communication. She does not directly affect party platforms but nevertheless has significant influence on electoral outcomes. We now contrast this situation of indirect capture with one where the expert *directly* controls the platform choices of one (or more) of the political parties. To do so, we revert also to our baseline assumptions that the expert cannot commit to an information disclosure policy and that the parties commit to platforms.

Suppose that one of the two political parties is directly controlled by the expert. The expert chooses this party's platform, possibly as a function of her own private information, in order to serve her ideological interests. The other party is uninformed and chooses its platform to maximize its chances of being elected. After the two parties simultaneously select their platforms, the voter elects her preferred platform given the information inferred from the observed platform choices. Our next result characterizes the best equilibrium for the voter in this signaling game of electoral competition.

**Proposition 6** *Suppose that the expert with ideology $b_e > 0$ directly chooses the platform of one party, while the other uninformed office-seeking party simultaneously chooses its own platform. In the best equilibrium for the voter, the expert's party will choose a platform $x_e^* = y + b_e$ in state $y$, while the uninformed party will choose a platform $x_u^* = 1 - b_e$, following which the voter will elect the smaller of the two observed platforms.*

In the equilibrium described by Proposition 6, the captured party's platform choice perfectly reveals the state, but the chosen platform is the expert's ideal policy in each state. The voter elects the expert's platform $x_e$ as long as it is to the left of the uninformed office seeking party's platform

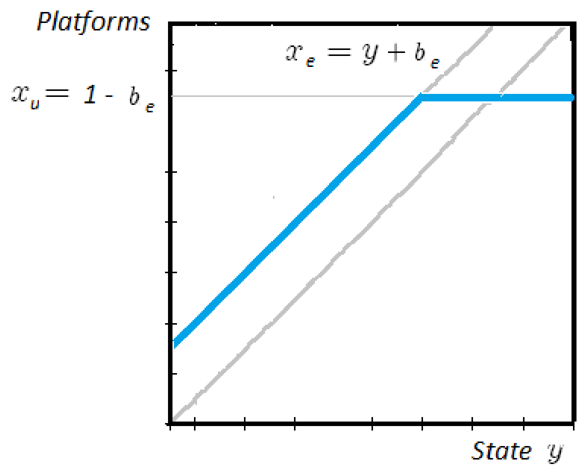


Figure 5: Direct capture

$x_u$. If $x_e > x_u$, the voter prefers the uninformed platform and elects it for sure. Figure 5 depicts the platforms and outcomes as a function of the state.

Direct expert capture of one party is quite good for voter welfare. Seen as a mapping from the state $y$ to elected policies, electoral outcomes take the form of a capped delegation mechanism. In fact, it coincides with the optimal mechanism (in the class of all mechanisms without transfers) in our framework (see Holmstrom (1982)). Direct capture of one party by the expert leads to the best of all possible outcomes for the voter. In particular, it is better than the outcome of indirect capture considered in Section 2.[12]

What happens if the expert captures not one but both the political parties? It is easy to see that both parties will propose platforms equal to the expert's ideal policy $y + b_e$ in each state and such a policy will be implemented. This corresponds to the notion of full delegation to the expert considered in Dessein (2002). It can be shown that such complete capture of both parties by the expert yields better outcomes for the voter, compared to indirect capture via public communication by the expert, as long as $b_e < 1/3$.

[12]The signaling game of direct capture has other equilibria, including other capped delegation type outcomes involving lower caps. We present the voter's most preferred equilibrium in the spirit of our previous equilibrium selection under indirect capture. The simultaneity of platform choices is also important for Proposition 6. If the uninformed party moves after observing the platform choice of the informed party, it can be shown that the equilibrium set under direct capture is identical to that under indirect capture.

Since the capped delegation mechanism of Holmstrom (1984) is the optimal mechanism, the direct capture of only one party the best of all outcomes for the voter. In particular, it is better for the voter than direct capture of both parties. So the number of parties that are directly captured by the expert has an interesting non-monotonic effect on voter welfare. When the expert captures only one party, the presence of the other uninformed, purely office seeking party provides a constraint on the expert's party that is beneficial for voters.

# 4 Conclusion

We reconsider the Hotelling-Downs model of two party electoral competition in the presence of an ideologically biased but informed expert. The expert can engage in strategic and public information transmission, providing platform endorsements as well as policy advice. Platform endorsements may influence voters and determine the electoral prospects of office-seeking parties. In order to obtain favorable endorsements, parties have an incentive to choose platforms that serves the expert's ideological interests. This by itself hurts voters.

However, expert pandering incentivizes the expert to provide detailed policy advice that allows parties to choose platforms that vary with the information held by the expert. This information dependence benefits voters. When the expert is not too ideologically biased, decentralized electoral competition influenced by the expert yields better average outcomes for voters than directly communicating with the expert and choosing their own ideal policies. Voter welfare is further enhanced if instead of merely engaging in public speech making, the expert directly controls the platforms choices of one (or more) of the parties.

# 5 Appendix

**General Lemma** *On any pure strategy equilibrium path of play, the policy advocacy message $m_a$ must be an interval of the state space and there must be platform convergence for each such message.*

**Proof.** We show first that in any pure strategy equilibrium, the first stage message must reveal an interval in which $y$ lies. Note that a policy advocacy strategy is a mapping from the state space $[0, 1]$ to the set of messages $m_a$ denoted here by $\mathcal{M}_a$. If we restrict attention to pure strategies, then while the inverse-image of any such map is a partition of $[0, 1]$, although it may not be an interval partition.

Let $Y(m_a)$ be the inverse image of $m_a$. Following $m_a$, let $x_L$ and $x_R$ be the two competing platforms. If $x_L = x_R$ then we have platform convergence. So suppose $x_L < x_R$. If the expert is influential, the second stage endorsement strategy then partitions $Y(m_a)$ further into two subsets $Y_L(m_a)$ and $Y_R(m_a)$ such that $x_L$ is endorsed and elected for each $y \in Y_L(m_a)$ and candidate $x_R$ is endorsed and elected for each $y \in Y_R(m_a)$. In case the expert is not influential, there is no further subdivision of $Y(m_a)$ and $x_L$ and $x_R$ may each be elected with positive probabilities. At this stage we have established that for each $y \in [0, 1]$, there is a winning policy, which we shall denote by $x^*(y)$ and let $X^*$ be the set of all such winning policies.

We next show that $X^*$ is a finite set. Recall that the full information ideal policies of the expert and the median voter are $y + b_e$ and $y$. Now pick two arbitrary winning policies $x', x''$ such that $x' < x''$ and let $y', y'' \in [0, 1]$ be two states such that $x^*(y') = x'$ and $x^*(y'') = x''$. Let $\succsim_y$ be the preference relation for the expert in state $y$. Then, $x' \succsim_{y'} x''$ and $x'' \succsim_{y''} x'$. Since the state space is continuous and $\succsim$ is continuous (given our utility function), there exists a unique indifferent type $\bar{y} \in [0, 1]$ such that $x' \backsim_{\bar{y}} x''$. It also follows that (a) $x' < \bar{y} + b_e < x''$, (b) $x'$ is not the induced winning policy for any state $y > \bar{y}$ as in all such states the expert prefers $x''$ and so will deviate; while $x''$ is not the induced winning policy for any state $y < \bar{y}$ as in all such states the expert prefers $x'$ and so will deviate. It is also straightforward to verify from the definition of $\bar{y}$ that $x' - b_e < \bar{y}$. Suppose first that $\bar{y} > x'$. In that case we are done as then from $x' < \bar{y} < \bar{y} + b_e < x''$ it follows that $x'' - x' > b_e > 0$. So suppose $\bar{y} < x'$, let $\varepsilon = \bar{y} + b_e - x'$ and note that since $x' < \bar{y} + b_e$, we have $\varepsilon > 0$. This implies $x'' - x' > \varepsilon$ since $\bar{y} + b_e < x''$. Hence we have shown that there exists $\delta > 0$ such that for each $y \in [0, 1]$, we have $x'' - x' > \delta$. Finally, since $x^*(0)$ and $x^*(1)$ are bounded, $X^*$ is a finite set.

We now prove platform convergence, i.e., we must have $x_L = x_R$. Suppose to the contrary that $x_L < x_R$. Note that if $y \in Y_L(m_a)$ then each $y' < y$, with $y' \in Y(m_a)$, is also in $Y_L(m_a)$ while if $y \in Y_R(m_a)$ then each $y' > y$, with $y' \in Y(m_a)$, is also in $Y_R(m_a)$. First consider the case when the expert is not influential and suppose $(x_L, x_R)$ is an equilibrium profile. Then

$$E[y] = x_{\text{mid}} := \frac{x_L + x_R}{2},$$

and

$$E[y|y + b > x_{\text{mid}}] \leq x_{\text{mid}}.$$

But since $E[y|y+b>x_{\text{mid}}] \geq E[y]$, it follows that

$$E[y|y+b>x_{\text{mid}}] = E[y] = x_{\text{mid}}.$$

Let $p_R(x_L, x_R)$ be the probability of $R$ being endorsed by the expert. Then we can write

$$\begin{aligned} E[y] &= p_R(x_L,x_R)E[y|y+b>x_{\text{mid}}] + (1-p_R(x_L,x_R))E[y|y+b<x_{\text{mid}}] \\ &= p_R(x_L,x_R)E[y] + (1-p_R(x_L,x_R))E[y|y+b<x_{\text{mid}}]. \end{aligned}$$

But since $E[y|y+b<x_{\text{mid}}] \neq E[y]$ , we can conclude that $p_R(x_L, x_R) = 1$. Now consider a leftward move by $R$ to $x'_R < x_R$ with $x_L \leq x'_R$. Let

$$x'_{\text{mid}} = \frac{x_L + x'_R}{2} < x_{\text{mid}}.$$

This means $p_R(x_L, x'_R) = 1$ and if the sender is still not influential, then $R$ wins with probability 1 since $x'_{\text{mid}} < x_{\text{mid}} = \mathbb{E}[y]$. Hence this is a profitable deviation for $R$ who was winning with probability 1/2 at the profile $(x_L, x_R)$. If the sender becomes influential at $(x_L, x'_R)$, then, given that $p_R(x_L, x'_R) = 1$, $R$ wins with probability 1 as well. This shows that if the expert is not influential, candidate $R$ has a profitable deviation whenever $x_L < x_R$. Finally suppose the expert is influential and $(x_L, x_R)$ is an equilibrium profile. Suppose $Y(m_a)$ is a convex set and $x_L < x_R$. Since the expert is influential the probability that candidate $R$ wins is $\Pr[y > x_{\text{mid}} - b_e]$ which must equal 1/2. Furthermore,

$$E[y|y > x_{\text{mid}} - b_e] \geq x_{\text{mid}},$$

and when candidate $R$ is endorsed he must win for sure under the observation that an indifferent endorsement is a zero probability event. Consider now a leftward deviation by candidate $R$ to $x'_R = x_R - \varepsilon$, $\varepsilon > 0$ and small so that $x_L < x_R - \varepsilon$, and let $x'_{\text{mid}} < x_{\text{mid}}$ be the new mid-point. If the prior on the state is log-concave (as we suppose), it follows that the expert is still influential and the probability of winning the election via an influential endorsement has strictly gone up for candidate $R$, a contradiction with equilibrium.

So, suppose the expert is not influential. Since we are in an equilibrium, the median voter must randomize, implying $E[y] = x_{\text{mid}}$. Consider here a small deviation by candidate $R$ left to $x'_R = x_R - \varepsilon$ , $\varepsilon > 0$ and small so that $x'_{\text{mid}} < x_{\text{mid}}$ be the new mid-point. Then

$$E[y|y > x'_{\text{mid}} - b_e] \geq E[y] = x_{\text{mid}} > x'_{\text{mid}}.$$

Furthermore, since $\varepsilon$ is small, $x'_{\text{mid}} \in (y_l, y_h)$ so that an influential equilibrium exists that we select. Thus, the probability of winning the election (getting an endorsement) is $\Pr[y > x'_{\text{mid}} - b_e] > \Pr[y > x_{\text{mid}} - b_e]$. If $\Pr[y > x_{\text{mid}} - b_e] \geq 1/2$, then the deviation is profitable. So suppose $\Pr[y > x_{mid} - b_e] < 1/2$. Consider then a small rightward deviation by candidate $L$ to $x''_L = x_L + \varepsilon$, $\varepsilon > 0$ and small so that $x''_{\text{mid}} > x_{\text{mid}}$ is the new mid-point. Notice that if

$$E[y|y > x''_{\text{mid}} - b_e] < x''_{\text{mid}},$$

then the expert is not influential in which case the left candidate wins for sure following the deviation, since $E[y] = x_{\text{mid}} < x''_{\text{mid}}$. So suppose

$$E[y|y > x''_{\text{mid}} - b_e] \geq x''_{\text{mid}},$$

and an influential equilibrium exists. Given that the expert cannot be indifferent with positive probability when it endorses, candidate $L$ wins for sure if he is endorsed and so the probability of his winning is at least $\Pr[y \leq x''_{\text{mid}} - b_e] \geq \Pr[y \leq x_{\text{mid}} - b_e] > 1/2$ and the deviation is profitable. Thus we have shown that $x_L = x_R$. So suppose $Y(m_a)$ is not convex. Let $X^-(m_a)$ be the set of policy outcomes that appear in any continuation game in state $y \in cov(Y(m_a)) \setminus Y(m_a)$ where $cov(A)$ is the convex hull of set $A$. Let $\underline{y}$ be the left border of $Y_R(m_a)$. Note that since $X^*$ is a finite set, $Y_R(m_a)$ is an interval. Since preferences of the voters (and so of the expert) are single-peaked, it must be that for each $x \in X^-(m_a)$ we have $x_L < x < x_R$. In this case $L$ will find it strictly better to migrate to some point $x'_L$ with $x_R > x'_L > \underline{y}$. To see this note that by moving to $x'_L$, $L$ will continue to be endorsed at each $y \in Y_L(m_a)$ and must also be endorsed by each $y \in [\underline{y}, x'_L]$ since otherwise the indifferent expert in state $\underline{y}$ cannot be indifferent between $x_R$ and the action $x \in X^-(m_a)$ that $\underline{y}$ induces as well.■

**Proof of Proposition *1*** Given the General Lemma above, fix some arbitrary interval $m_a$ and let the consequent convergent policy be $x_L = x_R = x^*$. We divide the proof into three claims and note that the proof is provided for any non-atomic prior for the state $y$.

**Claim 1** *If $y^* > y_{med}$, then $x^* = y_{med} + b_e$ is the unique pure strategy equilibrium platform.*

To prove the claim, suppose first that $x^* < y_{med} + b_e$ so that $x^* - b_e < y_{med} < y^*$. Consider a small deviation to the right by a candidate to $x_R = x^* + \varepsilon$, $\varepsilon > 0$ so that the new policy mid-point satisfies $x_{\text{mid}} - b_e < y_{med} < y^*$. If $x_{\text{mid}} - b_e \leq y_l < E[y]$, then the expert cannot be informative following such a deviation and the deviating candidate wins for sure. So suppose $y_l < x_{\mathrm{mid}} - b_e$. Since $x_{\mathrm{mid}} - b_e < y^*$, an influential equilibrium exists and the probability that the deviating candidate wins is $\Pr[y > x_{\mathrm{mid}} - b_e] > \Pr[y > y_{med}] = 1/2$ so that the deviation is profitable, a contradiction with equilibrium.

Suppose next that $x^* > y_{med} + b_e$ so that $x^* - b_e > y_{med}$. Consider a deviation to the left by a candidate to $x_L < x^*$ so that the new policy mid-point satisfies $x_{\mathrm{mid}} - b_e \leq y^*$ but $x_{\mathrm{mid}} - b_e > y_{med} > y_l$. Then an influential equilibrium exists and further the probability that the deviating candidate wins is at least $\Pr[y < x_{\mathrm{mid}} - b_e] > \Pr[y < y_{med}] = 1/2$, so that the deviation is profitable, a contradiction with equilibrium.

We show now $x^* = y_{med} + b_e$ is an equilibrium. Consider first a deviation right to $x_R > x^*$. As long as the new mid-point $x_{\mathrm{mid}}$ satisfies $x_{\mathrm{mid}} - b_e \leq y^*$, since $x_{\mathrm{mid}} - b_e > y_{med} > y_l$ an influential equilibrium exists and the deviating candidate wins with probability $\Pr[y > x_{\mathrm{mid}} - b_e] < \Pr[y > y_{med}] = 1/2$ so that the deviation is not profitable. If the deviation is such that $x_{\mathrm{mid}} - b_e > y^*$, then there is no influential equilibrium and the deviating candidate wins with positive probability only if $E[y] \geq x_{\mathrm{mid}}$. Combining the last two inequalities, we need $E[y] \geq y^* + b_e$ for the deviation to be profitable. But this is impossible since $y^* > y_{med} > y_l$ and so $E[y] < E[y|y > y^*] = y^* + b_e$. Consider next a deviation left to $x_L < x^*$. As long the new mid-point $x_{\mathrm{mid}}$ satisfies $x_{\mathrm{mid}} - b_e \leq y^*$, along with $x_{\mathrm{mid}} - b_e > y_l$, an influential equilibrium exists and the deviating candidate wins with probability $\Pr[y < x_{\mathrm{mid}} - b_e] < \Pr[y < y_{med}] = 1/2$ so that the deviation is not profitable; on the other hand, if the deviation is such that $x_{\mathrm{mid}} - b_e \leq y_l$ then there is no influential equilibrium and the deviating candidate wins with positive probability only if $E[y] \leq x_{\mathrm{mid}}$. Combining the last two inequalities, we need $E[y] \leq y_l + b_e$ for the deviation to be profitable. But this is impossible since it implies $y_l \geq y^* > y_{med}$. This proves the claim.■

**Claim 2** *If $y_{med} \geq y^* > y_l$ then $x^* = y^* + b_e$ is the unique pure strategy equilibrium platform.*

To prove the claim, suppose first that $x^* < y^* + b_e$ so that $x^* - b_e < y^* \leq y_{med}$. Consider a small deviation to the by a candidate to $x_R = x^* + \varepsilon$, $\varepsilon > 0$ so that the new policy mid-point satisfies $x_{\mathrm{mid}} - b_e < y^* \leq y_{med}$. If $x_{\mathrm{mid}} - b_e \leq y_l < E[y]$, then the expert cannot be informative following such a deviation and the deviating candidate wins for sure. So suppose $y_l < x_{\mathrm{mid}} - b_e$. Since $x_{\mathrm{mid}} - b_e < y^*$, an influential equilibrium exists and the probability that the deviating right candidate wins is $\Pr[y > x_{\mathrm{mid}} - b_e] > \Pr[y > y_{med}] = 1/2$, a contradiction with equilibrium.

Suppose next that $x^* > y^* + b_e$ so that $x^* - b_e > y^* \geq y_{med} - b_e$. If $E[y] < x^*$, then a slight deviation to the left will win the election for sure since the expert will not be influential given that the new mid-point will satisfy $x_{\text{mid}} - b_e > y^*$. Similarly, if $E[y] > x^*$, a slight deviation to the right will win the election for sure since the expert will not be influential given the new mid-point will satisfy $x_{\text{mid}} - b_e > y^*$. So to have a profitable deviation, we must have $E[y] = x^* > y^* + b_e$, which is impossible since $E[y] \leq E[y|y > y^*] = y^* + b_e$.

We show now $x^* = y^* + b_e$ is an equilibrium. Consider first a deviation to the right to $x_R > x^*$. The new mid-point $x_{\text{mid}}$ satisfies $x_{\text{mid}} - b_e > y^*$ so that there is no influential equilibrium and the deviating candidate wins with positive probability only if $E[y] \geq x_{\text{mid}}$. Combining the last two inequalities, we need $E[y] \geq y^* + b_e$, which is impossible since $y^* > y_l$ and so $E[y] < E[y|y > y^*] = y^* + b_e$. Consider next a deviation left to $x_L < x^*$. The new mid-point $x_{\text{mid}}$ satisfies $x_{\text{mid}} - b_e < y^*$ so that an influential equilibrium exists as long as $x_{\text{mid}} - b_e > y_l$. In such an equilibrium however, the deviating candidate wins with $\Pr[y < x_{\text{mid}} - b_e] < \Pr[y < y_{med}] = 1/2$ and such a deviation is not profitable. If the deviation is such that $x_{\text{mid}} - b_e \leq y_l$ then there is no influential equilibrium and the deviating candidate wins with positive probability only if $E[y] \leq x_{\text{mid}} < y_l + b_e$. Combining the last two inequalities, we need $E[y] \leq y_l + b_e$ for the deviation to be profitable implying that $y_l \geq y^*$ which contradicts the assumed conditions. This proves the claim.■

**Claim 3** *If $y_l \geq y^*$, then $x^* = E[y]$ is the unique pure strategy equilibrium platform.*

To prove the claim, suppose first that $x^* < E[y]$. Consider a deviation to the right by a candidate to $x_R > x^*$ so that the new policy mid-point satisfies $y_l < x_{\text{mid}} < E[y]$. Since $y_l \geq y^*$, the expert is not influential and the deviating candidate wins for sure a contradiction with equilibrium.

Suppose next that $x^* > E[y]$. Consider a deviation to the left by a candidate to $x_L < x^*$ so that the new policy mid-point satisfies $x_{\text{mid}} > E[y] > y_l \geq y^*$. The expert is not influential and the deviating candidate wins for sure, a contradiction with equilibrium.

We show now $x^* = E[y]$ is an equilibrium. Notice first that if any candidate deviates from $x^*$, for an influential equilibrium to exist we need the new policy mid-point $x_{\text{mid}}$ to satisfy $x_{\text{mid}} - b_e \leq y^*$ and $x_{\text{mid}} - b_e > y_l$, which is impossible under the assumed conditions. Given this, consider first a deviation to the right to $x_R > x^*$. The new mid-point $x_{\text{mid}}$ satisfies $x_{\text{mid}} > E[y]$ and since there is no influential equilibrium, the deviating candidate cannot win with positive probability. Similarly for a deviation to the left to $x_L < x^*$, the new mid-point $x_{\text{mid}}$ satisfies $x_{\text{mid}} < E[y]$, and since there is no influential equilibrium, the deviating candidate cannot win with positive probability. This completes the proof of the claim.□

This completes the proof of the proposition.■

**Proof of Proposition *2*** The General Lemma above establishes that any policy advocacy $m_a$ is an interval, which we write as $[c_{i-1}, c_i]$ and since the equilibrium policy set $X^*$ is finite, for a given expert bias $b_e$, $N^*(b_e) \geq 1$ and finite. Consider an $N$ - element partition of the state space $[0,1]$ given by

$$\{[c_0, c_1), [c_1, c_2), \ldots, [c_{i-1}, c_i), [c_i, c_{i+1}), \ldots, [c_{N-1}, c_N)\}, c_0 = 0, c_N = 1.$$

Let $l_i = c_i - c_{i-1}$ and recall that for an arbitrary interval $[c_{i-1}, c_i)$ of length $l_i = c_i - c_{i-1}$, Proposition 1 implies the following:

- If $4b_e \leq l_i$, then $x^*([c_{i-1}, c_i]) = \frac{c_{i-1}+c_i}{2} + b_e$;
- If $2b_e < l_i < 4b_E$, then $x^*([c_{i-1}, c_i]) = c_i - b_e$;
- If $l_i \leq 2b_e$, then $x^*([c_{i-1}, c_i]) = \frac{c_{i-1}+c_i}{2}$.

We first show that if the policy advocacy $[c_i, c_{i+1})$ leads to voter pandering, and $i > 1$ then the interval $[c_{i-1}, c_i]$ cannot lead to voter pandering as well. Suppose on the contrary it did. The expert must then be indifferent at state $c_i$ between two policies $\frac{c_{i-1}+c_i}{2}$ and $\frac{c_i+c_{i+1}}{2}$. This indifference implies

$$\frac{c_i + c_{i+1}}{2} - (c_i + b_e) = c_i + b_e - \frac{c_{i-1} + c_i}{2},$$

that yields $l_{i+1} - l_i = 4b_e$. Since $l_i < 2b_e$ this is possible only if $l_{i+1} > 2b_e$. But then one cannot obtain voter pandering from the interval $[c_{i-1}, c_i)$. So suppose the advocacy $[c_{i-1}, c_i]$ leads to non-pandered policy given by $c_i - b_e$. Expert's indifference at state $c_i$ then implies

$$\frac{c_i + c_{i+1}}{2} - (c_i + b_e) = c_i + b_e - (c_i - b_e),$$

yielding the requirement that $l_{i+1} = 6b_e$ which contradicts with the supposition that the policy advocacy $[c_i, c_{i+1})$ leads to voter pandering. Finally, suppose the interval $[c_{i-1}, c_i]$ leads to expert pandering given by $\frac{c_{i-1}+c_i}{2} + b_e$. Expert's indifference at state $c_i$ then implies

$$\frac{c_i + c_{i+1}}{2} - (c_i + b_e) = c_i + b_e - \left(\frac{c_{i-1} + c_i}{2} + b_e\right),$$

yielding the requirement that $l_i \leq 0$ which contradicts with the supposition $c_i > y_l$ and advocacy is partitional. Hence it must be that $c_i = y_l$.

Next consider two successive interval $[c_{i-1}, c_i)$ and $[c_i, c_{i+1})$ and suppose the interval $[c_{i-1}, c_i)$ leads to expert pandering. Let $x \in [c_i, c_{i+1})$ be the policy resulting from the interval $[c_i, c_{i+1})$. The expert's indifference at state $c_i$ implies $x > c_i + b_e$ and

$$(c_i + b_e) - \left(\frac{c_{i-1} + c_i}{2} + b_e\right) = x - (c_i + b_e).$$

We know from above that $c_{i+1} - c_i > 2b_e$ as only the left bordering interval can be so. So suppose $4b_e > l_{i+1} > 2b_e$. Then $x = c_{i+1} - b_e$ so that the indifference equation above yields $4b_e = 2l_{i+1} - l_i$. But since $l_i \geq 4b_e$ this is impossible. Hence it must be that that $l_{i+1} \geq 4b_e$. Suppose so. Then the indifference condition yields $c_i = \frac{c_{i+1} - c_{i-1}}{2}$ so that $l_i = l_{i+1}$. This proves that once we observe expert pandering in some state, it remains so for all states to its right. Moreover, the informational content of all expert pandering states is the same.

Finally consider two successive interval $[c_{i-1}, c_i)$ and $[c_i, c_{i+1})$ and suppose the interval $[c_{i-1}, c_i)$ does not lead to any pandering, voter or expert, that is $2b_e < l_i < 4b_e$. By construction, $c_i < y_h$. By Part (1), it follows that the interval $[c_i, c_{i+1})$ can either be no pandering or expert pandering since it is not the left bordering interval. Suppose it is a no-pandering interval. Then the indifference of the expert at state $c_i$ yields

$$c_i + b_e - (c_i - b_e) = c_{i+1} - b_e - (c_i + b_e),$$

from which it follows that $l_{i+1} = 4b_e$. Hence two successive intervals cannot lead to no-pandering. Hence the interval $[c_i, c_{i+1})$ must lead to expert pandering.

We will now prove the following: Fix and arbitrary interval $[y_l, y_h]$ of the state space and let $R$ be the remainder when $4b_e$ divides $l = y_h - y_l$. The most informative equilibrium is a unique $N^*$-element interval partition of the state space with the following properties:

1. Policy advice is informative (that is, $N^* > 1$) if and only if $l > 3b_e$;

2. If $3b_e < l = 4b_e$, then $N^* = 2$ where the advice from left-most states yields voter pandering while that from the right-most states yields partial pandering platforms and the 2- element partition is given by the cutoff $c_1 = ((2y_h + y_l)/3) - 2b_e$;

3. If $l > 4b_e$ then

(a) if $R > 3b_e$, then $N^* = \lfloor l/4b_e \rfloor + 2$, the left-most interval yields voter pandering, followed by partial pandering, and then expert pandering and the exact partition is given by $\{[y_l, c_1], (c_1, y_l + R], (y_l + R, y_l + R + 4b_e], \ldots, [y_h - 4b_e, y_h]\}$, where $c_1 = ((3y_l + R)/3) - 2b_e$;

(b) if $2b_e < R = 3b_e$, then $N^* = \lfloor l/4b_e \rfloor + 1$, the advice from left-most interval yields partial pandering while all other intervals yield expert pandering and the exact partition is given by $\{[0, R], (R, R + 4b_e], \ldots, [y_h - 4b_e, y_h]\}$;

(c) if $R = 2b_e$,then $N^* = \lfloor l/4b_e \rfloor + 1$, the advice from left-most interval yields voter pandering, followed by partial pandering, and then expert pandering and the exact partition is given by $\{[0, c_1], (c_1, c_2], (c_2, c_2 + 4b_e], \ldots, [y_h - 4b_e, y_h]\}$, where $c_1 = y_l + ((2(R + b_e))/3)$ and $c_2 = y_l + R + 4b_e$.

Consider an $N$-element equilibrium partition of the state space $[y_l, y_h]$ and denote by $l_i$ as the 'length' of the $i$ - th element of this partition, $i = 1, \ldots, N$. Let $y_h - y_l = l$. Our objective here is to find $N^*(b_e, l)$, the maximum value of $N$, such that (given the results on policy advice) the following constraints are met: (i) If an interval is of length not more than $2b_e$ then it must be the left-most interval, (ii) if an interval is of length no less than $4b_e$ then all intervals to its right must be of equal lengths and (iii) there cannot be two successive intervals whose lengths are each bigger than $2b_e$ and less than $4b_e$.

Part (1): Assume on the contrary that $l \leq 3b_e$ and there exists an informative equilibrium. Then the only candidate is of the form $\{[y_l, z), [z, y_h]\}$ such that the interval $[y_l, z)$ yields voter pandering policy $x^* = \frac{y_l+z}{2}$ and the interval $[z, y_h)$ yields partial pandering policy $x^* = y_h - b_e$, with $z > y_l$. The expert of type $z$ is indifferent so that $3z = 2y_h + y_l - 6b_e$. But $z > y_l$ is then possible if and only if $3b_e < l$, a contradiction.

Part (2) follows immediately from the proof of Part (1) and the earlier characterization in this proof.

Part (3): Let $R$ be the remainder when $4b_e$ divides $l = y_h - y_l$. The proof is by construction. Since $l > 4b_e$ it follows that $R > 0$. When $R > 3b_e$, we produce $\frac{1-R}{4b_e}$ intervals of size $4b_e$ from the right and apply Part (2) of the lemma on the 'remaining' left-most section $[y_l, y_l + R)$ in this construction to obtain the result. When $2b_e < R \leq 3b_e$, we again produce $\frac{1-R}{4b_e}$ intervals of size $4b_e$ from the right and this time apply Part (1) of the lemma on the 'remaining' left-most section $[y_l, y_l + R]$. So consider $R < 2b_e$.[13] Produce $\frac{1-R}{4b_e} - 1$ intervals of size $4b_e$ from the right. Then take the remaining left section $[y_l, y_l + R + 4b_e)$ and construct two sub-intervals of the form $[y_l, a), [a, y_l + R + 4b_e)$ such that $[y_l, a)$ produces voter pandering and $[a, y_l + R + 4b_e)$ produces partial pandering. This yields $a = y_l + 2(R + b_e)/3$. This completes the proof.■

**Proof of Lemma ??** We now prove that the expert and the median voter have identical preference rankings over the equilibrium set where the most informative equilibrium yields the highest ex-ante payoff. To prove this we employ the following steps.

STEP 1: Let $\mathcal{P}_1 = \{[0, c_1), [c_1, c_2), [c_2, c_3), \ldots, [c_{N-1}, 1]\}$ be an equilibrium such that the length of the interval $l_i = 4b_e$ for all $i \geq 3$, $l_1 < 2b_2$ and $2b_e < l_2 < 4b_e$ with $l_1 + l_2 < 4b_e$. Consider the partition $\mathcal{P}_2 = \{[0, c_2), [c_2, c_3), \ldots, [c_{N-1}, 1]\}$ and suppose it is also an equilibrium.

**Claim 4** *The median voter and the expert strictly prefer $\mathcal{P}_1$ to $\mathcal{P}_2$.*

It is necessary and sufficient to compare the welfare of the agents concerned over the state sub-interval $[0, c_2)$. Notice that $x^*([0, c_2)) = x^*([c_1, c_2))$. Also note that by construction, $x^*([0, c_1))$ is the median voter's best policy conditional on the event $[0, c_1)$. Hence, conditional on the event $[0, c_1)$, the median voter's expected payoff from $x^*([0, c_1))$ is strictly higher than from $x^*([0, c_2)) = x^*([c_1, c_2))$. Also, conditional on the event $[c_1, c_2)$, the expected payoff of the median voter from $x^*(([c_1, c_2))$ equals that from $x^*([0, c_2))$ since $x^*([0, c_2)) = x^*([c_1, c_2))$. Given $[0, c_1)$ is a strictly positive probability event, it follows that the median voter strictly prefers $\mathcal{P}_1$ to $\mathcal{P}_2$. Now consider the expert. Since $\mathcal{P}_1$ and $\mathcal{P}_2$ are equilibrium partitions, the expert strictly prefers $x^*([c_{i-1}, c_i))$ to $x^*([c_{j-1}, c_j))$ in all states under the event $[c_{i-1}, c_i)$, $i \neq j, i, j = 1, 2$. Again, since $x^*([0, c_2)) = x^*([c_1, c_2))$, it follows that conditional on the event $[0, c_1)$, the expected payoff of the expert from $x^*([0, c_1))$ is strictly greater than that from $x^*([0, c_2))$. Finally, conditional on the event $[c_1, c_2)$, the expected payoff of the expert is equal as $x^*([0, c_2)) = x^*([c_1, c_2))$. Thus the expert strictly prefers $\mathcal{P}_1$ to $\mathcal{P}_2$. ■

STEP 2: Let $\mathcal{P}_3 = \{[0, c_1), [c_1, c_2), [c_2, c_3), \ldots, [c_{N-1}, 1]\}$ and $\mathcal{P}_4 = \{[0, c'_1), [c'_1, c'_2), [c'_2, c'_3), \ldots, [c'_{N'-1}, 1]\}$ be two equilibrium partitions such that $l_i$ and $l'_j$ are each greater or equal to $4b_e$.

**Claim 5** *The median voter and the expert strictly prefer $\mathcal{P}_3$ to $\mathcal{P}_4$ iff $N > N'$.*

[13] Above we have not reported the case $R = 2b_e$ as this requires a particular value of $b_e$ and hence non-generic. Yet, for completeness, note that in this case $N^* = \lfloor l/4b_e \rfloor + 1$, the advice from the left-most states yield voter pandering platforms while in all other cases, advice leads to media pandering.

The expected utility of any agent with bias $\beta \geq 0$ from partitions $\mathcal{P}_3$ and $\mathcal{P}_4$ are given by

$$W(\mathcal{P}_3;\beta) = -\frac{1}{12N^2} - \frac{1}{N}\sum_{i=1}^{N}(E[y|[c_{i-1},c_i)] + \beta - x^*([c_{i-1},c_i)))^2,$$

and

$$W(\mathcal{P}_4;\beta) = -\frac{1}{12N'^2} - \frac{1}{N'}\sum_{i=1}^{N'}(E[y|[c'_{i-1},c'_i)] + \beta - x^*([c'_{i-1},c'_i)))^2.$$

Also, $x^*([c_{i-1},c_i)) = E[y|[c_{i-1},c_i)] + b_e$ and $x^*([c'_{i-1},c'_i)) = E[y|[c'_{i-1},c'_i)] + b_e$. Hence,

$$W(\mathcal{P}_3;b_e) = -\frac{1}{12N^2}, W(\mathcal{P}_4;b_e) = -\frac{1}{12N'^2}$$

and the result follows for the expert. Finally

$$W(\mathcal{P}_3;0) = -\frac{1}{12N^2} - b_e, W(\mathcal{P}_4;0) = -\frac{1}{12N'^2} - b_e,$$

and the result follows for the median voter as well.■

**Proof of Proposition 3**: For the expert's bias $b_e$, if $b_e > 1/24$, we can show by direct calculation that the median voter is better off in the most informative equilibrium of our model compared to the most informative equilibrium of CS iff $b_e < 5/18$. We will focus attention on the case where $b_e \leq 1/24$ in what follows.

Recall that the loss to the median voter from a $N = 2$ element CS equilibrium is

$$L_{CS} = \frac{1}{12}\sum_{i=1}^{N} l_i^3, \tag{7}$$

where

$$l_i = l_1 + 4b_e(i-1), i \geq 2 \tag{8}$$

and $\sum_{i=1}^{N} l_i = 1$. Using (8) in (7) and dropping all terms involving $l_1 = 0$, we have

$$L_{CS} \geq \frac{1}{12}\left(64b_e^3\left(\frac{N(N-1)}{2}\right)^2\right).$$

On the other hand, the loss to the median voter from the most informative equilibrium in our model, $L_{CGR}$, is strictly less than the loss from the $M$ - partition equilibrium where each interval is of equal length, of at least size $4b_e$, so that there is complete expert pandering in each interval. In other words,

$$L_{CGR} < \frac{1}{12}\sum_{i=1}^{M}\frac{1}{M^3} + b_e^2 = \frac{1}{12}\frac{1}{M^3} + b_e^2$$

where $M = \lfloor \frac{1}{4b_e} \rfloor$ and each interval is of length $1/M$.

Therefore, to show $L_{CS} > L_{CGR}$ for all $b_e \leq 1/24$, it suffices to show

$$64b_e^3 \left(\frac{N(N-1)}{2}\right)^2 \geq \frac{1}{M^2} + 12b_e^2. \tag{9}$$

We have left quite a bit of slack but we show below that for $b_e \leq 1/24$ we can afford this slack. Note since $b_e \leq 1/24$, we have $N \geq 4$ and $M \geq 6$. Call $b^*(N) = \frac{1}{2N(N-1)}$ the cutoff at which the $N$ element CS equilibrium is born, i.e., at $b_e = b^*(N)$, $l_1 = 0$ so that $l_2 = 4b_e$, $l_3 = 8b_e$, and so on, i.e., all CS intervals have lengths that are multiples of $4b_e$. At this value of $b_e$ we must have $M = \frac{N(N-1)}{2} = 1/4b_e$ in the equal length equilibrium in our model with $M$ elements with each interval of length exactly $4b_e$. In this case (9) becomes

$$64b_e^3 \left(\frac{1}{4b_e}\right)^2 > 16b_e^2 + 12b_e^2$$

or $b_e < 1/7$ which holds. We conclude that (9) holds at $b_e = b^*(N)$ for all $N \geq 4$.

Notice now that starting from $b^*(N)$, as we lower $b_e$ slightly, $N$ and $M$ remain fixed in (9). But when we lower $b_e$ all the way to $b^*(N+1)$, we get a new $N+1$ element CS equilibrium and a corresponding $M' = \frac{N(N+1)}{2} = M + N$ element equal-length equilibrium in our full model. In between $b^*(N+1)$ and $b^*(N)$, there are $N-1$ further cutoff values of $b-m$ at each of which the equal sized equilibrium number of partitions in our full model grow by 1. Let $b'(M+k)$ be the cutoff values of $b_e$ of this second kind of equilibrium, with $k = 0, ...., N$, so that

$$b^*(N) = b'(M) > ... > b'(M+k) > ... > b'^*(N+1).$$

Of course, the RHS of (9), if one uses such $M+k-$ element equal length equilibrium of our full model, is less than what obtains if one uses the $M$ - element equal length equilibrium of our full model.

We now introduce further slack in our analysis by proving that the lower bound on the most informative CS equilibrium loss provided in the LHS of (9) is greater than the loss from the $M$ element equal length equilibrium of the full model (which is not even the most informative equal-length equilibrium). More precisely, we now establish the following sufficient condition:

$$64b_e^2M^2 > 1/M^2 + 12b_e^2 \tag{10}$$

for all $b \in [b^*(N+1), b^*(N)]$ with $N \geq 4$ and $M = \frac{N(N-1)}{2}$. Note $N$ and $M$ are fixed for $b_e$ in this zone.

Note also that the difference between the LHS and RHS of (10) is monotone increasing in $b_e$ iff $b_e > 1/8M^2$. But using the facts that $M = \frac{N(N-1)}{2}$, $b_e \geq b^*(N+1) = \frac{1}{2N(N+1)}$ and $N \geq 4$, this can readily be verified to be true. Because of this monotonicity it suffices now to establish (10) at the lower end of the interval, i.e., for $b_e = b^*(N+1)$. Using $M = \frac{N(N-1)}{2}$ and $b^*(N+1) = \frac{1}{2N(N+1)}$ in (10) yields the equivalent inequality

$$\left(\frac{N(N-1)}{2}\right)\left(\frac{N-1}{N+1}\right)^3 - \frac{3}{4}\left(\frac{N-1}{N+1}\right)^2 > 1. \tag{11}$$

The derivative of the lHS of (11) in $N$ can be verified to be

$$\left(\frac{N-1}{2(N+1)^4}\right)(2N^4 + 3N^3 - 13N^2 + 3N - 7)$$

which is positive for $N \geq 4$. As a result if (11) obtains at some $N$ it also obtains for all larger $N$. To complete the proof it can be verified that (11) obtains at $N = 4$. This completes the proof.■

**Proof of Proposition 4.** Suppose the two parties have committed to candidates with ideologies $b_L$ and $b_R$. Fix the first stage message $m_a$ and the second stage message $m_e$. The median voter (and hence a majority) will strictly prefer to elect the candidate who is ideologically closest to the median voter since such a candidate will choose policies that are closest to what the median voter likes given all available information. So such a candidate will win the election for sure, regardless of the information revealed by the expert. It follows that is in the incentive of each office-seeking party to choose a candidate that is identical in his ideology to the median voter. ■

**Proof of Proposition 5**: We provide only a proof for the case with indirect democracy since the result under direct democracy (the CS model) is well known.

Suppose the expert (with bias $b_e > 0$) commits to disclose her information to a surrogate with bias $b_s > 0$ before the game of electoral competition starts. Subsequently, the surrogate takes the role of the expert in the game summarized in Figure **??**. The loss to the expert from a $N$-message equilibrium with the surrogate $b_s$ is

$$L(b_s; b_e) = \sum_{i=1}^{N} l_i \int_{l_i} (y + b_e - \widehat{y}_i)^2 \frac{dy}{l_i}$$

where $l_i$ = length of $i$th interval and $\widehat{y}_i$ = "action" in the $i$th interval. Let $\overline{y}_i$ = expected value of $y$ given it is in $i-$th interval and let $\delta_i = \widehat{y}_i - \overline{y}_i$ = "distortion" in the action from what the voter would like. We can write

$$\begin{aligned} L(b_s; b_e) &= \sum_{i=1}^{N} l_i \int_{l_i} (y - \overline{y}_i + b_e - (\widehat{y}_i - \overline{y}_i))^2 \frac{dy}{l_i} \\ &= \sum_{i=1}^{N} l_i \int_{l_i} (y - \overline{y}_i)^2 \frac{dy}{l_i} + \sum_{i=1}^{N} l_i \int_{l_i} (b_e - \delta_i)^2 \frac{dy}{l_i} \\ &= \frac{1}{12} \sum_{i=1}^{N} l_i^3 + \sum_{i=1}^{N} l_i (b_e - \delta_i)^2 \\ &= b_e^2 + \frac{1}{12} \sum_{i=1}^{N} l_i^3 - \sum_{i=1}^{N} l_i (2b_e - \delta_i)\delta_i. \end{aligned}$$

The expected loss to the expert from choosing a voter aligned surrogate, i.e., $b_s = 0$, is $b_e^2$. So the difference in the loss between full disclosure to the voter and choosing a surrogate with bias $b_s > 0$ is

$$\Delta = b_e^2 - L(b_s; b_e) = \sum_{i=1}^{N} l_i (2b_e - \delta_i)\delta_i - \frac{1}{12} \sum_{i=1}^{N} l_i^3.$$

To show that $b_s = 0$ is not optimal it suffices to find some $b_s$ and associated $N$ for which $\Delta > 0$. We pick a $N$ partition equilibrium where a $N+1$ equilibrium is "just born" for some $N > 1$. In this equilibrium, the left most interval is of length $3b_d$ (with partial pandering) and every other interval is of length $4b_d$ (with surrogate pandering). We have the following relationships in such an equilibrium:

$$\begin{aligned} l_1 &= 3b_s \\ l_i &= 4b_s \text{ for } i \geq 2 \end{aligned}$$

$$1 = 4(N-1)b_s + 3b_d$$

$$\begin{aligned} \delta_1 &= 3b_d - b_s - \frac{3b_d}{2} = \frac{b_s}{2} \text{ and} \\ \delta_i &= \overline{y}_i + b_s - \overline{y}_i = b_s \text{ for } i \geq 2. \end{aligned}$$

Using these, we obtain

$$\begin{aligned}\Delta &= \sum_{i=1}^{N} l_i(2b_e - \delta_i)\delta_i - \frac{1}{12}\sum_{i=1}^{N} l_i^3 \\ &= 3b_d(2b_e - \frac{b_s}{2})\frac{b_s}{2} + \sum_{i=2}^{N} 4b_d(2b_e - b_s)b_s - \frac{1}{12}(27b_d^3) - \frac{1}{12}\sum_{i=2}^{N} 64b_d^3 \\ &= b_s^2\left[3b_e + 4b_d + 8(N-1)b_e - \frac{7}{3}\right].\end{aligned}$$

As long as $b_s \neq 0$, $\Delta > 0$ iff the term in braces above is strictly positive. Furthermore, for fixed $b_e$, as $b_s$ becomes small $8(N-1)b_e$ becomes arbitrarily large and so the term inside braces must be positive for $b_s$ small enough. This completes the proof.■

**Proof of Proposition 6**.

We need to show that the following profile of strategies is an equilibrium. The expert (captured party) chooses a platform $x_u^* = y + b_e$ as a function of $y$ while the uninformed office-seeking party chooses a platform $x_u^* = 1 - b_e$. Notice that $x_e^* \in [b_e, 1 + b_e]$. Let $x_e$ denote a generic platform choice by the expert's party and $x_u$ a generic platform choice by the uninformed party.

First consider the voter's sequential rationality in this candidate equilibrium. When $x_e \notin [b_e, 1 + b_e]$, the voter's beliefs are free. We choose beliefs that allow the voter elect the uninformed platform for sure in this case. Otherwise, the voter infers $y = x_e - b_e$ and elects the platform closest to this inferred state, randomizing if indifferent in manner to be specified below. Notice that if the two parties behave as specified, the voter elects $\min[x_e^*, x_u^*]$.

Consider now the expert party's rationality. If it behaves as specified, then for all $y < x_u^* - b_e$, we get $x_e = x_e^* = y + b_e < x_u^*$ and so the voter elects $x_u^*$. Since this is the ideal policy of the expert in these states, there is no profitable deviation for the expert in such cases. On the other hand, if $y + b_e \geq x_u^*$, and the expert chooses $x_e = x_e^* = y + b_e$, the voter's loss from electing the expert's platform is $b_e$ while her loss from electing the uninformed platform is at most $b_e$. So the voter weakly prefers to elect the uninformed platform (and we suppose that the voter elects the uninformed platform when indifferent). If the expert deviates to any other platform $x_e < x_u^*$, and in the interval $[b_e, 1 + b_e]$, in these states, then the voter infers $y = x_e - b_e < x_e < x_u^*$ and elects the expert's platform. But since $y + b_e >\geq x_u^*$, this outcome is worse for the expert than letting $x_u^*$ get elected. So such a deviation is unprofitable for the expert. On the other hand, if the expert deviates to some $x_e \notin [b_e, 1 + b_e]$, then voter beliefs are free and the voter still elects $x_u^*$ so such a deviation is not profitable for the expert either. We conclude that the expert's behavior is sequentially rational in all states $y$.

Next consider the uninformed office-seeking party's rationality. If it behaves as specified, it wins the election when $x_e^* = y + b_e \geq x_u^*$ which occurs with probability $2b_e$.By deviating to any other platform $x_u$, it can win only the voter's loss from electing $x_u$ is at most $b_e$, the loss from electing $x_e^*$, i.e., only when $y \in [x_u - b_e, x_u + b_e]$ which occurs with probability at most $2b_e$. So the uninformed party does not have a profitable deviation from its prescribed platform.■

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