

Laws of War: The Growth of Legislative Power in America

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Abstract

The power of assemblies in the British new world grew far beyond the bounds contemplated at their creation. I develop a formal model to account for this growth. In this model colonial assemblies can challenge the agenda setting powers of colonial governors. Governors vary in their ability to withstand these challenges, but all wish to appear strong in the eyes of the crown. However, depending on political conditions within the colony, even a strong governor can generate a wide range of policy outcomes. Weak governors exploit this to avoid appearing weak, while capitulating to assembly demands. This reveals their weakness to the assembly (but not the crown), which demands even more from weak governors in the future. This creates a dynamic path of growing assembly power. I then show that colonial war increases the assembly's incentive to challenge the governor's power in the short run, which catalyzes the expansion of assembly power in the long run. Overall, the results reveal the strategic foundations of one of the most important institutional developments in American history: the growth of legislative power.

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[P]rogressive strengthening of the powers of the assemblies against the governors is the most striking characteristic of colony government, exploding, finally, in the Revolution of 1776.

— S.E. Finer, *A History of Government* (p. 1401)

The growth of legislative power is perhaps the foundational element of political institutions in the United States—indeed, as Finer (1997) suggests, of its very existence as an independent state (cf. Bailyn 1968). Yet political science and political economy have had almost nothing to say about the origins of this power, let alone its growth, opting instead to take the institutional landscape as given and explore its effects.¹

Since legislative power helped to spawn an independent United States, it follows that the United States itself did not create that power. Instead, it dates to the British colonial era. From modest origins as a consultative check on the actions of colonial executives (Kammen 1969), legislative power in royal colonies² came to encompass the authority to initiate all legislation, propose unamendable money bills, audit public accounts, name inferior executive officers, disburse funds on the assembly’s own warrant, and even plan specifics of military expeditions (Greene 1963).

How can we account for this growth of legislative power? It is clear that im-

¹Lutz (1988), Squire (2012, 2017), and Carpenter (2018) are important and rare exceptions. Squire (2012, 2017) focuses most directly on institutional change, though his analyses focus on institutions internal to colonial legislatures themselves (e.g. committee systems), rather than the place of legislatures in the system of government.

²Royal colonies were those with “constitutions” designed unilaterally by the crown, typically in commissions to colonial governors, who served as agents of the crown (Greene 1898, Keith 1930). It is more interesting to explain the growth of legislative power in royal colonies than in charter colonies (all in New England, eventually only Connecticut and Rhode Island), because the latter had fixed constitutions largely of their own design. The theory of royal colonies was that the crown would control their institutions completely.

perial authorities did not intend it (Labaree 1930). While they had some reason to create independent legislatures in North America (Gailmard 2017), legislative power in these colonies grew far beyond that sought or imagined at the time of their design.³ Indeed, by the late 1600s, the English crown was attempting to cabin assembly power with institutional checks, such as instruction of royal governors down to minute details of action and royal review of colonial legislation (Russell 1915; cf. Gailmard 2018). Yet in the end, and despite the crown bringing progressively more colonies within the cordon of royal administration, those steps failed (Labaree 1930, Greene 1963). Notwithstanding pain of removal from office, loss of (remunerative) livelihood, or even suit for negligence, time and again governors in fact nourished the power of assemblies by capitulating to their demands (Greene 1898).

Another explanation is that the English “imported” their political institutions with them to the new world (e.g., North 1990). Yet the English Parliament would never pretend⁴ to some of the powers listed above (Finer 1997, p. 1401) and could not serve as a model of them. Instead, a capacious legislative power emerged endogenously in America, through the contestation between governors and assemblies (Greene 1963). Thus, the “importation” thesis is of limited value in understanding the arc and eventual steady state of assembly power in America.

Historians focused on the home-grown development of colonial institutions have described assembly power attained once as a “precedent” for assembly power

³Gailmard (2017) showed that the crown may benefit by transferring agenda power from the governor to the assembly—but only in a very limited issue domain, and not in the generalized sense considered here. That paper addresses the establishment of an independent legislature with *some* power. This paper addresses the growth of that power beyond the bounds initially planned.

⁴Outside, at least, of the English Civil War.

in the future (Labaree 1930, Greene 1963). This explanation is also unsatisfying because precedent has no force in a bargaining dynamic beyond what one of the parties is strategically able to enforce in equilibrium. Moreover, in royal colonies, the legal construction of institutional forms came in the crown’s instructions to governors. Agreements between the governor and assembly, while changing de facto practice, did not change the de jure position of the crown’s instructions. What is required, then, is a model in which strategic action creates this progressive growth of assembly power over time in equilibrium.

In this paper, I attempt to articulate such a model. The model turns on strategic interplay between assemblies, colonial governors, and the crown. Assemblies can stage a (costly) challenge to the governor’s formal agenda setting power. The governor is privately informed of its bargaining resolve or “strength.” Strong governors are willing to resist assembly challenges indefinitely, and therefore hold agenda power firmly. Weak governors find it costly to resist the assembly’s demands, but prefer even more to avoid revealing their weakness to the crown, which risks dismissal from office—putting future pay and perquisites at risk.⁵

After resolving the disposition of agenda power, the assembly and governor then engage in policy bargaining. They each observe all proposals and concessions in colonial politics, while the crown only observes the outcome—not the locus of agenda power.⁶ The crown is also uncertain about the ideological position of

⁵I assume that the crown cannot commit to dynamic mechanisms or any incentive beyond a payment for holding office each period. Myerson (2015) and Padró i Miquel and Yared (2012) each consider possibilities of motivating governors in dynamic moral hazard models. Gehlbach et al. (2016) consider a much larger but related set of issues for dictators appropriately motivating subordinates in autocratic governance.

⁶Thus, this is formally a career concerns model (Holmström 1999), in the sense that the agent (governor) cares about the principal’s (crown’s) ex post beliefs of its type. But unlike canonical career concerns models in political economy (e.g. Persson and Tabellini 2000), the principal observes only a signal of the agent’s “effort” that is mediated through policy bargaining with a

the assembly, while the governor observes it perfectly. Therefore, even a strong governor can produce a wide range of policy outcomes, from policy stasis to the crown's ideal, depending on the assembly's leanings. The weak governor exploits this, capitulating to the assembly's demands and yet never producing results sufficiently different from those of a strong governor to risk dismissal from office.⁷

At first, when the assembly is uncertain of the governor's strength, its demands for power are relatively tentative. It challenges the governor's authority only when the benefits to the assembly of holding power are relatively great. But when it learns the governor's weakness as a result of these conditions, it exploits that information in a wider range of future circumstances. Having learned the governor's weakness, the assembly challenges his agenda power more often in the future. The weak governor, in turn, capitulates to this broader set of challenges to his authority.

The result in equilibrium is precisely the progressive growth of assembly power. The model explains not just that assemblies, sometimes in a strong bargaining position with governors, extracted transitory concessions—it explains how those concessions won once persisted into future periods.⁸ Having achieved success once in an unusual circumstance, the assembly parlays that into a certainty of future claims to power in a much broader set of circumstances. This

conflicting third party. In purely formal terms, this innovation to the career concerns framework is the contribution of this model.

⁷Thus, as in Gailmard (2018), I assume that the crown is not certain that the governor has pursued the best possible policy from the crown's perspective. That paper shows how royal oversight through legislative review can make governors more faithful—but never perfect agents. The present paper takes that observation as given and asks what it means for the growth of legislative power.

⁸This is crucial for institutional *change* and assembly power *growth*. It is relatively easy to explain why governors would grant short term concessions when facing an acute need for money. In my view, the challenge is instead to explain how those concessions built and stuck over time.

is because the governor's strength is persistent, so once information about it revealed to the assembly, that information is useful in the future. Moreover, in equilibrium, the actors on the ground in the colony (governor and assembly) are fully aware that the governor has transferred power to the assembly, and this governor may stay in office year after year, but never produce results that reveals this to the crown—at least not definitively enough to produce the governor's dismissal.

After articulating this strategic dynamic of legislative power, I then consider the effect of colonial war in catalyzing it. Historical accounts present dozens of cases in which assemblies bargained up their powers against governors in times of war (Greene 1963, Labaree 1930). A significant puzzle is why assembly gains won in such periods would persist after the war concludes.⁹ Why would governors, having made extraordinary concessions in the duress of war, not simply return to a more demanding position in time of peace?

The model below captures the effect of war on the distribution of power between the legislature and executive—both transitory and permanent. In this model, the legislature cares significantly less than the executive about the outcome of war, a typical condition in colonial America (Labaree 1930, p. 310).¹⁰ Thus, war increases (transitorily) the expected policy divergence between the governor and assembly.¹¹ This in turn increases the (short-run) stakes of claiming

⁹War has often increased the *transitory* bargaining power of legislatures relative to executives, as with e.g. the Magna Carta. This effect is itself interesting to explain, but even more interesting is the *permanent* effect of war on the distribution of power, which seems important in the American colonial context.

¹⁰It was also common for much of the history of assembly development in Europe (cf. Hoffman and Rosenthal 2015).

¹¹The modern doctrine of “total war” did not exist in the colonial era, and war did not seriously threaten any mainland English colony's existence after ca. 1700. The question was therefore not how to survive, but rather how to support the required mobilization.

agenda power. Therefore, the assembly is more likely to challenge the governor's agenda power, and so to learn of weaknesses in the governor's bargaining power, in a state of war. This captures the transitory effect of war on increasing assembly power.

The permanent effect of war on assembly power arises because the governor's bargaining strength is sticky over time. Having learned more about the governor's strength in the unusual tests of wartime, the assembly is more certain about when it can successfully threaten the governor in the future. After capitulating once in war, the governor is even more likely to be challenged, and forced to capitulate, in the future. In this way, concessions by the governor to the assembly in a state of war have a durable effect on colonial institutions that persists even after the war is over.

The results of this paper are important for three reasons. First, explaining the growth of legislative power in America is essential to understanding the foundations of the U.S. constitution, and the independence of the U.S. itself. More generally, this paper uncovers conditions for the growth of liberal institutions in repressive environments. Second is the broad question of how war affects the distribution of power between the legislative and executive branches of government. Despite longstanding interest in this question,¹² little scholarship in political science has considered it.¹³ Third, the results address the theoretical issue of formally modeling institutional change and evolution. Despite the obvi-

¹²Cf. *Federalist* No. 8: "It is the nature of war to increase the power of the executive at the expense of the legislative authority."

¹³The notable exception is Howell et al. (2013). They argue that, in post-WWII America, war has tended to increase the power of the executive relative to the legislature. The reason is that both the legislature and executive in their setting care deeply about the outcome of war, but the executive has better information about its conduct. This condition is the opposite of that in the colonial era, and explains why the results were different.

ous centrality of institutional evolution for understanding the political world, few formal models in political science consider a nontrivial dynamic, endogenous path of change in institutions (cf. Greif and Laitin 2004; Shepsle 2017). Endogenous institutional change was central to legislative power development in the US, and thus also in the model below.¹⁴

The rest of the paper proceeds as follows. In the next section I lay out the formal model, and then proceed through its analysis to equilibrium. Following this I consider the equilibrium growth of assembly power, and then the effect of war on this growth. I then present historical evidence in support of the model’s key assumptions and results, as well as brief comparison with other British colonies. Finally, I conclude with a discussion of the findings and possibilities for future research.

1 A Model of Career Concerns, Policy Bargaining, and Legislative Power

The core of the model is a career concerns dynamic between the governor and crown. The governor (agent) can take action on behalf of the crown (principal); different “types” of governors differ in the cost of this effort. However, C does not observe the agent’s G “effort” directly. Instead, C observes a noisy signal of G ’s effort (and type) based on the play of a policy bargaining game between G and

¹⁴Here I conceive of an “institution” as a durable pattern of self reinforcing behavior by multiple actors with shared expectations. This squares with the view of institutions as configurations of behavior on the equilibrium path of a game (Calvert 1995). The model below depicts a dynamic path to change in these behaviors and beliefs over time, and in that sense captures institutional change. For analyzing institutional change, this perspective is more useful than the common meaning of “institution” as a fixed extensive form game.

A . G can act to deflect A 's challenge to agenda power in that game. C observes only the outcome of the game, not the disposition of agenda power or G 's efforts to keep it. In addition, C does not “consume” G 's type directly. “Good” types are useful to C because they hold more firmly to agenda power in bargaining with A , and thus produce better outcomes.

1.1 Formal Definition

A policy x is chosen by A and G in a policy bargaining game. Assume $x \in X = \mathbb{R}_+$; ideal points $x_C = x_G > 0$, $x_A < x_C$ as described below; status quo $q < x_C$; policy utility $u_i = -|x - x_i|$, $i \in \{A, G, C\}$. I assume throughout that $\frac{x_C}{2} < q$.

G begins every period with formal agenda setting power in policy bargaining. A can challenge this power at cost γ_A . G can either capitulate to or resist the challenge. If G capitulates, A unilaterally sets policy. If G resists, with probability $\beta < 1/2$ bargaining breaks down and q stays in place; with probability $(1 - \beta)$, the challenge fails completely and G keeps agenda power in a Romer-Rosenthal bargaining game.

G 's privately observed type is $\sigma \in \{0, 1\}$ (“weak” or “strong”); $\Pr[\sigma = 1] = s$. Assume that G incurs a cost $(1 - \sigma)\gamma_G$ for resisting, where γ_G is common knowledge and “large” so that resistance is “sincerely dominated” for weak G . G earns wage w at the start of each period in office.

A and G observe all moves in each period. The crown observes only the policy x . Following this, C can dismiss G at cost γ_C and replace with an ex ante identical G , with new type σ . Alternatively, C can retain G at no cost, and G continues to the next period with its already established type.

There are 2 periods, $t = 1, 2$. The sequence within periods is:

1. N draws $x_A^t \sim U[0, x_G]$, shows G and A .
2. A chooses to challenge or not, observed by G and A , not C .
3. G chooses to resist or concede, observed by G and A , not C .
4. If G concedes, A implements $x^t = x_A^t$. If G resists, breakdown $x^t = q$ with probability β , or G makes proposal p with probability $1 - \beta$.
5. If G makes a proposal, A accepts (so $x^t = p$) or rejects it (so $x^t = q$).
6. C observes x^t , decides to retain or fire G .

Period 2 is identical except C does not have the option to fire G .

The exogenous parameters are $\{\gamma_i\}$, β , q , s , w , and x_C . They are all constant across periods t . The random variables are σ and x_A^t , with a stationary distribution. The endogenous choices are challenge, resistance, and policy for each period t , as well as dismissal for period 1. The game has incomplete information, in that G 's information sets are a partition of A 's, and A 's are a partition of C 's. Therefore, the natural equilibrium concept to preserve sequential rationality is perfect Bayesian equilibrium (PBE). I focus exclusively on pure strategy PBE.

1.2 Discussion

The central problem for the crown in this model is to ascertain the governor's performance from a sparse set of observable outcomes. Unlike the rich information on the ground in the colony, the crown's information was delayed, partial, and stilted in the favor of the reporting party (Pownall 1777, ch. 2; Johnson 1981,

p. 23; Bliss 1993, p. 179). The crown was often suspicious of governors in general, but lacked specific observations that would rationalize dismissal (Labaree 1930, Greene 1963). For their part, governors took full advantage of this to get along well enough with the assembly to make colonial government function, while presenting a heavily curated picture to the home authorities (Greene 1898).

The governor is endowed with *formal* agenda power in each period, reflecting the conventional instruction of the crown in royal colonies (Labaree 1930). The disposition of *real* agenda power in each period is resolved by the governor and assembly. The model focuses on institutional change in the sense of this real agenda power, formalities notwithstanding. This is necessary to analyze colonial institutions: the essential problem was that formal and real authority became increasingly mismatched, and metropolitan authorities were unable to harmonize them (Greene 1986; Bliss 1993).

Thinking of x^t as a budget for public spending on some issue (levees, port maintenance, militia, etc.), $x_A < x_C$ reflects the typical situation in colonial politics. Legislators (and their constituents) internalized the tax cost of greater budgets for colonial spending. The crown did not, nor did governors since they were not elected (or taxed) in royal and proprietary colonies. This naturally implies that legislators prefer lower spending than governors and the crown. The assumption that $x_G = x_C$ implies that G is a perfect agent of C in policy terms. This is simply to isolate the effect of G 's career concerns on the agency loss faced by C , since it cannot arise from policy disagreement.

The stochastic ideal point for A reflects that not only policy priorities in the assembly, but assembly members themselves, changed over time. Indeed, it was not unusual for the governor to prorogue or dissolve an assembly in hopes

that, upon return, assembly members or their preferences would change in the governor's favor (Greene 1898, p. 152-153). Prorogation is excluded from the model to keep it as simple as possible, but this does illustrate the substantive realism of the assumption of shifting assembly preferences.

A key element of the model is the governor's "type" or political strength relative to the assembly. The crown had numerous considerations in selecting colonial governors: repaying favors, loyalty to the crown, administrative efficiency, military fitness, etc. (Greene 1898, pp. 46-47). With multiple considerations in selection, it is to be expected that not all governors were experts at political bargaining. For instance, in New York, Governor Robert Hunter (in office 1710-1720), fresh from the lieutenant governorship of Virginia and later a distinguished governor of Jamaica, was adroit in convincing the assembly to pass revenue bills of (relatively) long duration and allowing the governor to control expenditures. On the other hand, Governor George Clinton (in office 1743-1753),¹⁵ a royal navy officer who served in America to evade creditors in Britain, capitulated completely to assembly demands for total control over expenditures (Labaree 1930, p. 286).¹⁶ This variation is captured in the governor's "type." "Strong" is simply a label for those governors who resisted assembly demands easily; "weak" is a label for those who were not able to do so.

The crown's primary and most potent tool of accountability for governors was the threat to fire them (Greene 1898). This resulted in a loss of the governor's status and pay (usually around £1000-2000, a very significant sum at the time) from future periods. Governors in royal colonies served at the pleasure of the

¹⁵This George Clinton was a distant cousin of the future governor of the state of New York and US vice president with the same name.

¹⁶The case of New York is treated more fully below, after analysis of the model.

crown, and were charged with acting as the crown's primary agent in colonial governance and liaison with imperial authorities (Keith 1930). Firing governors was typically disruptive to the colonial government and economy (McCusker and Menard 1985) and carried an opportunity cost of tapping a limited talent pool (Dewan and Myatt 2010). These factors are represented as a cost γ_C that the crown incurs for dismissal.

2 Analysis

In this section I present the PBE of interest and work through the intuition. Complete formal derivation is in the appendix. The key result holds when each player's cost (of challenge, resistance, or dismissal) lies in an intermediate range. I offer interpretations of these ranges below. Intuitively, these assumptions rule out cases where each player's key action (challenge, resistance, and dismissal) is either so cheap that it is always taken, or so costly that it is never taken.

Assumption 1 $\gamma_A \in (\gamma_A^*, \gamma_A^{**}) \equiv (\beta(x_C - q), \frac{(x_C - q)}{2})$.

Assumption 2 $\gamma_G \in [\gamma_G^*, \gamma_G^{**}] \equiv [2x_G, w]$ (and thus, obviously, $w > 2x_G$).

Assumption 3 $\gamma_C \in [\gamma_C^*, \gamma_C^{**}]$, defined below.

Proposition 1 *Under assumptions 1, 2, and 3, there is a pure strategy perfect Bayesian equilibrium such that,*

1. *Assembly challenge: In periods $t = 1, 2$, A challenges for an interval of ideal points $X_A^t \subset (q, x_C)$. In period 2, A also challenges for an interval in $[0, q)$.*

2. *Governor resistance:* On the equilibrium path, G resists all challenges from A if $\sigma = 1$, and capitulates to all challenges if $\sigma = 0$.
3. *Policy outcome:* For $t = 1, 2$, policy is $x^t = 2x_A - q$ if G holds agenda power, $x^t = x_A$ if G concedes agenda power, and $x^t = q$ if bargaining breaks down.
4. *Governor beliefs:* In period 1, A learns G 's type with certainty after a challenge, and retains the prior belief $\Pr[\sigma = 1] = s$ absent a challenge.
5. *Crown beliefs and retention:* In period 1, for any $x^1 \in [q, x_C]$, C believes $\tilde{s}_C \equiv \Pr[\sigma = 1|x^1] \geq \frac{3}{2-s}$ and retains G . For any $x^1 < q$, C believes $\tilde{s}_C = 0$ and fires G .

Proposition 1 implies that governors do sometimes concede to assembly challenges, and the crown retains them in office anyway. Of course, the assembly observes the result of a first period challenge, and since the governor is retained in equilibrium, carries that revealed information into the second period. That, in turn, leads to even more (successful) second period challenges—the progressive growth of assembly power. I discuss the intuition for these results by focusing on the two periods in sequence.

2.1 Period 1

The governance problem for the crown is this: observing only the first-period policy outcome x^1 , is it possible to be sufficiently certain that the governor is weak to dismiss him?¹⁷ Since only weak governors ever capitulate to assembly demands,

¹⁷Assumption 3 ensures that the crown will dismiss the governor after the first period when certain he is weak.

this is equivalent to asking: is it possible for the crown to determine whether its agent was the proposer or agenda setter in a Romer-Rosenthal bargaining game?

Governor's Resistance to Assembly Challenges. If the governor faced no threat of dismissal and followed only its sincere preferences, it would sometimes be possible. The weak governor would capitulate to all challenges in this case (assumption 2). Knowing this, the assembly would challenge whenever $|q - x_A^1| > \gamma_A$, or the policy benefits of agenda power exceed the cost of a challenge to the assembly. This would occur (among other cases) for $x_A^1 < q$ and sufficiently close to 0. A weak governor capitulates to a challenge from such an assembly, which yields policy $x^1 < q$. On the other hand, a strong governor resists these challenges. Given $x_G > q$, resistance yields $x^1 = q$ with certainty (that is, both bargaining breakdown and successful retention of agenda power yield equilibrium policy q in this case), which is preferable in policy terms to $x_A^1 < q$. Therefore, upon observing $x^1 < q$, the crown could infer that the governor is certainly weak, and fire him.

In fact, the governor did face a threat of dismissal for evident weakness. Assumption 2 implies that even a weak governor would resist a challenge rather than reveal his weakness—and lose his post—with certainty. Thus, the threat of dismissal makes even a weak governor stand up to assembly challenges when $x_A^1 < q$. Capitulating to these challenges is out of equilibrium (prop. 1, part 2). In turn, since they are fruitless, the assembly never makes them (prop. 1, part 1). Thus, $x^1 < q$ never occurs in equilibrium for any assembly ideal point. In short, the dismissal threat does shift the governor's behavior in the crown's interest.

However, for any other policy $x^1 \in [q, x_C]$, the weak governor has some cover.

For any policy y in this range, there is an assembly ideal point x_A^1 such that a strong governor produces $x^1 = y$ in equilibrium. To see this, note that (by standard logic of the agenda setter model) a strong governor who retains agenda power produces $x^1 = 2x_A^1 - q$. For $x_A^1 = q$, this collapses to $x^1 = q$. For $x_A^1 = x_C + q/2 \equiv x_M$, this yields $x^1 = x_C$. Since $2x_A^1 - q$ is linear in x_A^1 , any other $x^1 \in [q, x_C]$ results from some $x_A^1 \in [q, x_M]$.

This has a powerful effect on the incentives of a weak governor to resist assembly challenges in the first period. The weak governor knows that, provided $x^1 \in [q, x_C]$, he can capitulate to assembly challenges and not reveal his weakness to the crown with certainty. Specifically, if assembly with ideal point $x_A^1 \in [q, x_C]$ challenges the governor, and he capitulates, then the resulting policy, $x^1 = x_A^1$, lies in the range of policies generated by strong governors. The weak governor can have his cake and eat it too—concealing his weakness from the crown, but also avoiding the high cost of resisting the assembly’s demands—by hiding behind the range of possible outcomes that even a strong governor would produce in equilibrium.¹⁸

Assembly Challenges to the Governor’s Power. In view of this resistance behavior by the governor, when does the assembly challenge? The key idea is that issuing a challenge requires balancing (i) the cost of challenge γ_A , (ii) the chance that it will succeed (i.e., probability that G is weak, $1 - s$), and (iii) the stakes of holding agenda power. The last factor suggests that A will be more

¹⁸ G may seem to have an incentive to appear strong in period 1, to dissuade challenges in period 2. However, these incentives actually play no role in determining G ’s first period behavior. For weak types, assumption 2 ensures that the weak type never has a signaling incentive—which, given retention by C , is rooted in G ’s period 2 policy payoff—to incur the cost of resistance in period 1. In other words, a weak G can be induced to resist only (possibly) by the threat of dismissal, not by sincere concerns over policy.

inclined to challenge when x_A^1 is near $x_M = (q + x_C)/2$. It is here that A has the most rent extracted when G holds agenda power, and thus has the most to gain by taking agenda power itself.

An important complication is that A must consider not only the effect of a challenge on policy in period 1, but the value of information for period 2. Irrespective of the effect of the period 1 challenge on period 1 policy, it provides information about G 's strength that is useful for period 2. Let $v(s)$ denote the ex ante value of perfect information in $t = 2$ about σ to A . The exact specification of $v(s)$ is in the appendix (equation 21 and lemma 5). Intuitively, the value $v(s)$ boosts the value of a period 1 challenge for any ideal point.¹⁹ In effect, the period 1 cost of an assembly challenge can be thought of simply as

$$\tilde{\gamma}_A = \gamma_A - v(s). \quad (1)$$

Given this, the assembly's optimal challenge strategy in period 1 is as follows.

Lemma 1 *In period 1, given the prior belief s and γ_A satisfying assumption 1, A challenges G 's agenda power if and only if*

$$\begin{aligned} x_A^1 &\in \left[q + \frac{\tilde{\gamma}_A}{1-s}, \frac{(1 - (1-\beta)s)x_C + s\beta q - \tilde{\gamma}_A}{1-s+2s\beta} \right] \\ &\equiv [x_{M-}^1, x_{M+}^1] \\ &\equiv \mathcal{X}^1(s). \end{aligned} \quad (2)$$

This result is proved in the appendix. The set \mathcal{X}^1 is the period 1 *challenge zone*:

¹⁹However, A 's incentive to learn G 's type does not lead to more challenges than actually knowing that G is weak. This is proved in proposition 2 below.

the set of ideal points x_A^1 such that the assembly challenges for power. Intuitively, A challenges more when it thinks G is weak,²⁰ and when G would use agenda power to enact a policy especially far from x_A .

In view of the governor's and assembly's strategies, the assembly holds a very restricted set of beliefs about the governor's strength in equilibrium. Let \tilde{s}_A denote A 's posterior belief that $\sigma = 1$. If A challenges, then G 's type is fully revealed so that $\tilde{s}_A = \sigma \in \{0, 1\}$. If A does not challenge, then A learns nothing and $\tilde{s}_A = s$.

Crown Beliefs about the Governor's Strength. Assembly challenge and governor resistance jointly determine the equilibrium policy outcome x^1 . This is depicted in figure 1. The crown's problem is to infer the governor's strength (solid or dashed line) only from observation of a point on the vertical axis. As the figure indicates, there is no outcome x^1 that definitively demonstrates the governor's weakness: there is no equilibrium outcome generated only by a weak governor.

More formally, let $\tilde{s}_C(x)$ denote the crown's belief that the governor is strong ($\sigma = 1$) given the policy enactment x and the strategies in proposition 1. It is shown in the appendix that

$$\tilde{s}_C = \begin{cases} 0 & \text{for } x^1 < q \\ \frac{s}{2-s} < s & \text{for } x^1 \in [x_{M-}^1, x_{M+}^1] \\ \tilde{s}_C \geq s & \text{for any other } x^1. \end{cases}$$

²⁰This comparative static is not trivial because the value of information $v(s)$ is not a monotone function of s , but it is still true.

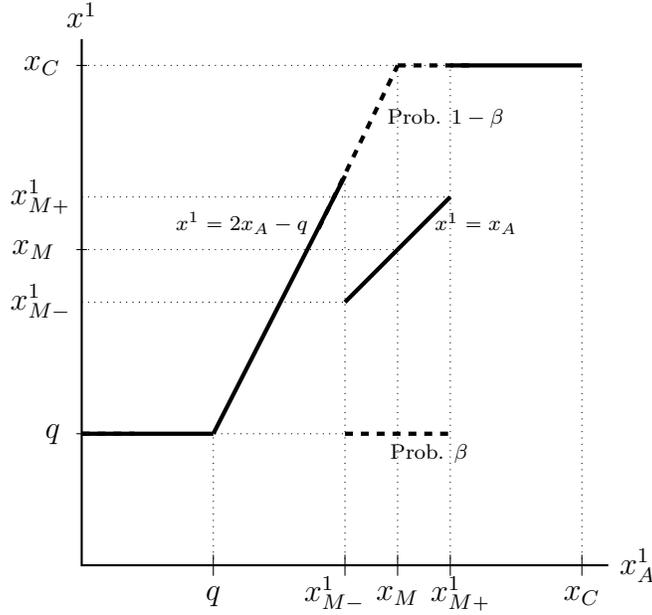


Figure 1. Period 1 policy x^1 as a function of assembly ideal x_A . Solid line: weak governor. Dashed line: possible outcomes with strong governor.

For instance, only a weak governor could conceivably produce $x^1 < q$. This requires $x_A^1 < q$, and G capitulating to an assembly challenge. This behavior is strictly dominated for a strong type, but not for a weak type. Therefore, any reasonable beliefs assign probability 0 to a strong type in this case.

Given equilibrium challenge behavior, a weak governor is more likely than a strong governor to produce outcomes in the the period 1 challenge zone, $[x_{M-}^1, x_{M+}^1]$. So this is “bad news” about G ’s type, but it is not dispositive, because even strong governors produce these outcomes for some assembly ideal points. All other policy outcomes are either uninformative about G ’s strength, or are “good news” in that they are more likely the result of a strong governor.

Crown Retention of the Governor. With beliefs $\tilde{s}_C(x)$, the crown can make a retention decision for period 1. Since strong governors hold agenda power, they generate better policy outcomes for the crown; thus, the crown is better off with strong governors. If the crown received good news about G 's strength from period 1, then the sitting governor is preferable to his replacement irrespective of replacement costs, and G is retained. If C received bad news about G 's strength, its decision to dismiss is determined by the cost of dismissal γ_C .

Following bad news ($\tilde{s}_C < s$), let $\gamma_C(\tilde{s}_C)$ be the cost of dismissal such that $EU_C^2(\tilde{s}_C) = EU_C^2(s)$, or C is indifferent about retaining and dismissing G .²¹ A lower cost is necessary to justify dismissal when C is more confident that G is strong, i.e., $\gamma_C(\tilde{s}_C)$ is decreasing in \tilde{s}_C .

Since $\tilde{s}_C = \frac{s}{2-s}$ is the smallest posterior belief that C holds on the equilibrium path, this yields the crown's optimal retention rule:

Lemma 2 *Assume $\gamma_C(0) > \gamma_C > \gamma_C(\frac{s}{2-s})$, and G and A play according to proposition 1. Then C will dismiss G after a major concession $x < q$ but not for any other policy outcome x^1 .*

Thus, the bounds in assumption 3 are $(\gamma_C^*, \gamma_C^{**}) = (\gamma_C(\frac{s}{2-s}), \gamma_C(0))$. This result also supports the career concerns that structure G 's optimal resistance to assembly challenges. In particular, C 's beliefs after $x^1 < q$ would be so pessimistic that G would be fired. G wants to prevent that, so despite a temptation to allow all concessions, a weak governor resists challenges when $x_A^1 < q$.²² However, a

²¹It is shown in the appendix that $EU_C^2(\tilde{s}_C)$ is monotone, so there is exactly one such γ_C for each \tilde{s}_C .

²²Even if the career concerns were not strong enough to induce resistance by the weak type, it might seem that A would forego $t = 1$ challenges for $x_A^1 < q$, to avoid "outing" a weak governor, so that a weak governor can be exploited in $t = 2$. This is not true, because having

weak governor capitulates to all other challenges A is willing to make in $t = 1$. The crown cannot differentiate this capitulation from the action of a strong governor facing a challenging political environment. The weak governor exploits this by capitulating.²³

2.2 Period 2

With no belief updating or threat of dismissal for the crown, period 2 equilibrium behavior is substantially simpler. Governor resistance in period 2 is determined entirely by G 's type, not by incentives from the crown (which are absent). Assumption 2 implies that the governor's cost of resistance γ_G is larger than any possible policy payoffs for resistance, so a weak governor will never resist a challenge in period 2. On the other hand, assumption 1 implies that a strong governor resists all challenges that an assembly would choose to make.²⁴

Given the governor's resistance, the assembly must determine the ideal points x_A^2 such that it challenges G 's agenda power. A successful challenge by A yields policy $x = x_A^2$ and utility $-\gamma_A$ for the assembly. The governor resists a challenge if and only if strong ($\sigma = 1$). Resistance by G yields policy $x = q$ with probability β , and $\min\{2x_A^2 - q, x_C\}$ with probability $(1 - \beta)$. Solving this decision problem

foregone a challenge in $t = 1$, A has no information about G 's type, and therefore no reason to prefer a sitting G to its replacement.

²³Lemma 2 also supports "sincere" behavior by both A and G in policy bargaining. There are no observable outcomes that lead to G being fired in equilibrium, so no strategic behavior in policy bargaining can arise for that reason. For example, A is never tempted to reject an offer and produce $x^1 = q$ in order to get G fired. And a weak G is never tempted to make an outrageous proposal so that A rejects, producing q , so that G is *not* fired.

²⁴When x_A^2 is close to x_C , even a strong governor may not want to risk bargaining breakdown by resisting. By the same token, the assembly does not gain much from these challenges either. Assumption 1 implies that the assembly prefers not to challenge for any ideal points such that even a strong governor would capitulate. Altering this would add intricacy to the presentation without substantively changing the results.

(see appendix) yields the assembly's optimal challenge strategy in period 2:

Lemma 3 *In period 2, given beliefs \tilde{s}_A and γ_A satisfying assumption 1, A challenges G's agenda power if and only if*

$$x_A^2 \in \left[0, q - \frac{\gamma_A}{1 - \tilde{s}_A} \right] \cup \left[q + \frac{\gamma_A}{1 - \tilde{s}_A}, \frac{(1 - (1 - \beta)\tilde{s}_A)x_C + \tilde{s}_A\beta q - \gamma_A}{1 - \tilde{s}_A + 2\tilde{s}_A\beta} \right] \quad (3)$$

$$\equiv [0, x_{q-}^2] \cup [x_{M-}^2, x_{M+}^2] \quad (4)$$

$$\equiv \mathcal{X}^2(\tilde{s}_A).$$

This is much like the period 1 challenge zone, except that the period 2 zone has a “hole” in it. This is because the weak governor now concedes to challenges for $x_A^2 < q$, and so the assembly sometimes challenges in this range.

Equilibrium outcomes x^2 as a function of x_A^2 are depicted in figure 2. Figure 2 assumes that governor types separated in $t = 1$, so A knows σ . The strong governor is never challenged. The weak governor is challenged in a larger region than in $t = 1$, when A was uncertain of σ .

3 Dynamics of Assembly Power

The key question of this paper is how assembly power grows over time, given the equilibrium behavior described above. In this section I show that equilibrium play in this model does indeed capture this progressive growth. Formally, let $\mathcal{A}_t \in \{0, 1\}$ be a random variable denoting whether the assembly does or does not hold agenda power in period t .

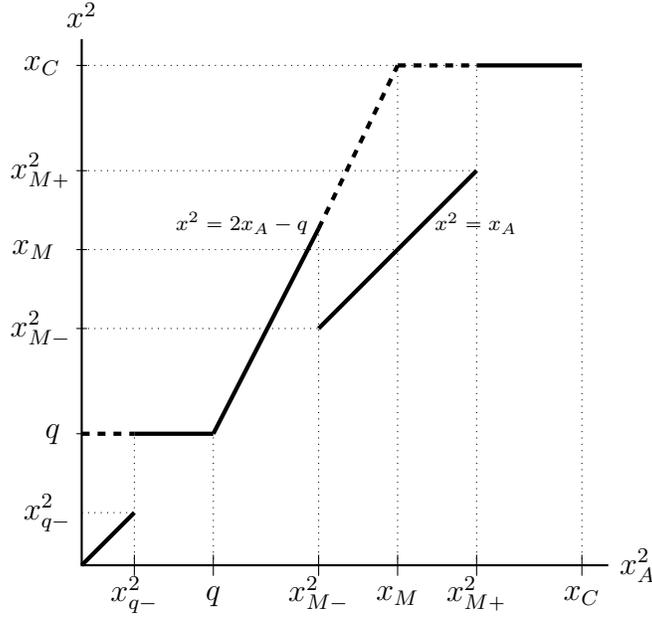


Figure 2. Period 2 policy x^2 as a function of assembly ideal x_A .
Solid line: weak governor. Dashed line: strong governor.

Proposition 2 *The expected power of the assembly in period 2 grows if it successfully takes power in period 1: $E(\mathcal{A}_2|\mathcal{A}_1 = 1) > E(\mathcal{A}_1) > E(\mathcal{A}_2|\mathcal{A}_1 = 0)$.*

This result (proved in the appendix) is based on two effects. First, A challenges for more values of x_A in period 2 after a successful first period challenge, than in period 1.²⁵ Second, the challenge is successful with probability 1 over this larger range, as opposed to probability $(1 - s)$ over a smaller range.

Intuitively, the result depends on several ingredients in the model. First is the crown's ignorance of colonial affairs. Even a perfect agent would produce a range

²⁵In other words, in this model, the dynamic growth of assembly power *cannot be just a selection effect*. In identifying cases where assembly power happens to have grown, a critical view might suggest this is simply selecting for places that had weak governors, so obviously expected assembly power in these cases is greater than expected assembly power in general. Proposition 2 shows precisely that this logic is at best incomplete: obtaining assembly power in one period changes the assembly's behavior in future periods. This strategic dynamic is a treatment effect of early assembly power on later assembly power.

of outcomes, depending on conditions within the colony that the agent observed but the crown did not. The weak governor simply had to make sure he did not produce any other outcomes besides these. This would preserve the crown's uncertainty about the governor's quality, and in turn, given the disruptions of removal, the governor's job.

Second, however, while the crown could not observe the colonial scene, the assembly could. Having staged a successful attack on the governor's institutional power once, and thereby learned the governor's strength, the assembly was more confident that future attacks would succeed. The assembly was therefore inclined to stage those attacks more often. Therefore, assembly success in claiming agenda power leads directly to increased demands, and an increased chance of assembly success, in the future. In this sense, the model precisely captures progressive growth of assembly power.

4 War and Peace and Assembly Power

This section will show that war is a crucial catalyst for starting the engine of assembly power growth. The reason is that war acts as a multiplier on ideal points, expanding the expected difference between the assembly and the crown.

This reflects the experience of war as a disruptive phenomenon requiring mobilization, rather than an existential threat to the colony's survival. This is a reasonable summary of the security position of most mainland English North American colonies from the late 17th century, when assembly power started its unprecedented growth (Greene 1963). Most wars and threats of war in the colonial period took place in borderlands, or even outside of English possession, rather

than in the heart of a colony. Thus, most colonists did not experience war as a direct threat to life and liberty. Moreover, the spoils of war often consisted of claims by the crown to new tracts of land, or even—in case of intercolonial wars—a better security or status position for England relative to other European powers. The vast majority of colonists, and even most assembly members, had little to gain from such excursions.²⁶

However, war mattered a great deal for colonial policy and public finance. War funding for supplies and personnel was by far one of the most costly activities of colonial governments, which almost always bore the cost of militia expenditures themselves (Rabushka 2010); the cash strapped crown was usually loath to offer assistance. Since the elites cared more about the war’s outcome but expected the colonists to support it, war amplified an obvious divergence between ideal policies.²⁷

To capture this element of war, the model is modified as follows.

- In each period t there is a state $\omega_t \in \{0, 1\}$ indicating whether the colony is at war ($\omega_t = 1$) or peace ($\omega_t = 0$) in that period. Let $\Pr[\omega_t = 1] = m$, such that ω_t is independent across periods. The draw of ω_t occurs at the start of each period and is commonly observed.
- In a period of peace, the ideal points of C , G , and A are as defined above: for C and G they are exogenous, commonly known, and equal; for A it is a

²⁶When typical colonists did get exercised about war, it was typically in response to threats of “popery” or various impure incursions from competing European powers. Still, in these cases, their response was more focused on turning inward to reaffirm beliefs and identities within their own societies, rather than turning outward in battle to the impure foe (Stanwood 2011).

²⁷However, there were exceptions to this pattern—cases in which war could or did spill into key colonial cities, or even threaten a colony’s survival. This reversal of the typical pattern is considered below in historical evidence.

random variable observed by A and G . Denote these as $\{x_{i,0}^t\}$ respectively.

- In a period of war, all ideal points are multiplied by $\mu > 1$. Denote war ideal points as $\{x_{i,1}^t\}$ such that $x_{i,1}^t = \mu x_{i,0}^t$ for $i \in \{A, C, G\}$. As far as C is concerned, $x_{A,1}^t$ is still a random variable drawn from $[0, x_{C,1}^t]$. Finally, let $x_i^t \equiv m x_{i,1}^t + (1 - m) x_{i,0}^t$ denote the expected ideal point for player i in period t .

Thus, war increases all ideal points, but since G is starting from a larger baseline, war has a larger effect on G 's (and C 's) ideal point than on A 's. This captures the fact that mainland colonists generally seemed to care far less about the outcomes of wars than the governor and crown.²⁸

With war represented in this way, its effect on assembly power in equilibrium is straightforward to analyze. All of proposition 1 continues to hold. First, for period 2, simply interpret the ideal points $\{x_i^2\}$ for lemmas 3 to 2 as the expected value over the states of war and peace in $t = 2$.

Given this, the effect of war in period 1 is to increase the expected policy disagreement between A and G/C , and to increase $|x_C - q|$ by $(m - 1)$ units. A simple comparative static from lemma 1 shows that A 's period 1 challenge zone \mathcal{X}^1 is increasing in $|x_C - q|$. Since war increases the policy disagreement between assembly and royal authorities, it raises the stakes of gaining agenda power. Therefore, A is more inclined to challenge G 's authority, all else constant; it has more to lose by leaving authority in G 's hands.

This is how war catalyzes the growth of assembly power. It tests the governor's

²⁸Note that war affects realized ideal points $\{x_{i,\omega}^t\}$ but not the status quo q . War can change the preferences of players about policy, but it cannot retroactively change a policy already put in place (or failure to enact any policy at all) in the past.

mettle and leads to more cases in which G 's type is revealed to A . In case G is weak, the assembly has the information it needs to stage a bid for greater power in the future. Formally:

Proposition 3 *War has both a transitory and long run effect on assembly power:*

- A. Transitory effect. *The expected power of the assembly is greater in a period of war than in a period of peace: $E(\mathcal{A}_1|\omega_1 = 1) > E(\mathcal{A}_1|\omega_1 = 0)$.*
- B. Long run effect. *The expected power of the assembly in period 2 is greater after a war in period 1 than after peace in period 1: $E(\mathcal{A}_2|\omega_1 = 1) > E(\mathcal{A}_2|\omega_1 = 0)$.*

Proposition 3(A) reveals the transitory effect of war on assembly power. The greater divergence of interests during war ignited the strategic concerns of assemblies to wrest control from governors whenever possible. If they did not, they stood to lose more from rent extraction in policy bargaining. Facing challenges more often, weak governors were revealed (to assemblies) more often.

Proposition 3(B) shows that this power shift endures *after the war is over*. In other words, it reveals that colonial institutions might evolve as a result of war, to a condition that is durable even after a return to peace. Since war makes the assembly more inclined to resist in the short run, and resistance reveals the governor's strength to the assembly, war also has a long term effect. Conditional on a weak governor, war increases the probability of the assembly successfully claiming agenda power after the war.

Taken together, propositions 2 and 3 are the main results of this analysis. The first indicates that assembly power in one period leads to even greater expectations of assembly power in future periods. The second indicates that war, as a

multiplier on ideal points, creates conditions ripe for the assembly to challenge for power in the first place, and initiate the dynamic growth in its power.

5 Historical Evidence

In this section I present historical evidence to make three points. First, that the assumptions of the model are reasonable interpretations of political conflict in American colonial history; second, that the key results of the model capture important developments in assembly power during the colonial period; third, that comparison with other British colonies is consistent with the theory in this paper.

With respect to the assumptions, I present evidence that (i) assembly agenda power was an important source of contention; (ii) a governor's political skill in dealing with assembly affected his ability to implement crown instructions on this and other matters; (iii) assemblies challenged for power even at the risk of breakdown of the political process; (iv) the crown sanctioned or removed governors when its instructions for exercising power were clearly violated; (v) governors frequently made concessions to assemblies that of which the crown was unaware; (vi) assemblies were typically happier with the status quo than the governor, and this difference was intensified during most colonial wars.

With respect to results, I present evidence that (i) assembly powers were sticky over time, particularly during the tenure of a single governor; (ii) assemblies were especially inclined to challenge governors for power in wartime; (iii) assembly power often expanded during war; (iv) power won in wartime remained sticky after the war's conclusion.

5.1 Crown Instructions, Governor Concessions, and Assembly Power

By the 1700s, British crown authorities had long recognized a legal (Keith 1930) and strategic (Gailmard 2017) rationale for some participation by colonial freeholders in their own government, in the form of representative assemblies. But metropolitan authorities never intended or desired for colonial assemblies to exercise complete control over colonial government. Rather, they attempted to keep assembly power tightly bound.

The agenda setting power of crown agents was a crucial element of this vision:

One of the most common subjects of dispute was the right of the governor's council to amend money bills... Uniformly the governors and the authorities in Great Britain...wanted the royally appointed councillors to act as a check upon the assembly's initiative... If every bill dealing with money had to be accepted or rejected by the supporters of the prerogative in exactly the form proposed by the elective house, the only possible result would be a weakening of the authority of the crown... Consequently the Board of Trade and Privy Council brought all their influence to bear in support of the provincial council... (Labaree 1930, pp. 296-297).

However, this *de jure* institutional vision was far from the reality of *de facto* institutional operation. Over time and despite these attempts at overhead control, assemblies in most British colonies maneuvered to claim much more power in legislative affairs than the crown authorities had intended (e.g. Greene 1898, Labaree 1930, Greene 1963). These powers included the right to initiate legis-

lation, the right to make appropriations of a fixed (usually short) duration for specific purposes, the right to pass unamendable appropriations bills, the right of the lower house to sit separately from the governor and governor's council (which served in part as the upper house in most colonies), and the right to independently audit colonial finances. In most colonies, assemblies successfully obtained control over their membership and internal proceedings.²⁹

In colony after colony, the mechanism by which the assembly successfully claimed new authority was the power of the purse. Colonial assemblies approved taxes and appropriated funds with short durations, usually one year, for precisely stated purposes. They would accept no amendments to these bills that the governor might direct his council to make. Governors were instructed to resist these demands, but their resistance risked of breakdown of colonial governance.

Whenever disputes arose [about amendments], the members of the lower house always had the advantage, for they could refuse to concur in the council's amendments and could return the bill to the upper house in its original form. The latter body was then faced with the alternatives of passing the measure without amendment or of accepting responsibility for its failure. If the supply were not to be lost entirely, the council would have to give way... Thus the members of the lower house gained a control over financial arrangements which could not

²⁹However, they generally did not succeed in obtaining the right to initiate, prorogue, or adjourn legislative sessions; this remained the governor's prerogative. Yet the short duration for appropriations and taxes implied that governors typically needed assemblies to meet frequently, and their commissions sometimes specified at least annual sessions. Assemblies also did not succeed in obtaining any right to override the governor's veto of legislation, though their duress on governors often defanged the veto. Despite lack of formal success on these latter issues, colonists never accepted defeat. The matters on which assemblies were unsuccessful ultimately found their way into the list of grievances against the king in the Declaration of Independence.

be thwarted and, by the use of ‘riders’ in their money bills, were able to force the adoption of many other proposals which the council and governor would otherwise have rejected (Labaree 1930, p. 299).

Alternatively, the governor could mollify the assembly by conceding to its demands, but only by violating the instructions from the crown. If flagrant enough, these concessions could result in the governor’s dismissal from office. This is precisely the decision calculus faced by the governor, and the sanction available to the crown, after an assembly challenge in the model.

Greene (1898) presents a vivid example from Pennsylvania (pp. 83-84). “[Governor William] Keith had adopted a distinctly popular policy by allying himself with the assembly,” and the home authorities sought to check his concessions by instructing him to stand firm against the it. Keith so flagrantly ignored his instructions to resist assembly incursions that the home authorities got wind of events and intervened. “Keith was censured for departing from his instructions, and new instructions were issued that completely tied his hands in matters of legislation.” Yet given the assembly’s intransigence about control of legislation, there was no way to comply with this and also mollify the assembly; given Keith’s history of concessions, the assembly was not inclined to ease off its demands. In continued violation of his instructions, Keith doubled down on his alliance with the assembly, but “soon paid the penalty of his insubordination...with the loss of his office.”

More generally, governors found it necessary to evade instructions and work with the assembly, if more discreetly than Governor Keith did. “[I]t was almost impossible, without a violation of instructions, for a governor to get...the neces-

sary grants for the conduct of government or even the military supplies demanded by the crown” (Greene 1898, p, 51). Yet metropolitan authorities were similarly unyielding in their demands on governors: “Measures the Board of Trade and Privy Council...took to restrict assemblies’ control of the purse were among the most important parts of British colonial policy” (Labaree 1930, p. 270).

Given these competing demands, “[the governor’s] position was trying in the extreme... [O]ne would naturally have expected a brief and uncertain tenure” (Greene 1898, p, 51). Yet the tenure of governors actually tended to be reasonably long (Greene 1898, p. 51). Terms of a decade were not unusual, and indeed the norm in some colonies. The model in this paper suggests that governors squared their circle by evading instructions so as to let the colony run well enough, but concealing this evasion from home authorities.

Historical evidence corroborates that governors took this route. For example, in South Carolina,

[d]uring the fifty years of royal government in the province [from 1721] the assembly had encroached...gradually and imperceptibly upon the executive control of finance... [T]he Board of Trade suddenly discovered that the governors of the province had of late years ‘improvidently acquiesced’ in a method of authorizing expenditures which deprived the executive of any voice in the matter... This situation did not come to the attention of the authorities until 1770... (Labaree 1930, pp. 305-306).

Overall, “governors...found it easy to conceal from the home authorities...but the Board of Trade was aware that all was not well” (Labaree 1930, p. 321).

This is the configuration one would expect if crown authorities were aware that governors dissemble about concessions to assemblies in equilibrium, even though they could not identify and redress most specific instances of it.

Many strategic elements in the model are illustrated by the case of New York (cf. Greene 1898, p. 184; Labaree 1930, pp. 283-295). The colony had been folded into the autocratic (and assembly-less) Dominion of New England (1685-1688) when its proprietor, the Duke of York, became King James II. Upon James's deposition, New York emerged from this failed experiment in the shambles of rebellion. Affairs were briefly stabilized under the Earl of Bellomont's governorship (in office 1698-1701), but following his death, a series of underqualified and short term governors (six in nine years) had soured relations with the assembly to an unprecedented degree. In this interval the lower house began using the techniques of short term revenue bills, refusal to concede to council amendments even at risk of shutting down the government, naming the colonial treasurer in appropriations acts, and disbursing funds on its own warrant through its hand-picked treasurer. The assembly was content to leave the government in disarray rather than concede any power to the governor, and the governors ultimately acquiesced in response. In short, there was a total failure of governors to implement the terms of their commissions and instructions with respect to control over finance and the legislative process.

In 1710, crown advisors realized the need to attend to this parlous situation with a more experienced and competent governor. They selected Robert Hunter, who had served previously as Lieutenant Governor of Virginia. Initially Governor Hunter met with the same treatment from the assembly as his predecessors. However, "the confidence which Hunter inspired in his own integrity...produce[d]

a conciliatory spirit in the assembly” (Labaree 1930, p. 285). Within a few years Gov. Hunter had reclaimed some of the prerogative powers that were important to the crown. In particular, Gov. Hunter induced the assembly to pass five-year revenue bills with expenditures as directed by the governor. While modest in absolute terms, and short of the crown’s instructions for perpetual revenues, these concessions were the largest the assembly had granted since 1701. This illustrates two key points of the model: first, a “strong” governor could enjoy some success with the assembly; second, he could roll back some of the assembly powers claimed under his predecessors.

Gov. Hunter’s tenure was the high water mark of gubernatorial power in provincial New York. The concessions he won were larger than those of his predecessors, or his successors. Having proved himself effective in New York, Hunter went on to the more important and lucrative post of governor of Jamaica, where he settled a 50-year dispute with the assembly about permanent revenues. But the New York assembly continued to press for maximum powers under his successors there.

The last major struggle for power in New York occurred under Governor George Clinton, who took office in 1743. Clinton was a well-connected officer in the British navy who sought office in America to avoid creditors in England, but “was totally unfitted either by temperament or previous experience to cope with the situation” in New York (Labaree 1930, p. 286). Clinton revealed his “utter lack of political foresight or skill” (*ibid.*) immediately by relying on the counsel of James Delancey, a longstanding member of the assembly, who advised the governor to shore up relations with the lower house by conceding power to it. The assembly capitalized on the situation by consolidating power with the

standard techniques of passing one-year revenue bills, refusing amendments to its bills, making highly detailed appropriations to the care of a specifically named treasurer instead of the governor, and allowing disbursement only upon passing a bill calling for it.

Clinton sought advice from crown authorities in England, but they were distracted by the War of Austrian Succession against France and Spain and ignored over a dozen missives from the governor over several years. When the war spilled into North America, the governor needed even more money from the assembly. The assembly, more closely attuned to benefits of illicit trading with the French than fighting them, seized the opportunity to claim “practically complete control over the the most important branches” of government (*ibid.* p. 287).

The powers won by the assembly during the war remained sticky after its conclusion in 1748. For five more years, Gov. Clinton labored in abject submission to the lower house. In 1753, the governor realized the situation in New York was hopeless. Rather than endure an ignominious removal, he resigned and went on to an obscure post as governor of Newfoundland—a colony with a small population and no elective assembly. Labaree (1930) summarizes:

One can hardly fail to sympathize with Clinton, incompetent though he was. The home authorities...were ready to censure and even to remove him if he failed to assert and maintain the prerogative... The Board [of Trade] criticized Clinton for having submitted to the assembly on money matters at his first arrival... They declared that such a retreat would only confirm the assembly in its opposition... In the opinion of the Board, the constitution of the province could be

restored to its proper balance only through the appointment of a new governor who would not be hampered by the personal animosity that Clinton had aroused (pp. 290-291).

In this way the crown authorities recognized that, having revealed his weakness through capitulation, the governor consigned himself to further challenge, and capitulation, in the future. However, recognizing the strategic dilemma does not imply a solution to it. The Board of Trade did not have one short of appointment of a (hopefully) stronger successor.

5.2 The Effect of War on Assembly Power

An important implication of the model is that war could expand assembly power—even after a war’s conclusion—provided that it increased the governor’s need for additional funding more than the assembly’s. This effect was already indicated in the case of Governor Clinton in New York. More generally, the strategic implications of war are summarized by Labaree (1930), p. 310:

The intercolonial wars, with their necessarily increased expenditures for military services, proved to be golden opportunities for the assemblies. The governors were generally endowed with...a far greater appreciation of the importance of effective cooperation with the British and with other provinces. Consequently, they were often willing to make great sacrifices in order to induce the assemblies to grant the necessary supplies...By the end of the period of intercolonial conflict the assemblies of the continental colonies...were thereby able to direct in large measure the activities of their governments...

Thus, governors typically cared more about the outcome of colonial wars than the assemblies, and the assemblies pushed for strategic advantage particularly intently under war.

There are myriad examples of war increasing assembly power (Labaree 1930; Greene 1963); I present only three.

- Massachusetts, 1704: Governor Joseph Dudley, exercising a clear prerogative power under the charter of 1692, refused to recognize the Speaker of the General Court. The assembly refused to yield, and Gov. Dudley backed down, explicitly citing the pressures of Queen Anne's War (North American theater of the War of Spanish Succession). In 1701, before the onset of war, the same governor has no trouble asserting his power to refuse General Court nominations to the Council (upper house). With no war to bolster its bargaining power, the assembly relented and nominated different councillors. (Greene 1898, p. 150-151.)
- New Jersey: During Queen Anne's War (1703), the assembly agreed to £3000 for military supply, but only in exchange for naming the commissioners to carry out the expedition of the New Jersey militia and the commissary. During the French and Indian war, the assembly repeated this demand. Despite explicit instructions from the Board of Trade not to acquiesce, Gov. Bernard did so (Greene 1898, p. 186).
- Massachusetts, 1758: During the French and Indian War, assembly bills to provide pay for militia forces specified the number of men to be employed at each specific fort. Governor Pownall objected that this infringed on his right under the charter as captain general and commander in chief of

the militia. The assembly, unswayed, insisted on its allocation, and the governor acquiesced (Greene 1898, p. 189-190).

Importantly, this pattern of assembly power growth during war time was reversed when the theater of war spilled into the heart of the colony. In these cases, the status quo of low funding and meager military supply was undesirable for the assembly. Correspondingly the proposition of risking breakdown of colonial policy for gains in assembly power was less desirable. As a result, and consistent with the model's logic, assemblies were more compliant with the governor's assertions of institutional power in these cases.

A clear example comes from South Carolina in the French and Indian War. Before the war, the South Carolina Commons House of Assembly demanded and won the right to appoint commissioners of fortifications itself, despite the governor's formal authority to do so. However, Charleston was one of the only mainland colonial cities south of New York vulnerable to a naval assault, and was menaced by the French navy. As a result, the Commons acquiesced to the governor's demand to utilize his formal power to name commissioners of fortifications. The prospect of bargaining breakdown could prove very costly due to the military threat, and the assembly was therefore compliant. (Greene 1963, pp. 258-259.)

Overall, the historical evidence in this section reveals that the key conflicts in the model were of great strategic import to both crown authorities and the assembly. They also reveal that assembly power growth was sticky over time, and that war catalyzed growth in assembly power.

5.3 Other British Colonies

The initial condition necessary for assembly power growth in this model is some assembly participation in colonial policy making, especially taxation. This condition was present in the first British empire in the New World, but not in Britain's governance of subsequently acquired colonies. This difference explains the divergence in legislative power observed in the US vs. other British colonies.

Based on both its American experience and crystallizing racist-nationalist ideology, Britain controlled legislative power much more tightly, and ruled through executive agencies more fully, in subsequent colonization (Bayly 1989, pp. 100-132). For instance, British India was not granted any assembly recognition until 1861, and even then, local assemblies were stacked with Britains and franchise was highly restricted. The most important comparison for my model is British Canada, where local assemblies were recognized and legislative power certainly (eventually) grew, but under a very different mechanism than highlighted in this paper, and comparatively late in its colonial history.

From 1760-1791, Canada had no assembly at all (formalized in the Quebec Act of 1774). In 1791 and for most of its subsequent colonial history, Canada was governed under the Constitution Act, which did recognize assemblies but kept power carefully controlled in a Legislative Council, answerable to the lieutenant governor, which exercised agenda power in legislation. Leading families of British Canada joined in a governing coalition with the lieutenant governor, and dominated most other key state institutions such as the judiciary, the executive council, the legal profession, and the Bank of Canada. By these instruments (the "family compact"), Upper Canadian elites wielded nearly complete power over

not only government, but virtually all of society, such that legislative challenge to the lieutenant governor was beside the point (Bourinot 1901, pp, 139-155). In this way, institutional conservatism and British loyalism characterized the posture of political elites for decades.³⁰

Thus, the British Canadian case illustrates that de facto power sharing with local elites could forestall colonial opposition to imperial authority and obviate the challenges that underpin institutional change in the future US.³¹ Overall, the difference in initial conditions of the future US vs. other British colonies helps to explain the divergence in growth of legislative power in these cases.

6 Conclusion

Legislative power played a major role in the founding of the United States, and continues to play a major role in the quest for political power in the US today. Clearly, that power grew beyond the control of royal authorities, and not for lack of trying to restrain it. The challenge of this paper is to understand the strategic foundations of this growth.

I have presented a formal model to offer such an interpretation. The setup is a modified career concerns model, in which (*i*) the agent's "effort" is signaled by the outcome of a strategic policy bargaining process, and (*ii*) the agent's "type"

³⁰Property owners shut out of the family compact certainly had their grievances with it, and thus a series of major rebellions occurred in 1836-37. But the conflict was between elite families in control of all major social institutions and others broadly shut out of this control; correspondingly, the rebellions were broader and more diffuse than the question of legislative power or crown vs. colonial autonomy.

³¹French or Lower Canada presents an interesting contrast: here the elite dominance of society and fusion with the lieutenant governor was not as great, and assembly challenges to the lieutenant governor were more pronounced. Moreover, they unfolded on much the same lines as in the US colonies (Bourinot 1901, pp. 124-138).

is useful to the principal because it leads to better outcomes in that process.

A crucial element, in the model as in fact, is that the crown is less informed than the governor about political conditions within the colony. Even strong governors who act as perfect agents can create a wide range of policy outcomes, depending on the assembly's disposition. This allows weak governors to concede to assembly demands for power, yet still appear indistinguishable from strong governors in the eyes of the crown.

Once the assembly learns of the governor's weakness, of course, it has a strong incentive to exploit it further in future periods. Knowing the governor's weakness made the assembly more confident that its future demands for power would succeed, and therefore more inclined to make them. In this way, the governor's desire to avoid assembly conflict while concealing weakness from the crown led to a dynamic growth of assembly power.

The model also shows that war—on a reasonable interpretation of its effect on colonial political conflict—catalyzes this dynamic. In the model, war raises the policy disagreement between assemblies and royal authorities, and therefore the stakes of gaining agenda power. As a result, assemblies challenge the governor's power more often in war. This has a transitory effect on assembly power: more frequent challenges imply greater assembly power conditional on the governor's weakness. It also has a long run effect: having learned of the governor's weakness in war time, the assembly would raise its demands in future periods, to which a weak governor would bend.

The findings reveal that the progressive growth of assembly power was rooted in strategic dilemmas of imperial governance, and more specifically in agency problems between the crown and governors. But they leave open many questions

that should be addressed in future research. First, it would be useful to explore how increased assembly powers transferred across gubernatorial regimes. Merging this model with that of Dewan and Myatt (2010) on the declining talent pool of government could provide an intriguing answer. Second, from colonial petitions and agents in London throughout the 18th century, the crown tended to get better information about political leanings within colonies (Carpenter 2018). How did these practices factor into the uncertainty of the crown about colonists' policy preferences, which is a crucial ingredient in this model? Third, it would be useful (though challenging) to extend the model in this paper to $t > 2$ periods, to see the effect on governors' resistance. After enough repetitions of the play described in proposition 1, the crown would become sufficiently skeptical of weak governors as to fire them. Given strong career concerns, it is possible that weak governors would randomize between concession and resistance to muddy the crown's inference and safeguard their jobs. How this affects the convergence to assembly power would be interesting to explore.

These questions notwithstanding, the model of this paper does reveal a central irony of English imperial administration. Incentives for performance by governors could be quite potent, and concerns by the crown for the colonies quite acute. And yet, given the governor's asymmetric information about their actions and colonial politics, institutional arrangements could diverge quite sharply from those the crown perceived or prescribed. This divergence led, ultimately, to the growth of legislative power in America—one of the most important institutional developments in its history.

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Appendix: Formal Proofs

This appendix presents proofs of propositions 1, 2, and 3 and supporting lemmas.

Proposition 1 This result is proved through a sequence of lemmas, some of which were stated in the text:

- Lemma 1: assembly challenge in $t = 1$.
- Lemma 2: crown beliefs (part A) and retention of G (part B) in $t = 1$.
- Lemma 3: assembly challenge in $t = 1$.
- Lemma 4: governor resistance to challenges in $t = 1, 2$.

Lemma 1 (Assembly Challenge in $t = 1$) *In period 1, given the prior belief s and γ_A satisfying assumption 1, A challenges G 's agenda power if and only if*

$$\begin{aligned} x_A^1 &\in \left[q + \frac{\tilde{\gamma}_A}{1-s}, \frac{(1 - (1-\beta)s)x_C + s\beta q - \tilde{\gamma}_A}{1-s+2s\beta} \right] \\ &\equiv [x_{M-}^1, x_{M+}^1] \\ &\equiv \mathcal{X}^1(s). \end{aligned} \tag{5}$$

Proof: If $q < x_A < x_M$, then challenge followed by no resistance gives $x = x_A$. Challenge followed by resistance gives a lottery of $x = q$ and $x = 2x_A - q$. No challenge ($c = 0$) gives $x = 2x_A - q$. Thus, A compares

$$EU_{\chi^1=1} = \tilde{s}_A(\beta u_A(q) + (1-\beta)u_A(2x_A - q)) + (1 - \tilde{s}_A)u_A(x_A) - \gamma_A$$

$$EU_{\chi^1=0} = u_A(2x_A - q).$$

A will challenge if and only if

$$\gamma_A \leq (x_A - q)(1 - \tilde{s}_A)$$

or equivalently

$$\begin{aligned} x_A^1 &\in \left[\frac{\gamma_A}{1 - \tilde{s}_A}, x_M \right] \\ &\equiv [x_{M-}^1, x_M]. \end{aligned} \tag{6}$$

If instead $q < x_M < x_A < x^*(\beta)$, then challenge followed by no resistance gives x_A . Challenge followed by resistance is just a lottery of q with probability β , and x_C with probability $(1 - \beta)$. No challenge gives x_C for sure. Thus, A compares

$$\begin{aligned} EU_{\chi^1=1} &= \tilde{s}_A(\beta u_A(q) + (1 - \beta)u_A(x_C)) + (1 - \tilde{s}_A)u_A(x_A) - \gamma_A \\ EU_{\chi^1=0} &= u_A(x_C). \end{aligned}$$

A will challenge if and only if

$$\gamma_A \leq (1 - (1 - \beta)\tilde{s}_A)(x_C - x_A) - \tilde{s}_A\beta(x_A - q)$$

or equivalently

$$\begin{aligned} x_A^1 &\in \left[x_M, \frac{(1 - (1 - \beta)\tilde{s}_A)x_C + \tilde{s}_A\beta q - \gamma_A}{1 - \tilde{s}_A + 2\tilde{s}_A\beta} \right] \\ &\equiv [x_M, x_{M+}^1]. \end{aligned} \tag{7}$$

Putting together equations (6) and (7) yields the assembly's optimal challenge strategy in lemma 1. ■

Lemma 2 (A. Crown Beliefs) *Given behavior by A and G in proposition 1, C's posterior belief is*

$$\tilde{s}_C = \begin{cases} 0 & \text{if } x^1 < q \\ s' \in (s, 1) & \text{if } x^1 = q \\ s & \text{if } x^1 \in (q, x_{M-}^1) \\ \frac{s}{2-s} & \text{if } x^1 \in [x_{M-}^1, x_{M+}^1] \\ 1 & \text{if } x^1 \in (x_{M+}^1, x_C) \\ s'' \in (s, 1) & \text{if } x^1 = x_C. \end{cases}$$

These beliefs are depicted in figure 3.

Proof: Let $Q(x, y) \equiv \Pr[x_A^1 \in (x, y)] = \frac{y-x}{x_C}$, where the last equality follows from the functional form of the uniform CDF.

1. For $x^1 < q$: This can only occur if $x_A^1 < q$, A challenges, and G concedes. Note that this is off the PBE path in proposition 1. However, since concession is sincerely dominated for strong G, but sincerely dominant for weak G, C should assume

$$\tilde{s}_C(x^1 < q) = 0. \tag{8}$$

2. For $x^1 = q$: This can only occur if:

- (a) $q \leq x_A^1$ and A does not challenge. This occurs with probability $Q(0, q)$.

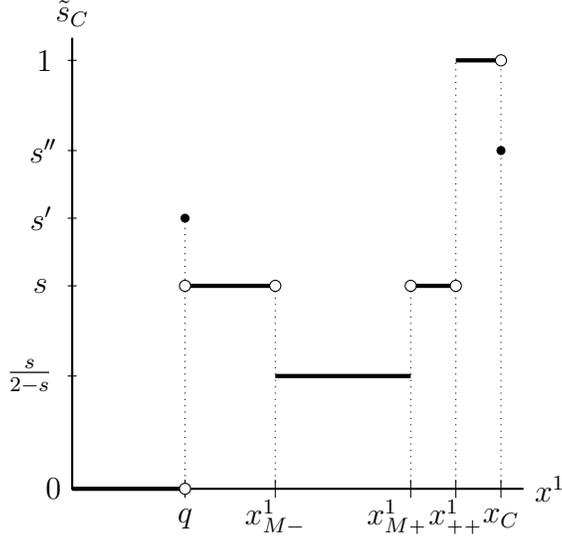


Figure 3. C 's posterior belief \tilde{s}_C as a function of 1st period policy x^1 .

- (b) $x_A^1 \in [x_{M-}^1, x_{M+}^1]$, G resists, and the probability- β event of bargaining breakdown occurred. This occurs with probability $Q(x_{M-}^1, x_{M+}^1)s\beta$.

Applying Bayes's rule,

$$\begin{aligned} \tilde{s}_C(q) &= \frac{s\beta Q(x_{M-}^1, x_{M+}^1) + sQ(0, q)}{s\beta Q(x_{M-}^1, x_{M+}^1) + Q(0, q)} \\ &= \frac{s\beta (x_{M+}^1 - x_{M-}^1) + sq}{s\beta (x_{M+}^1 - x_{M-}^1) + q} > s. \end{aligned} \quad (9)$$

3. For $x^1 \in (q, x_{M-})$: This occurs for $x_A^1 \in (q, \frac{x_{M-}+q}{2})$. A does not challenge and both governor types retain agenda power, setting $x = 2x_A^1 - q$. Therefore,

$$\tilde{s}_C = s. \quad (10)$$

4. For $x^1 \in (x_{M-}, x_{M+})$: This can only occur if

- (a) $x_A^1 \in [x_{M-}, x_{M+}]$ and G is weak. Let $x'_A(x_1)$ be the unique $x_A^1 \in [x_{M-}, x_{M+}]$ that produces x_1 in equilibrium. Then the probability of this history is $\frac{1-s}{x_C}$.
- (b) $x_A^1 \in [\frac{x_{M-}+q}{2}, \frac{x_{M+}+q}{2}]$ so A does not challenge, and both types of G retain agenda power. Let $x''_A(x_1)$ be the unique $x_A^1 \in [\frac{x_{M-}+q}{2}, \frac{x_{M+}+q}{2}]$ that produces x_1 in equilibrium. Then the probability of this history is $\frac{s}{x_C} + \frac{1-s}{x_C} = \frac{1}{x_C}$.

By Bayes's rule

$$\tilde{s}(x^1) = \frac{s/x_C}{(1-s)/x_C + 1/x_C} = \frac{s}{2-s} < s \quad (11)$$

5. For $x^1 \in (x_{M+}, 2x_{M-} - q)$: this occurs if $x_A^1 \in (\frac{x_{M+}+q}{2}, x_{M-})$. G is not challenged; therefore,

$$\tilde{s}_C = s. \quad (12)$$

6. For $x^1 \in (2x_{M-} - q, x_C)$: this can only happen $x_A^1 \in [x_{M-}, x_M]$, a strong G resisted the challenge, and no breakdown occurred. Therefore,

$$\tilde{s}_C = 1. \quad (13)$$

7. For $x^1 = x_C$: this can only occur under the following sequences.

- (a) $x_A^1 \in (x_M, x_{M+})$, so A challenges, but G resists and is successful. This occurs with probability $s(1-\beta)Q(x_M, x_{M+})$.
- (b) $x_A^1 > x_{M+}$, so A does not challenge. This occurs with probability $Q(x_{M+}, x_C)$.

By Bayes's rule,

$$\begin{aligned}\tilde{s}(x_C) &= \frac{s(1-\beta)Q(x_M, x_{M+}) + sQ(x_{M+}, x_C)}{s(1-\beta)Q(x_M, x_{M+}) + Q(x_{M+}, x_C)} \\ &= \frac{s(1-\beta)(x_{M+} - x_M) + s(x_C - x_{M+})}{s(1-\beta)(x_{M+} - x_M) + (x_C - x_{M+})} > s.\end{aligned}\quad (14)$$

■

Lemma 2 (B. Crown Retention of Governor) *Assume $\gamma_C(0) > \gamma_C > \gamma_C(\frac{s}{2-s})$, and G and A play according to proposition 1. Then C will dismiss G after a major concession $x < q$ but not for any other policy outcome x^1 .*

Proof: C 's utility in period 2 depends on both σ and whether the governor is challenged. Letting χ denote the challenge, C 's ex post period 2 utility $U_C^2(\sigma, \chi; x_A^2)$ is monotone in both arguments:

$$U_C^2(1, 0; x_A^2) = U_C^2(0, 0; x_A^2) > U_C^2(1, 1; x_A^2) > U_C^2(0, 1; x_A^2). \quad (15)$$

It follows that $EU_C^2(\tilde{s}_C)$ is increasing in \tilde{s}_C .

Obviously, $\tilde{s}_C < s$ is a necessary condition for C to dismiss G . Moreover, for any belief \tilde{s}_C , there is a unique $\tilde{\gamma}_C$ that solves

$$EU_C^2(\tilde{s}_C) = EU_C^2(s) - \tilde{\gamma}_C. \quad (16)$$

Given the posterior belief \tilde{s}_C , C prefers to retain G for $\gamma_C \geq \tilde{\gamma}_C$; but prefers to fire G for $\gamma_C < \tilde{\gamma}_C$. Since $EU_C^2(\tilde{s}_C)$ is monotone, so is $\tilde{\gamma}_C \equiv \gamma_C(\tilde{s}_C)$. The threshold values $\gamma_C(0)$ and $\gamma_C(\frac{s}{2-s})$ derive from inserting the smallest values of

\tilde{s}_C from lemma 2(A) into $\tilde{\gamma}_C$. ■

Lemma 3 (Assembly Challenge in $t = 2$) *In period 2, given beliefs \tilde{s}_A and γ_A satisfying assumption 1, A challenges G's agenda power if and only if*

$$x_A^2 \in \left[0, q - \frac{\gamma_A}{1 - \tilde{s}_A} \right] \cup \left[q + \frac{\gamma_A}{1 - \tilde{s}_A}, \frac{(1 - (1 - \beta)\tilde{s}_A)x_C + \tilde{s}_A\beta q - \gamma_A}{1 - \tilde{s}_A + 2\tilde{s}_A\beta} \right] \quad (17)$$

$$\equiv [0, x_{q-}^2] \cup [x_{M-}^2, x_{M+}^2] \quad (18)$$

$$\equiv \mathcal{X}^2(\tilde{s}_A).$$

Proof: Let χ^2 denote the probability of an assembly challenge in $t = 2$.

If $x_A^2 \leq x_M \equiv (q + x_C)/2$, Resistance gives $x = q$ with probability β , and $\min\{2x_A^2 - q, x_C\}$ with probability $(1 - \beta)$. Thus, A compares

$$EU_{\chi^2=1} = \tilde{s}_A(\beta u_A(q) + (1 - \beta)u_A(2x_A^2 - q)) + (1 - \tilde{s}_A)u_A(x_A^2) - \gamma_A$$

$$EU_{\chi^2=0} = u_A(2x_A^2 - q).$$

A will challenge if and only if

$$\gamma_A \leq -u_A(q)(1 - \tilde{s}_A)$$

or equivalently

$$\begin{aligned} x_A^2 &\in \left[0, q - \frac{\gamma_A}{1 - \tilde{s}_A} \right] \cup \left[q + \frac{\gamma_A}{1 - \tilde{s}_A}, x_M \right] \\ &\equiv [0, x_{q-}^2] \cup [x_{M-}^2, x_M]. \end{aligned} \quad (19)$$

If instead $x_A^2 > x_M$, resistance by G gives $x = q$ with probability β , and $x = x_C$ with probability $(1 - \beta)$. Thus, A compares

$$\begin{aligned} EU_{\chi^2=1} &= \tilde{s}_A(\beta u_A(q) + (1 - \beta)u_A(x_C)) + (1 - \tilde{s}_A)u_A(x_A) - \gamma_A \\ EU_{\chi^2=0} &= u_A(x_C). \end{aligned}$$

A will challenge if and only if

$$\gamma_A \leq u_A(q)\tilde{s}_A\beta - u_A(x_C)(1 - (1 - \beta)\tilde{s}_A)$$

or equivalently

$$\begin{aligned} x_A^2 &\in \left[x_M, \frac{(1 - (1 - \beta)\tilde{s}_A)x_C + \tilde{s}_A\beta q - \gamma_A}{1 - \tilde{s}_A + 2\tilde{s}_A\beta} \right] \\ &\equiv [x_M, x_{M+}^2]. \end{aligned} \tag{20}$$

Putting together equations (19) and (20) yields the assembly's optimal challenge strategy in lemma 3. ■

Lemma 4 (Governor resistance to Assembly Challenge) *For all challenges from A under proposition 1, G resists if and only if $\sigma = 1$. For the out of equilibrium challenge by $x_A^1 < q$ in $t = 1$, G resists for all σ .*

Proof: First consider period $t = 2$.

- Type $\sigma = 1$:
 - Suppose $q < x_A$. Capitulation gives $u_G(x_A)$. Resistance gives $u_G(q) >$

$u_G(x_A)$ with certainty. Therefore, in this range, resistance is a dominant strategy for type $\sigma = 1$.

- Suppose $q < x_A < x_M$. Resistance gives a lottery of $x = q$ with probability β , and $x = 2x_A - q$ with probability $1 - \beta$. No resistance gives $x = x_A$ with probability 1. It follows that $E(x) = \beta q + (1 - \beta)(2x_A - q) > x_A$ given $\beta \leq 1/2$. Moreover, since u_G is linear in this range, G has no second order preference to avoid risk. Therefore, the strong governor resists any challenge in this range.
- Suppose $x_A > x_M$. Resistance gives a lottery of $x = q$ with probability β , and $x = x_G$ with probability $1 - \beta$. No resistance gives $x = x_A$ with probability 1. Thus, $E(x) = \beta q + (1 - \beta)x_G = x_C - \beta(x_C - q)$. Note that if $x_A > E(x)$, then even a strong governor does not resist A 's demand for agenda power. However, given γ_A in assumption 1, A does not challenge in this region.

- Type $\sigma = 0$: capitulation to challenge from any x_A is immediate given γ_G and lack of career concerns.

Second, consider period $t = 1$.

- Type $\sigma = 1$: Given $(1 - \sigma)\gamma_G = 0$ for $\sigma = 1$, Resistance to challenge from all x_A is determined by A 's policy utility alone. That is the same for $t = 1$ as for $t = 2$. Therefore, the best response function for type $\sigma = 1$ is the same in both periods.
- Type $\sigma = 0$

- Given $w > \gamma_G$, type $G = 0$ will resist for any x_A such that capitulation leads to dismissal. By proposition 1, this occurs for $x_A < q$. Therefore, type $\sigma = 0$ will resist challenge in this region.
- Type $\sigma = 0$ may also wish to resist in $t = 1$, to convince A that he is type $\sigma = 1$ and preclude a challenge (and ensuing policy loss) in $t = 2$. However, this signaling motive is ruled out by $\gamma_G > 2x_C$ (assumption 2). ■

Proposition 2 (Growth of Assembly Power) *The expected power of the assembly in period 2 grows if it successfully takes power in period 1: $E(\mathcal{A}_2|\mathcal{A}_1 = 1) > E(\mathcal{A}_1) > E(\mathcal{A}_2|\mathcal{A}_1 = 0)$.*

To prove proposition 2, some properties of $v(s)$ are required. First, a definition:

$$v(s) \equiv sEU_A^2(\mathcal{X}^2(\tilde{s}_A = 1)) + (1 - s)EU_A^2(\mathcal{X}^2(\tilde{s}_A = 0)) - EU_A^2(\mathcal{X}^2(s)) \quad (21)$$

Lemma 5 *For all $s \in (0, 1)$ and $\beta \in [0, \frac{1}{2})$, $\gamma_A > 0$ implies $v(s) < s\gamma_A$. Additionally, $v(0) = v(1) = 0$.*

Proof: The value of information $v(s)$ is constructed as follows. Recall from lemma 3 that the width of the $t = 2$ challenge zone $\mathcal{X}^2(s)$ is increasing in s . Recall from proposition 1 that strong and weak G 's separate whenever challenged for $x_A > q$, so any challenge in this range will reveal G 's type.

- Given G weak (probability $(1 - s)$):

- If $x_A^2 > x_M$ and $x_A^2 \in \mathcal{X}^2(\tilde{s} = 1)$ but $x_A^2 \notin \mathcal{X}^2(s)$, A gains $-u_A(x_C)$ in $t = 2$ from challenge in $t = 1$. This occurs with ex ante probability $\frac{(1-s)[(x_C - \gamma_A) - \frac{(1-(1-\beta)s)x_C + s\beta q - \gamma_A}{1-s-2s\beta}]}{x_C}$.
- If $x_A^2 < x_M$ and $x_A^2 \in \mathcal{X}^2(\tilde{s} = 1)$ but $x_A^2 \notin \mathcal{X}^2(s)$, A gains $-u_A(q)$ in $t = 2$ from challenge in $t = 1$. This occurs with ex ante probability $\frac{(1-s)[(q + \frac{\gamma_A}{1-s}) - (q - \gamma_A)]}{x_C}$.
- If $x_A^2 \notin \mathcal{X}^2(\tilde{s}_C = 1)$, no gain in $t = 2$ from challenge in $t = 1$.
- If $x_A^2 \in \mathcal{X}^2(s)$, no gain in $t = 2$ from challenge in $t = 1$.

• Given G strong (probability s):

- If $x_A^2 \notin \mathcal{X}^2(s)$, no gain in $t = 2$ from challenge in $t = 1$.
- If $x_A^2 \leq x_M$ and $x_A^2 \in \mathcal{X}^2(s)$, A gains γ_A in $t = 2$ from challenge in $t = 1$. This occurs with ex ante probability $\frac{s(x_M - q - \frac{\gamma_A}{1-s})}{x_C}$.
- If $x_A^2 > x_M$ and $x_A^2 \in \mathcal{X}^2(s)$, A gains $\gamma_A + \beta(u_A(x_C) - u_A(q))$ in $t = 2$ from challenge in $t = 1$. This occurs with ex ante probability $\frac{s([\frac{(1-(1-\beta)s)x_C + s\beta q - \gamma_A}{1-s-2s\beta}] - x_M)}{x_C}$.

Then $v(s)$ is constructed as the utility gain in each case times its associated ex ante probability, and summing over cases. The special case of $\beta = 0$ is especially relevant for the proof of proposition 2, a key result below.

For $\beta = 0$,

$$\begin{aligned}
v(s) &= s\gamma_A \frac{(x_C - x_A)}{x_C} + s\gamma_A \frac{(x_A - q)}{x_C} + s\gamma_A \left(\frac{x_C - q - \frac{2\gamma_A}{1-s}}{x_C} \right) \\
&= 2 \left(\frac{x_C - q}{x_C} \right) s\gamma_A - \left(\frac{2\gamma_A}{1-s} \right) s\gamma_A \\
&< s\gamma_A.
\end{aligned}$$

The final inequality follows because $2q > x_C$ (already assumed) implies $2\left(\frac{x_C - q}{x_C}\right) < 1$, and $\gamma_A > 0$.

The limiting cases $v(1) = v(0) = 0$ are obvious from the definition of $v(s)$ in equation (21). ■

With this result, we can prove proposition 2.

Proof: First establish that the $t = 1$ challenge zone for belief $s \in (0, 1)$ is a strict subset of the $t = 2$ challenge zone for belief $\tilde{s}_A = 0$.

$$\forall s \in [0, 1], \mathcal{X}^1(s) \subset \mathcal{X}^2(\tilde{s}_A = 0). \quad (22)$$

Given lemmas 1 and 3, the relation (22) holds if

$$\begin{aligned}
q + \gamma_A &< q + \frac{\gamma_A - v(s)}{1-s} \\
\gamma_A &< \frac{\gamma_A - v(s)}{1-s} \\
v(s) &< s\gamma_A
\end{aligned} \quad (23)$$

and

$$\begin{aligned} \frac{(1 - (1 - \beta)s)x_C + s\beta q - (\gamma_A - v(s))}{1 - s + 2s\beta} &< x_C - \gamma_A \\ s\beta(x_C - q) + (1 - 2\beta)s\gamma_A &> v(s). \end{aligned} \quad (24)$$

Note $\frac{\partial(LHS)}{\partial\beta} > 0$, given the assumption $\frac{x_C - q}{2} > \gamma_A$. For $\beta = 0$ this collapses to

$$v(s) < s\gamma_A. \quad (25)$$

These sufficient conditions (23) and (25) are established for $\beta = 0$ by lemma 5. Moreover, when equation (24) holds for $\beta = 0$, it holds for $\beta > 0$. Therefore, relation (22) is true for $\beta \in [0, 1/2)$.

Second, given relation (22), note that $E(\mathcal{A}_2 | \mathcal{A}_1 = 1) = \Pr[x_A^2 \in \mathcal{X}^2(1)] > (1 - s) \Pr[x_A^1 \in \mathcal{X}^1(s)] = E(\mathcal{A}_1)$. ■

Proposition 3 (War and Assembly Power) *War has both a transitory and long run effect on assembly power:*

- A. *Transitory effect. The expected power of the assembly is greater in a period of war than in a period of peace: $E(\mathcal{A}_1 | \omega_1 = 1) > E(\mathcal{A}_1 | \omega_1 = 0)$.*
- B. *Long run effect. The expected power of the assembly in period 2 is greater after a war in period 1 than after peace in period 1: $E(\mathcal{A}_2 | \omega_1 = 1) > E(\mathcal{A}_2 | \omega_1 = 0)$.*

Proof: There are two parts.

Part (A).

Let $\mathcal{X}^1(\omega_1)$ denote the period 1 challenge zone for A, given the state ω_1 . By

lemma 1, $|\mathcal{X}^1(\omega_1 = 0)| < |\mathcal{X}^1(\omega_1 = 1)|$. Given this and a uniform distribution over x_A^1 , $E(\mathcal{A}_1|\omega_1 = 1) = (1-s) \Pr[x_{A,1}^1 \in \mathcal{X}^1(\omega = 1)] > (1-s) \Pr[x_{A,0}^1 \in \mathcal{X}^1(\omega = 0)] = E(\mathcal{A}_1|\omega_1 = 0)$.

Part (B).

Define $k(\omega_1) = \Pr[\tilde{s}_A = \sigma]$ as the probability that A learns G 's type in period 1, conditional on ω_1 . Given G 's separation behavior in proposition 1, $k = \Pr[x_A^1 \in \mathcal{X}^1(\omega_1)]$. Note that $k(\omega_1 = 1) > k(\omega_1 = 0)$ by lemma 1.

Given this,

$$E(\mathcal{A}_2|\omega_1 = 1) = k(1)(1-s) \Pr[x_A^2 \in \mathcal{X}^2(\tilde{s}_A = 0)] + (1-k(1))s \Pr[x_A^2 \in \mathcal{X}^2(s)]$$

$$E(\mathcal{A}_2|\omega_1 = 0) = k(0)(1-s) \Pr[x_A^2 \in \mathcal{X}^2(\tilde{s}_A = 0)] + (1-k(0))s \Pr[x_A^2 \in \mathcal{X}^2(s)].$$

Since $\Pr[x_A^2 \in \mathcal{X}^2(\tilde{s}_A = 0)] > \Pr[x_A^2 \in \mathcal{X}^2(s)]$ and $k(1) > k(0)$, it follows that $E(\mathcal{A}_2|\omega_1 = 1) > E(\mathcal{A}_2|\omega_1 = 0)$. ■