Separation of Powers as a Guardian of Civil Peace[*]

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Abstract

We model civil conflict and separation of powers in a dynamic game of contest for the executive power to persecute and expropriate. We show that separation of powers helps to secure civil peace, since it safeguards strong executive constraints, without which elites would fight over the power to persecute. The exact form of separation of powers required varies with socio-economic development: under low economic interconnectedness within the elite, it is essential to keep the chief executive from setting the constitutional agenda; under high interconnectedness, it is vital to insulate judges' future career paths from the executive branch. Our results shed light on the evolution of separation of powers from emphasizing *legislative* independence to prioritizing *judicial* independence, and thus on the rise of majoritarian democracy with an independent judiciary in modern times.

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1 Introduction

Famous authors have argued that separation of powers protects individual liberty and property rights, which are fundamental to economic prosperity (e.g., Locke, 2003; Montesquieu, 1989; Hayek, 1960, 1979; North and Weingast, 1989). Yet worries have been expressed that separation of powers may make government too fragmented or too weak to secure civil peace (e.g., Bodin, 1992; Hobbes, 1996).[1] Despite being a central concern for human welfare (e.g., Hobbes, 1996; Cox et al., 2019; Dal Bó et al., 2022), securing civil peace has not been much emphasized in the political-economic literature on separation of powers, which mainly studies how separation of powers improves policy outcomes and political accountability (e.g., Persson et al., 1997, 2000; Persson and Tabellini, 2002; de Figueiredo et al., 2006; Callander and Krehbiel, 2014).

In this paper, we propose models to show the effect of particular forms of separation of powers on civil conflict and civil peace. We find that separation of powers can be a powerful instrument in securing civil peace, to the extent that it safeguards strong constraints on executive power, without which elites would fight over this power to persecute and expropriate. We also show that the exact form of separation of powers that secures civil peace varies with socio-economic development: under low economic interconnectedness within the elite, legislative independence is essential; under high interconnectedness, judicial independence becomes key to maintaining civil peace.

We derive our results building on a baseline model without separation of powers, showing how unlimited or imperfectly limited executive power can attract elites to fight over it, generating civil conflict. In the model, there is a king, who is the chief executive, and $N-1$ members of his council, who are all important members of the elite and each endowed with an asset. In each period, any council member may participate in a violent and destructive contest over the kingship, and the losers will lose their seats in the council to some newcomers. The winner can then, as the new king, persecute and expropriate these newcomers and those who did not contest the kingship, only subject to a voting rule in the council. This voting rule measures the constraints on the executive power: at one end, unanimity rule protects every council member from persecution with an individual veto; at the other end, dictatorship grants the king unlimited power to persecute and expropriate. Since we want to construct a stress test for institutions against civil conflict, we consider (pure-strategy) Markov perfect equilibria, i.e., the players' capability of contracting is limited; in particular, the king cannot credibly commit to spare anyone from persecution.

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[1] In particular, when civil peace coexists with fragmented government, the literature often views that the former is achieved *despite* the latter (e.g., Plumb, 1967, p. 189; Finer, 1997c, p. 1356–1358).

We show in our baseline model that under any non-unanimous voting rule for persecution, the king can always persecute and expropriate at least one council member in equilibrium. Vulnerable to persecution, all council members may thus contest the kingship, aspiring to the potentially great value of being an expropriating king. The risk of civil conflict can be eliminated only under unanimity rule, i.e., when executive power is completely limited so that executive transgressions over fundamental rights of individuals are impossible.

This result leads to ask the following question: what institutions can safeguard unanimity rule, so that civil peace will always be secured? We show that the key is to deny the chief executive agenda-setting power on constitutional matters. This is the first form of separation of powers in our paper, i.e., to separate *legislative* and executive powers.

To demonstrate this, we extend the baseline model by allowing at the end of each period either the king or a council member to set the constitutional agenda, i.e., to propose a new voting rule for the next period, with the current voting rule as the default. The council then votes on the proposal, using the current voting rule.

We show that if the players understand that any non-unanimity rule would lead to a fight of all against all, and if the incumbent king always sets the constitutional agenda, then any temporal non-unanimity rule will eventually become dictatorship, not unanimity rule. This is because, knowing that both full dictatorship and any other non-unanimous rules would lead to a war of all against all, while full dictatorship maximizes the prize of the war, the king and all council members would thus prefer full dictatorship over the other non-unanimous rules. With any non-unanimity rule as the current default, the king who prefers dictatorship over unanimity rule will thus propose to install dictatorship, and all council members will support it. It is only when the king is always denied agenda-setting power on constitutional matters, i.e., when executive and legislative powers are separated, that the council members can make sure to propose, vote for, and thus install unanimity rule.

Separating legislative and executive powers is thus essential to maintaining strong executive constraints, and thus securing civil peace, in the long run. This message is relevant to a few historical and contemporary contexts and debates. It helps to explain the dominance of autocracy and fragility of unanimous democracies in ancient times, when separation of executive and legislative powers was rare (e.g., Finer, 1997a,b; Stasavage, 2020a). It also sheds light on the observed instability of those modern presidential democracies that features an insufficiently constrained president and substantial presidential legislative powers (e.g., Linz, 1990; Shugart and Carey, 1992). It also helps to understand the recent quick collapse of the consensual leadership of the Political Bureau Standing Committee of the Chinese Communist Party (CCP) into a one-man rule (e.g., Shirk, 2018; Cai, 2022; Li et al., 2022; Wu, 2022), where the chief executive of the Party, i.e., the General Secretary, has institu-

tionalized agenda-setting power on the Party's constitutional matters (CCP, 1982). It also suggests that separating legislative and executive powers can allow temporary expansion of executive power to manage emergencies without sacrificing individual rights and civil peace in the long run, the Venetian Republic being a prime example of this, in contrast to the Florentine Republic (e.g., Greif, 1995; Finer, 1997b). This implication refutes a long tradition in political theory that justifies dictatorship by its supposed advantage in managing crises and maintaining order (e.g., Bodin, 1992; Hobbes, 1996; Schmitt, 1985, 2014), while lending a hand to democratic institutions in the recent debate on regime types and crisis management (e.g., Agamben, 2005; Stasavage, 2020b; Qin, 2021; Gratton and Lee, 2024).

Although separating legislative and executive powers safeguards unanimity rule, and thus civil peace, this may seem unsatisfactory from a modern perspective. Unanimity rule is often criticized for being inefficient or too rigid (e.g., Tullock, 1961; Aghion et al., 2004; Persico, 2004; Harstad, 2005; Fukuyama, 2014). Majority rule, usually accompanied by an independent judiciary, is fundamental to modern democracies (e.g., Weber, 1978; Finer, 1997b; Stasavage, 2020a). Within our framework, the question is then: in a majoritarian democracy, can the judiciary secure civil peace, especially if embedded in a modern society, whose members may have become economically quite interconnected and socially quite cohesive (e.g., Durkheim, 2014; Greif, 2008; Cox et al., 2019)?

We show that having simply a judiciary embedded in an interconnected and socially cohesive circle is not enough to secure civil peace. Instead, the judiciary must have its members' career paths sufficiently insulated from the executive branch. This is the second form of separation of powers in our paper, i.e., to separate *judicial* and executive powers.

To demonstrate this, we extend the baseline model in another direction. We first introduce a judicial committee whose only task is to review persecution decisions that have been approved by the king's council, i.e., the executive branch. Second, economic interconnectedness and social cohesion are modeled by assuming that with socio-economic development, persecution of a council member will have potentially severe negative externalities on the elite, including other members of the council and judiciary. Finally, we allow a certain number of members of the judiciary to join the executive branch and thus possibly contest the kingship in the future.

We show that, given a non-unanimity rule in the executive branch, the judiciary can prevent persecution and thus eliminate the risk of civil conflict, only when the level of economic interconnectedness and social cohesion is high *and* a great number of the members of the judiciary are prohibited from joining the executive branch in the future. This is because, only justices who are embedded in an interconnected, socially cohesive elite circle would care to prevent persecution in the first place. The king could, however, still find it affordable to

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buy them off and manipulate judicial decisions if they could join the executive branch in the future, since in that case they would be aspiring to the potentially lucrative kingship themselves and care too little about the persecution externality. This is why insulating the judiciary's members' career paths from the executive branch is necessary in order to secure civil peace under majoritarian rule.

Separating judicial and executive powers is thus key to allowing modern society to adopt non-unanimous, majoritarian rules for executive decisions, while still protecting individual rights and thus securing civil peace. This message helps to explain how, as the pioneer of modern, majoritarian democracy, England transitioned from frequent civil wars to perpetual peace around the end of the 17th century and the beginning of the 18th century, and why such non-unanimity rule was not adopted by other medieval or early modern European states that lacked an independent judiciary, interconnectedness and social cohesion among elites, or both (e.g., Lovell, 1949; Finer, 1997c; Fukuyama, 2018; Stasavage, 2020a).
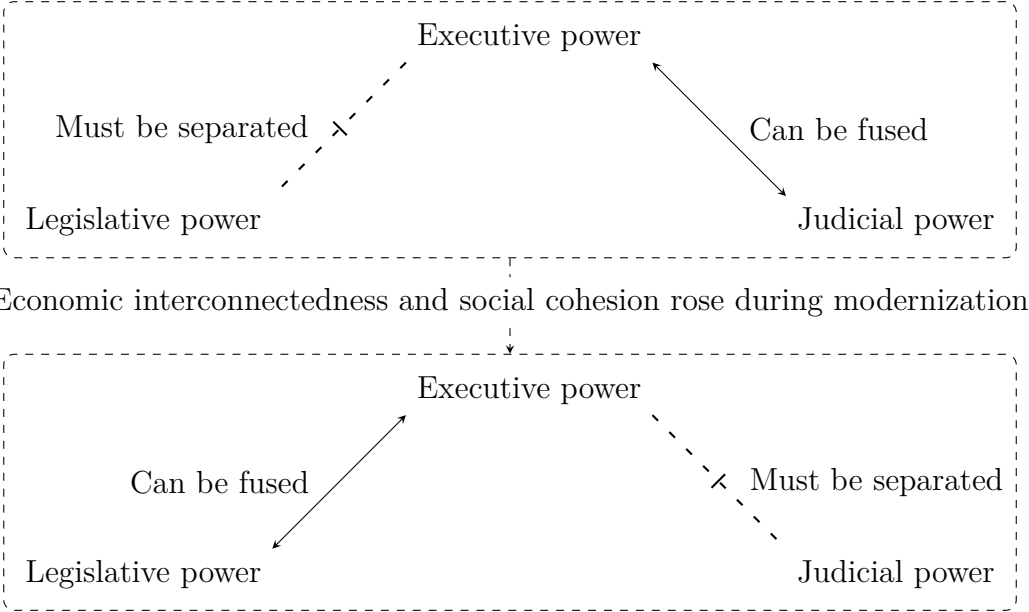
Figure 1: Evolution of separation of powers, a hypothesis

We can summarize all the results from our analysis into a hypothesis about the evolution of the separation-of-powers institutions. As illustrated in Figure 1, starting from a time when economic interconnectedness and social cohesion was low, strong constraints on executive power were required to protect individual rights and thus secure civil peace. As shown in the model with endogenous constitutional dynamics, robustness of such constraints, and thus civil peace, required an independent *legislature.* Conditional on an independent legislature safeguarding the strong executive constraints, it would be less necessary to strictly separate judicial and executive powers.

As economic interconnectedness and social cohesion rose as a result of modernization, as shown in the model with the judiciary, society can adopt majoritarian rules for executive decisions without sacrificing individual rights and thus civil peace, as long as the *judiciary* is independent. Since in that case civil peace does not depend on a unanimous executive regime, the legislature can be fused with the executive as in the case of parliamentary democracy. Socio-economic development may have thus facilitated a transition of separation of powers from emphasizing an independent *legislature,* to prioritizing an independent *judiciary.* This hypothesis is consistent with the English experience, as the beginning of the rise of parliamentarism in Europe, the precursor of parliamentary democracy today (e.g., Locke, 2003; Montesquieu, 1989; Finer, 1997c).

Our paper brings together the literature on separation of powers (afore-cited), origins of civil conflict (e.g., surveys by Garfinkel and Skaperdas, 2007; Blattman and Miguel, 2010; Hoeffler, 2012; Baliga and Sjöström, Forthcoming), political persecution and expropriation (e.g, Acemoğlu et al., 2008; Egorov and Sonin, 2015; Francois et al., 2015; Diermeier et al., 2017; Nunnari, 2021; Anderlini et al., 2022), and institutions constraining executive power (e.g., North and Weingast, 1989; Przeworski, 1991, 2006; Weingast, 1997; Myerson, 2008; Fearon, 2011; Svolik, 2012).[2] We show that our unique position at the intersection of these four threads of literature helps us understand the role of separation of powers as a guardian of civil peace by constraining the persecution power of the executive.[3]

Foundational works in the literature have noted the general inequality in agenda-setting power within political organizations (e.g., Dahl, 1956, p. 72, 84; Cox, 2006, p. 142), and the literature has primarily focused on how such power influences policy outcomes (e.g., Romer and Rosenthal, 1978; Tsebelis, 2003; Cox, 2006; Diermeier and Fong, 2011; Gehlbach, 2013; Anesi and Seidmann, 2014; Nunnari, 2021; Ali et al., 2023). Agenda-setting power is largely not the main focus of the literature on endogenous constitutions (e.g., Aghion et al., 2004; Barbera and Jackson, 2004; Acemoğlu et al., 2012, 2015, 2021; Howell et al., 2023) and self-enforcing or stable institutions (e.g., surveys by Svolik, 2019; Acemoğlu et al., 2021; Egorov and Sonin, 2024).[4] Bridging these threads of literature, we show that whether or not the

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[2]Important examples in the literature on origins of civil conflict are not limited to Skaperdas (1992), Fearon (1995), Gibbons (2001), Powell (2006), Chassang and Padró i Miquel (2010), Dal Bó and Dal Bó (2011), Besley and Persson (2011a,b), Baliga and Sjöström (2012, 2020), Svolik (2012), Yanagizawa-Drott (2014), Bhattacharya et al. (2015), Bai and Jia (2016), Harish and Little (2017), Acharya et al. (2020), Amarasinghe et al. (2020), Dippel and Heblich (2021), Henn et al. (2021), Mueller et al. (2022), Herrera et al. (2022), and Fergusson et al. (2023).

[3]The cited literature on institutions constraining executive power primarily focuses on the coordination-facilitating role of the institutions. In particular, Myerson (2008) shows that a king may solve his commitment problem towards his potential allies by creating a council to help them coordinate a credible threat if commitments are not fulfilled. Without contradicting this view, our paper focuses on individual veto and its institutional safeguards.

[4]For example, Howell et al. (2023) focus on a specific arrangement of agenda-setting power; Aghion et al.

legislature can strip the chief executive of agenda-setting power on constitutional matters can determine whether strong executive constraints can be in place in the long run.

A vast literature has also highlighted the benefits of judicial independence (e.g., Salzberger and Fenn, 1999; Hanssen, 2004; Maskin and Tirole, 2004; La Porta et al., 2004; Haggard et al., 2008; Melton and Ginsburg, 2014). Contributing to this literature, we emphasize insulating the career paths of justices from the executive branch. This notion of *judicial insulation* is more demanding than the generic notion of judicial independence. In light of this, the secure tenure of justices may help the judiciary function not only because it protects them from executive retaliation, which is well recognized by the literature (e.g., Hanssen, 2004), but also because it insulates them from joining the executive branch in the future, and thus makes it more difficult for executive power to influence them, protecting individual rights and securing civil peace.

The paper is organized as follows. Section 2 presents analysis of the baseline model. Sections 3 and 4 present the analysis of the two forms of separation of powers, respectively. Section 5 discusses implications of our results. Proofs of results, further extensions, and additional historical narratives are provided in the appendix.

2 Baseline Model: Executive Power and Civil Conflict

2.1 Setup

The baseline model is embedded in discrete time. As laid out in Figure 2, each period t inherits from period $t-1$ a council, which consists of a king, who is the chief executive, and $N-1 \geq 2$ identical ordinary council members, who are important members of the elite and each endowed with an asset, which can bring an exogenous flow payoff of $R > 0$ at the end of each period. Period t then has two stages:

Contest stage. Each ordinary council member first simultaneously chooses whether or not to contest the kingship, and then the king must respond by fighting. The contest is so violent and destructive that it will destroy the assets of all contestants, including the king's asset. The contest's outcome is determined by a random draw, in which the winning probability for the incumbent king is $\Pi^K(Q_t)$, and that for each contesting ordinary council

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(2004) and Barbera and Jackson (2004) abstract away from any specific arrangement; Acemoğlu et al. (2012) assume away the importance of agenda-setting power by postulating that all possible constitutional proposals can eventually be voted on. These approaches simplify the analysis, while deriving sufficiently general results. Important examples of the literature on self-enforcing or stable institutions are not limited to Przeworski (1991, 2006), Weingast (1997), Acemoğlu and Robinson (2006, 2008), Myerson (2008), Fearon (2011), Bidner and Francois (2013), Bidner et al. (2015), Anderlini et al. (2022), and Rantakari (Forthcoming).
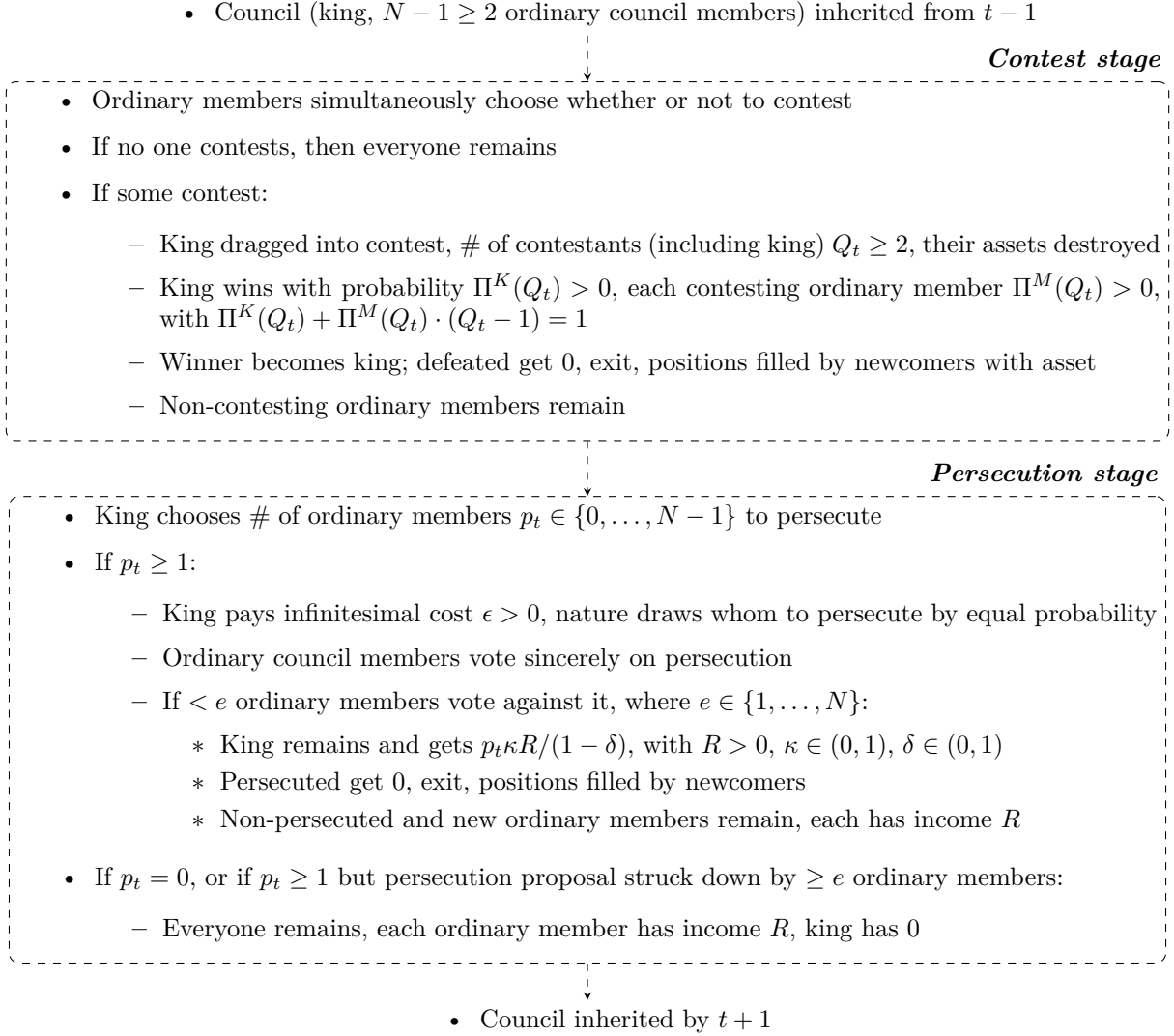
- Council (king, $N - 1 \geq 2$ ordinary council members) inherited from $t - 1$

Contest stage

- Ordinary members simultaneously choose whether or not to contest

- If no one contests, then everyone remains

- If some contest:

    - King dragged into contest, # of contestants (including king) $Q_t \geq 2$, their assets destroyed
    - King wins with probability $\Pi^K(Q_t) > 0$, each contesting ordinary member $\Pi^M(Q_t) > 0$, with $\Pi^K(Q_t) + \Pi^M(Q_t) \cdot (Q_t - 1) = 1$
    - Winner becomes king; defeated get 0, exit, positions filled by newcomers with asset
    - Non-contesting ordinary members remain

Persecution stage

- King chooses # of ordinary members $p_t \in \{0, \ldots, N - 1\}$ to persecute

- If $p_t \geq 1$:

    - King pays infinitesimal cost $\epsilon > 0$, nature draws whom to persecute by equal probability
    - Ordinary council members vote sincerely on persecution
    - If $< e$ ordinary members vote against it, where $e \in \{1, \ldots, N\}$:
        * King remains and gets $p_t \kappa R / (1 - \delta)$, with $R > 0$, $\kappa \in (0, 1)$, $\delta \in (0, 1)$
        * Persecuted get 0, exit, positions filled by newcomers
        * Non-persecuted and new ordinary members remain, each has income R

- If $p_t = 0$, or if $p_t \geq 1$ but persecution proposal struck down by $\geq e$ ordinary members:

    - Everyone remains, each ordinary member has income R, king has 0

- Council inherited by $t + 1$

Figure 2: Baseline model, each period t

member is $\Pi^M(Q_t)$, where $Q_t \in \{2, 3, \ldots, N\}$ is the total number of contestants. We assume that the functions $\Pi^K(\cdot)$ and $\Pi^M(\cdot)$ are exogenous and satisfy $\Pi^K(Q_t) > 0$, $\Pi^M(Q_t) > 0$, and $(Q_t - 1)\Pi^M(Q_t) + \Pi^K(Q_t) = 1$, i.e., any contestant has a strictly positive chance to win and there is one and only one winner in each contest.

The winner of the contest, either the old king or a contesting ordinary council member, will then become the new king, whereas the losing contestants will exit the game with a zero payoff. As we consider the council a permanent institution, to keep the council's size constant at N, $Q - 1$ new ordinary members will now join the council, each with an asset, which can bring a flow payoff of R at the end of each period.[5] Those council members who

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[5]We can microfound these entries by assuming that potential newcomers' assets have a low outside flow payoff. For an example featuring an infinite pool of contenders for power, see Egorov and Sonin (2015).

did not contest will keep their positions and assets untouched; in case no one contested the kingship, this would apply to everyone in the council.

Persecution stage. Right after the contest stage, the current king, either the old or a new king, can propose to persecute and expropriate $p_t \in \{0, 1, \ldots, N-1\}$ of the $N-1$ current ordinary council members, randomly selected with equal probability, at an infinitesimal cost, $\epsilon > 0$. This equal-probability setting is standard in the literature, capturing the classic commitment problem for the powerful in excluding others from their domination (e.g., Weingast, 1979; Bueno de Mesquita et al., 2003, p. 82; Gehlbach, 2013, p. 124–128).

The council will then vote on the whole list of names for persecution. We assume that all ordinary council members play weakly undominated voting strategies, which, in this setting of two voting options, means they vote sincerely. We also assume that they will vote for the proposal when indifferent. Both assumptions help us focus on more intuitive equilibria in our analysis and are standard in the literature (e.g., Acemoğlu et al., 2012; Gehlbach, 2013, p. 13–14; Dziuda and Loeper, 2016; Diermeier et al., 2017).

The proposal will be blocked by the council if and only if at least e ordinary council members vote against it. Having a procedure like this for persecution captures the idea that domination of executive power is often rule-based (e.g., Weber, 2004, p. 33–34). This voting rule, $e \in \{1, 2, \ldots, N\}$, thus measures constraints upon executive power in our model:

- When $e = 1$, *unanimity rule,* or *unanimous democracy,* protects each council member from executive transgression, i.e., persecution in our model, with an individual veto.[6]

- When $e = N$, the council would not be able to block any persecution, even if all the $N-1$ ordinary council members voted against it. This makes a *dictatorship*, where the king has effectively unlimited power to persecute and expropriate.

- When $e \in \{2, 3, \ldots, N-1\}$, a *non-unanimous democracy,* protects council members at a certain collective level, but not the individual level. For example, if $e = \lfloor N/2 \rfloor + 1$, a majoritarian democracy protects and only protects council members in the majority.

This voting rule is thus central in our analysis. It is exogenous and invariant in the baseline model; we will endogenize it in Section 3.

If the persecution proposal is blocked, or if the king did not propose to persecute anyone, then everyone will remain in their positions through the end of period t. Since all ordinary council members will have their assets intact, each of them will receive a payoff of R. Since

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[6] As in the literature, the word "democracy" denotes constraints upon the ruler and minimization of executive domination (e.g., Weber, 1978; Ober, 2008; Stasavage, 2020a). One may also interpret any polycracy where each co-ruler holds a veto over any executive initiative as a council under unanimity rule.

we have assumed that any contest produces a king while destroying all contestants' assets, any king in this scenario does not own any asset, unless he is the very first king and has not experienced any contest. In that case, for simplicity, we assume that this very first king does not own any asset. The king will thus receive a zero payoff.

If the persecution proposal is not blocked, the king will persecute and expropriate the council members on the persecution list, and the persecuted will exit the game with a zero payoff. The king is assumed to automatically cash out each expropriated asset at a value of $\kappa \cdot R/(1-\delta)$, and enjoy it only for this period, where $\delta \in (0,1)$ is the exogenous social discount factor, $R/(1-\delta)$ is thus the market value of the asset, and $\kappa \in (0,1)$ is exogenous and indicates the efficiency of the expropriation and sale. Since p_t council members are persecuted, the king will eventually receive a payoff of $p_t \cdot \kappa \cdot R/(1-\delta)$ for this period. The vacant positions in the council will be filled, again, by newcomers, each with an asset, and these newcomers and the ordinary council members who are not persecuted will receive R for this period. The persecution stage and thus period t end there. Period $t+1$ then follows.

Completing the setup.   The first period is endowed with $N-1$ ordinary council members and a king. All players have an infinite horizon and maximize the net present value of their own expected payoff, using the social discount factor δ as their personal discount factor.

Solution concept.   We adopt pure-strategy Markov perfect equilibrium (MPE) as the solution concept. This captures the classic commitment problem for political players in the literature (e.g., Acemoğlu, 2003; Myerson, 2008, 2015; Egorov and Sonin, 2011). In particular, it makes it impossible for the king to prevent a contest by promising to compensate or spare any non-contesting council members from persecution. Together with the equal-probability setting for persecution and the voting-for-persecution assumption for indifferent council members, adopting MPE introduces a stress test for institutions against civil conflict, helping us understand what institutions can secure civil peace *robustly*.

To clarify the Markovian state variables, note that all ordinary council members are symmetric to each other at each contest and persecution stage. Therefore, given the exogenous, invariant voting rule, all ordinary council members at all contest stages considering contesting or not face the same payoff-relevant state of the game. So do all the kings at all persecution stages considering persecution. For any ordinary council member at any persecution stage voting on any persecution proposal, the payoff-relevant state of the game varies only across whether or not her own name is on the persecution list.

Enforceability of institutions. Before proceeding to analysis, one may wonder how the institutions modeled in this paper, such as the voting rule here and separation-of-powers institutions in Sections 3 and 4, may be enforced. On that, we can apply the logic in Myerson (2008) and Fearon (2011): any publicly understood and performed institution, when violated, may provide a clear public signal to coordinate rebellion, making itself possibly self-enforcing. In addition, the literature has long observed that rule-based coercion often draws voluntary submission (e.g., Weber, 1978, p. 215, 217; 2004, p. 33–34).[7]

2.2 Analysis and Results

We first analyze the persecution stage for each period t:

Lemma 1 (Persecution stage). *Given any voting rule $e \in \{1, 2, \ldots, N\}$, in any MPE, at each persecution stage, the king will propose to persecute $e - 1$ ordinary council members, and each ordinary member will vote against a persecution proposal if and only if she is on it.*

We prove Lemma 1 in Appendix A. The intuition is simple. Since persecution matters only to those who are on the persecution list, only they will vote against the persecution proposal. Given the voting rule e, the king can thus persecute at most $e - 1$ ordinary council members. He will thus do so, not leaving anything on the table.

Given Lemma 1, we can derive our baseline results, first about any non-unanimity rule:

Proposition 1 (Risk of civil conflict under any non-unanimity rule). *Given any non-unanimity rule, i.e., $e \geq 2$, as $\delta \to 1$, there exists a unique MPE, in which all ordinary council members at each contest stage will contest the kingship; at each persecution stage, all players follow Lemma 1.*

We prove Proposition 1 in Appendix B. Since we emphasize the risk, not inevitability, of civil conflict, we skip here the "uniqueness" part of the result but focus on why the proposed strategy profile constitutes an MPE. Given any non-unanimity rule, by Lemma 1, each and every ordinary council member at any persecution stage is always vulnerable to persecution and thus may have to exit the game. Therefore, for any ordinary council member at any contest stage, the single deviation from the conjectured equilibrium path, i.e., not contesting only for now, will risk her opportunity to contest the kingship in the future, only for the potential return from her asset at the end of the current period. Therefore, if

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[7]Along this Weberian interpretation, in our model, persecution is governed by rules, in that it follows a publicly understood procedure and is subject to the council's vote with a given rule, and thus a form of *legitimate* violence; contests are ruleless, in that anyone can initiate a contest and its outcome is determined randomly, and thus a form of *illegitimate* violence. Our model thus provides a framework to analyze the interaction between legitimate and illegitimate violence.

the kingship is sufficiently valuable, the ordinary council member will be worse off under the single deviation, making the proposed strategy profile an MPE. Having a high social discount factor indeed makes such a scenario, since it will make each expropriated asset, and thus being an expropriating king, very valuable.

This intuition suggests that only unanimity rule can totally eliminate the risk of civil conflict, since only under unanimity rule the king is incapable of persecuting anyone. Everyone is thus safe, and the throne worthless. No one would thus contest it:

Proposition 2 (Civil peace under unanimity rule)**.** *Under unanimity rule, i.e., $e = 1$, there exists a unique MPE, in which all ordinary council members at each contest stage will not contest the kingship; at each persecution stage, all players follow Lemma 1.*

We prove Proposition 2 in Appendix C. Gathering Propositions 1 and 2, our baseline results thus imply that, without separation-of-powers institutions that we analyze in Sections 3 and 4, unanimity rule, which imposes the strongest constraints on executive power, has an unique advantage in protecting individual rights, and thus securing civil peace.

Robustness of results. We conclude the baseline analysis with a few remarks on the robustness of the results. We could assume that each contest damages only part of the assets of the contestants, rather than totally destroying them. We could also assume that the damage spills to all the ordinary council members who did not contest and to all the potential newcomers. We show in Appendices A, B, and C that the baseline results are robust to these alternative assumptions.

Note that our assumptions that any contestant has a strictly positive chance to win and that there is one and only one winner, are less restrictive than the common specifications in the literature (e.g., Skaperdas, 1996). In particular, the baseline results do not depend on the king's advantage in the contest, or the monotonicity of $\Pi^K(\cdot)$ and $\Pi^M(\cdot)$, if any.

We could assume that the very first king does start with an asset. We discuss in Appendices A, B, and C that this will not affect the results here. The results will also remain if we assume that the king keeps some of the expropriated assets and enjoys their return flows later, rather than automatically cashing out the assets immediately. This can be achieved with a simplifying assumption that the king prioritizes persecuting the most senior council member, which we introduce in Section 4.1.

Finally, we show in Appendix B that the baseline results are robust if the personal discount factor differs from the social one. Also in Appendix B, we show that, under stronger executive constraints, i.e., a smaller $e \geq 2$, for the conflict in Proposition 1 to emerge, a higher social discount factor is required. This is consistent with the intuition of Proposition 1.

3 Endogenous Constitutional Dynamics and Separation of Legislative and Executive Powers

If unanimity rule delivers the strongest executive constraints and thus secures civil peace, what institutions can safeguard unanimity rule itself? In this section, we extend the baseline model by allowing the council to periodically change its voting rule, i.e., its constitution. We then compare the resulting constitutional dynamics between two arrangements depending on who sets the constitutional agenda, showing that separation of legislative and executive powers safeguards unanimity rule, and thus civil peace.
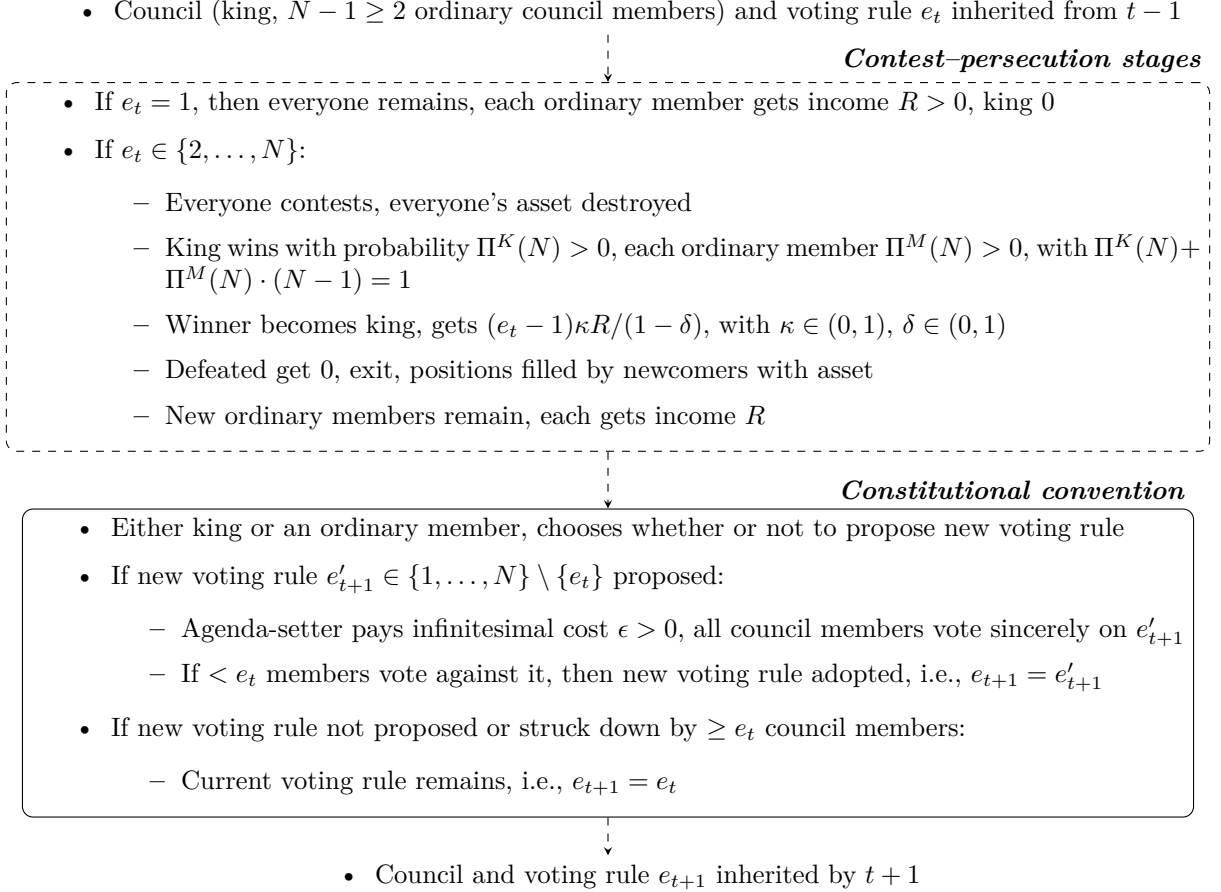
3.1 Setup

As Figure 3 lays out, we now add a constitutional convention to the end of each period t, where an agenda-setter, either the king or an ordinary council member, can first propose to revise the voting rule from e_t to $e'_{t+1} \in \{1, 2, \ldots, N\} \setminus \{e_t\}$, at an infinitesimal cost $\epsilon > 0$. We consider two arrangements of this agenda-setting power:

- If the constitutional agenda is always set by an ordinary council member at the time, then we have *separation of executive and legislative powers,* in the sense that the chief executive, i.e., the king, is denied agenda-setting power on constitutional matters.

- If the king at the time always sets the constitutional agenda, then executive and legislative powers are fused.

Once a new voting rule is proposed, the council will vote on it, with the current voting rule, e_t, being the default alternative, and the votes will be counted by the current voting rule. Again, each council member is assumed to vote sincerely. If the new voting rule is approved, then the council will adopt it for period $t + 1$, i.e., $e_{t+1} = e'_{t+1}$; if it is rejected, or no proposal is made, then the current voting rule will remain, i.e. $e_{t+1} = e_t$.

Given our focus on the resulting dynamics of the voting rule, we simplify the contest and persecution stages, by assuming that all players follow the strategies in the baseline results, i.e., under unanimity rule no contest or persecution will happen, whereas under any non-unanimity rule a war of all against all will break out, destroying assets of contestants, and $e_t - 1$ ordinary members will be persecuted. This captures the classical idea that institutional designers should take the risk of civil conflict very seriously (e.g., Hobbes, 1996).

We still consider MPEs. To clarify the Markovian state variables, for any agenda-setter at any constitutional convention considering proposing a new voting rule, the state of the game is characterized by the current voting rule, e_t. For any player at any constitutional

- Council (king, $N - 1 \geq 2$ ordinary council members) and voting rule e_t inherited from $t - 1$

Contest–persecution stages

- If $e_t = 1$, then everyone remains, each ordinary member gets income $R > 0$, king 0
- If $e_t \in \{2, \ldots, N\}$:
    - Everyone contests, everyone's asset destroyed
    - King wins with probability $\Pi^K(N) > 0$, each ordinary member $\Pi^M(N) > 0$, with $\Pi^K(N) + \Pi^M(N) \cdot (N - 1) = 1$
    - Winner becomes king, gets $(e_t - 1)\kappa R/(1 - \delta)$, with $\kappa \in (0, 1)$, $\delta \in (0, 1)$
    - Defeated get 0, exit, positions filled by newcomers with asset
    - New ordinary members remain, each gets income R

Constitutional convention

- Either king or an ordinary member, chooses whether or not to propose new voting rule
- If new voting rule $e'_{t+1} \in \{1, \ldots, N\} \setminus \{e_t\}$ proposed:
    - Agenda-setter pays infinitesimal cost $\epsilon > 0$, all council members vote sincerely on e'_{t+1}
    - If $< e_t$ members vote against it, then new voting rule adopted, i.e., $e_{t+1} = e'_{t+1}$
- If new voting rule not proposed or struck down by $\geq e_t$ council members:
    - Current voting rule remains, i.e., $e_{t+1} = e_t$

- Council and voting rule e_{t+1} inherited by $t + 1$

The solid frame indicates additions to the baseline setup (Figure 2). Contest–persecution stages are simplified following Propositions 1 and 2.

Figure 3: Setup with endogenous constitutional dynamics, each period t

convention voting on any constitutional proposal, the state of the game is characterized by the current voting rule, e_t, and the proposed new rule, e'_{t+1}.

3.2 Analysis and Results

The first step in our analysis is to show that unanimity rule is stable, i.e., an absorbing state:

Lemma 2 (Stability of unanimity rule)**.** *Regardless of who sets the constitutional agenda, in any MPE, if the current rule is unanimity rule, then the agenda-setter will not propose any new rule, and all ordinary council members will vote against any new rule if proposed. Unanimity rule is thus stable, i.e., if $e_t = 1$, then $e_{t+1} = 1$.*

We prove Lemma 2 in Appendix D. To clarify the intuition, first note that any ordinary council member prefers unanimity rule over any non-unanimity rule. This is because, compared with unanimity rule securing the safe return of her asset, any non-unanimity rule

will destroy it by inducing a war of all against all, while giving her only the chance to win the war and become an expropriating king. Since there is one and only one winner in each contest, this chance to win a war of all against all proves to be so small that any ordinary council member would prefer unanimity rule instead.[8] Therefore, if the current rule is unanimity rule, all ordinary council members will vote against any proposed new rule, so that unanimity rule will remain. Knowing that, to save the proposing cost, no agenda-setter will propose any new rule.

This intuition further implies that even if the current rule is non-unanimous, as long as ordinary council members control the constitutional agenda, any one of them can always propose to install unanimity rule, which is their favorite, and all ordinary members will then vote for it. Therefore, under separation of executive and legislative powers, unanimity rule will always be restored. Combining this and Lemma 2, we have the following result:

Proposition 3 (Constitutional dynamics under separation of executive and legislative powers). *If the king is always denied agenda-setting power on constitutional matters, then in any MPE, unanimity rule is stable, and any non-unanimity rule will transition to unanimity rule, i.e., for any $e_t \in \{1, 2, \ldots, N\}$, $e_{t+1} = 1$.*

We prove Proposition 3 in Appendix E. This result contrasts with the dynamics without such separation of powers:

Proposition 4 (Constitutional dynamics under fusion of executive and legislative powers). *If the king always sets the constitutional agenda, then in any MPE, unanimity rule and dictatorship are stable; any non-unanimous, non-dictatorial rule will transition to dictatorship, i.e., if $e_t = 1$, then $e_{t+1} = 1$; if $e_t \geq 2$, then $e_{t+1} = N$.*

We prove Proposition 4 in Appendix F. In this result, the stability of unanimity rule follows Lemma 2. To clarify the intuition of the rest of the result, first note that the king and all ordinary council members prefer dictatorship over any non-unanimous, non-dictatorial rule. This is because all these rules will induce a war of all against all, while dictatorship maximizes the trophy of the war, i.e., the power to persecute and expropriate.

Second, when the current voting rule is non-unanimous, the king also prefers dictatorship over unanimity rule for the future. This is because, when the current rule is non-unanimous, the king at the constitutional convention must have experienced a war and, therefore, have

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[8]Mathematically, by $\Pi^M(N) \cdot (N-1) + \Pi^K(N) = 1$, the net present chance to become an expropriating king under any non-unanimity rule, first winning a war of all against all as an ordinary council member and then keeping winning such wars as a king, would be only $\Pi^M(N) / \left(1 - \delta \cdot \Pi^K(N)\right) < 1/(N-1)$, which is too small to dominate the safe return under unanimity rule.

had his asset destroyed in that war. The king will thus not value the peace under unanimity rule, but will welcome the power to persecute and expropriate under dictatorship. Dictatorship is thus the king's favorite among all voting rules.

Because of that, when the king controls the constitutional agenda, if the current rule is indeed dictatorship, then he will not propose any new rule, keeping dictatorship. If the current rule is instead a non-unanimous, non-dictatorial rule, then the king will propose to install dictatorship. Now comparing dictatorship with the current non-unanimous, non-dictatorial rule as the default alternative, all ordinary council members will vote for and approve dictatorship. This is because, as just discussed, both dictatorship and the non-unanimous, non-dictatorial default will bring a war of all against all, while dictatorship maximizes the trophy for the winner. Therefore, when executive and legislative powers are fused, any non-unanimity rule will lead to dictatorship.

Table 1: Constitutional dynamics and separation of executive and legislative powers

	Fused executive and legislative powers	Separated executive and legislative powers
Unanimous democracy, $e_t = 1$	↺	↺
Non-unanimous democracies, $e_t \in \{2, 3, \ldots, N-1\}$	↓	↑
Dictatorship, $e_t = N$	↺	

Summary of Propositions 3 and 4. Executive and legislative powers fused/separated in terms of chief executive controlling/denied agenda-setting power on constitutional matters. Self-pointing arrows for stability; straight arrows for directions of transition.

Summarizing Propositions 3 and 4, Table 1 shows that, to secure unanimity rule, and thus civil peace, it is crucial to separate executive and legislative powers. When the chief executive controls the constitutional agenda, dictatorship, which brings the risk of civil conflict, can be a long-run alternative to unanimity rule. This possibility is denied only when the chief executive is denied agenda-setting power on constitutional issues.

This analysis yields two corollaries that have potentially important theoretical and historical relevance, which we discuss in Section 5.2. The first is about the resilience of unanimity rule to autocratic shocks, which could be, for example, resulting from a coup, or demanded

by a response to an emergency. Propositions 3 and 4 would imply the following dynamics:

Corollary 1 (Resilience of unanimity rule). *Under separation of executive and legislative powers, unanimity rule will be quickly restored after an autocratic shock; without such separation of powers, it will collapse into dictatorship after such shocks.*

The second corollary deals with the emergency situation, in particular, when legislators in a unanimous democracy are considering whether to expand executive power temporarily to better manage the emergency. If the chief executive always controls the constitutional agenda, understanding Proposition 4, the legislators will be worried that a temporary expansion of executive power would eventually become permanent, and thus be reluctant to approve it. If the chief executive is always denied such agenda-setting power, knowing Proposition 3, the legislators will be confident that unanimity rule will be restored after the emergency, and thus be more willing to approve the temporary expansion of executive power. Separation of executive and legislative powers would thus strengthen the emergency capacity of unanimous democracy:

Corollary 2 (Emergency capacity of unanimous democracy). *The emergency capacity of unanimous democracy is strong under separation of executive and legislative powers, and is weak without such separation of powers.*

Robustness of results. We end this section with some remarks on the robustness of the results. First, the intuition of Proposition 4 involves the fact that, under a non-unanimous current rule, the king has no asset so that he prefers dictatorship over unanimity rule for the future. As we discuss in Appendix F, this preference, and thus Proposition 4, will remain robust even if the king holds assets, as long as he has a strong enough incumbency advantage in a war of all against all.

Second, we have assumed in this section that the players follow the baseline results at the contest and persecution stages. We show in Appendix G that our analysis is robust if we keep the contest and persecution decisions endogenous.

Third, in Appendix H, we examine the only alternative sequencing of the stages, where each constitutional convention happens after each contest stage but before each persecution stage, and we show that results in this section are robust to it.

Fourth, one may want a separate voting rule for constitutional change. Since sincere voting is assumed, and since all ordinary council members are symmetric, they will always cast the same vote on any given constitutional proposal. Therefore, results in this section will remain robust to any alternative voting rules for constitutional change that require the

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approval of at least one ordinary council member, which include, but are not limited to, a super-majority rule, or even a unanimity rule among all ordinary council members.

Finally, one may wonder how the voting rule is enforced at each constitutional convention. Besides our argument in Section 2 following Myerson (2008) and Fearon (2011), note that all the ordinary council members always compose a broad coalition of $N-1$ members, while only one person, i.e., the king, may dissent. Following the spirit of Przeworski (1991, 2006), the broad coalition is likely to dominate the one person, and the voting rule is thus self-enforcing.

4 Socio-economic Development and Separation of Judicial and Executive Powers

We have shown that separation of executive and legislative powers safeguards unanimity rule, which protects individual rights, and thus secures civil peace. That said, it does not speak to the fact that modern democracies generally feature majority rule, which is non-unanimous, while not provoking much civil conflict. How is the risk of civil conflict minimized? In particular, can it be merely a result of being modern, i.e., members of society becoming economically interconnected and socially cohesive? If not, given that majoritarian democracy is often accompanied by an independent judiciary reviewing executive decisions, what is the role of judicial independence in conferring civil peace?

4.1 Setup

To answer these questions, given an executive council under a non-unanimous rule, $e \in \{2, 3, \ldots, N\}$, we add to our baseline model a judiciary composed of $\bar{N}$ justices, with its voting rule $\bar{e}$, where $\bar{N} \geq 1$ and $\bar{e} \in \{1, 2, \ldots, \bar{N}\}$ are exogenous. As Figure 4 lays out, once the executive council approves a persecution proposal, the justices will vote on it, maximizing the net present value of their own expected payoff; they will vote for it if indifferent.

We assume that persecution will incur a negative externality among the elite, i.e., members of the executive council and the judiciary, so that the asset of each non-persecuted ordinary council member and justice, denoted by i, will generate a flow payoff at the end of period t, $R_{it} = (1 - c \cdot p_t \cdot \theta_t) \cdot R_{i,t-1}$, where $R_{i,t-1} > 0$ is the potential flow payoff of her asset before any persecution at period t, and the whole game starts from $R_{i,0} = R$ for everyone. The exogenous externality intensity, $c > 0$, represents the degree of economic interconnectedness and social cohesion among the elite. The interpretation is thus:

- Making members of society economically more interconnected and socially more cohesive, socio-economic development raises c.

- Council (king, $N - 1 \geq 2$ ordinary members), judiciary ($\bar{N} \geq 1$ justices, among them $w \in \{1, \ldots, \min\{N, \bar{N}\}\}$ political, $\bar{N} - w$ apolitical), externality status $\theta_t \in \{0, 1\}$, and potential returns $\{R_{i,t-1}\}$ to elites' assets inherited from $t - 1$

Contest stage

- Same as in baseline setup (Figure 2), plus $\Pi^K(N)/\Pi^M(N) \leq \Pi^K(2)/\Pi^M(2)$

- Positions of defeated filled by new elite members with asset, potential return $R_{i,t-1} \equiv R > 0$

Persecution stage with judicial review

- King chooses # of ordinary members $p_t \in \{0, 1, \ldots, N - 1\}$ to persecute

- If $p_t \geq 1$:

  - King pays infinitesimal cost $\epsilon > 0$, nature draws p_t ordinary members (set P_t) to persecute[†]

  - King proposes transfer $T_{it} \geq 0$ to each justice, subject to budget $\sum_{i \in P_t} \frac{\kappa R_{i,t-1}}{1-\delta}$[‡]

  - Ordinary members vote against persecution if and only if they are to be persecuted

  - If $< e \in \{2, \ldots, N\}$ ordinary members vote against it, then justices vote sincerely on it:

    * If $< \bar{e}$ justices vote against it, $\bar{e} \in \{1, 2, \ldots, \bar{N}\}$:
      · King remains and gets $\kappa \cdot \sum_{i \in P_t} R_{i,t-1}/(1-\delta)$, with $\kappa \in (0, 1)$, $\delta \in (0, 1)$
      · Non-persecuted and justices remain, each gets $R_{it} = (1 - cp_t\theta_t) R_{i,t-1}$, $c > 0$
      · Each justice gets T_{it} from king if having voted for persecution
      · Persecuted get 0, exit, positions filled by new elite members with asset, each of whom gets $R_{it} \equiv R$

- If $p_t = 0$, or if $p_t \geq 1$ but struck down by $\geq e$ ordinary members or $\geq \bar{e}$ justices:

  - Everyone remains, each ordinary member/justice gets $R_{it} = R_{i,t-1}$, king 0

Career and externality status update

- With probability $z \in (0, 1)$:

  - Nature retires w ordinary members by equal probability with safe return R_{it} forever

  - Council positions filled by political justices

  - Judicial positions filled by new elite members with asset, potential return $R_{it} \equiv R$

- With probability $1 - z$, no one retires

- Externality status $\theta_{t+1} = 1$ if no contest or persecution has ever happened, 0 if otherwise

- Council, judiciary, externality status θ_{t+1}, and potential returns $\{R_{it}\}$ inherited by $t + 1$

Solid frame and underlined text indicate additions to baseline setup (Figure 2). Ordinary members' voting decisions on persecution simplified and following Lemma 1. [†]: if unique most senior ordinary member exists, first draw her, then $p_t - 1$ from the other $N - 2$ by equal probability; if otherwise, draw p_t from $N - 1$ by equal probability. [‡]: king prioritizes justices who have been offered > 0 amount before.

Figure 4: Setup with judicial review, each period t

This externality will kick in, i.e., $\theta_t = 1$, only when there has never been any contest or persecution by the end of period $t - 1$, and $\theta_t = 0$ if otherwise. This captures the idea that economic interconnectedness and social cohesion are fragile to political violence and are difficult to rebuild (e.g., Cox et al., 2019).

We assume that among the $\bar{N}$ justices, there are w "political" ones, where w is exogenous and $w \in \{1, 2, \ldots, \min\{N, \bar{N}\}\}$. After each persecution stage, with an exogenous probability $z \in (0, 1)$, nature will retire w ordinary council members with equal probability, letting them exit the game with their assets' flow payoffs from then on, and their positions are filled by the w political justices. The number of "apolitical" justices, i.e., $\bar{N} - w$, thus measures whether executive and judicial powers are separated:

- A great $\bar{N} - w$ indicates *separation of executive and judicial powers,* in the sense that many justices' future career paths are insulated from the executive branch.

- A small $\bar{N} - w$ suggests that executive and judicial powers are fused.

Since we are constructing a stress test for institutions against conflict, we allow in this section the king to influence the justices, i.e., he can promise a transfer $T_{it} \geq 0$ to each justice i, in exchange for her vote for the persecution proposal. The total amount of transfers must be subject to a budget constraint, which is the potential persecution profit, $\sum_{i \in P_t} \kappa R_{i,t-1}/(1-\delta)$, where P_t denotes the persecution list. In addition, when offering transfers, the king prioritizes the justices to whom he has offered a strictly positive amount before. This captures the idea that influence relies on relationships that are based on past interactions.

As an additional but key assumption, we assume that the king's advantage in a duel is not smaller than in a war of all against all, i.e., $\Pi^K(2)/\Pi^M(2) \geq \Pi^K(N)/\Pi^M(N)$. This is intuitive, since in a war of all against all the king is one among many, whereas in a duel his status as the king is significant. Also, this holds when the contest success functions are additive, as is standard in the literature (e.g., Hirshleifer, 1995; Skaperdas, 1996).[9]

As we focus on judicial independence and socio-economic development, we have incorporated the judiciary and social structure into the model, making it quite complex. For tractability, we impose two simplifications. First, to focus on the judiciary's decision, we assume that all ordinary council members follow Lemma 1, i.e., they vote against any persecution proposal if and only if they themselves are on it.

Second, we assume that the king prioritizes persecuting the most senior ordinary council member: if there exists a unique most senior ordinary member, when drawing the persecution proposal, nature will draw her first for sure, and then $p_t - 1$ from the other $N - 2$ ordinary

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[9]Mathematically, suppose that $\Pi^K(Q) \equiv K/\big((Q-1)M + K\big)$ and $\Pi^M(Q) \equiv M/\big((Q-1)M + K\big)$, where $M > 0$ and $K > 0$ are exogenous. The king's advantage is thus $\Pi^K(Q)/\Pi^M(Q) = K/M$, constant in Q.

members by equal probability; if otherwise, nature will draw p_t from $N-1$ ordinary members by equal probability. This is reasonable, since the most senior ordinary member often poses the most significant threat to the king's power, creating a good reason for the king to purge him first (e.g., Francois et al., 2015). This discourages an ordinary council member from pulling out of a war of all against all, since doing so would make him the unique most senior ordinary member at the following persecution stage, assuring persecution. It thus also helps us to construct a stress test against civil conflict, again.

We still consider MPEs. To clarify the Markovian state variables, for any ordinary council members at any contest stage considering contesting or not, the payoff-relevant state of the game is characterized by the externality status, θ_t, potential returns of assets, $\{R_{i,t-1}\}$, and the seniority profile of the incumbent ordinary council members at the time. For any justice voting on a persecution proposal, the state of the game is characterized by θ_t, $\{R_{i,t-1}\}$, the seniority profile, the length of the persecution list, p_t, and the transfer promised to her, T_{it}.

4.2   Analysis and Results

We start with the scenario in which the persecution externality is absent, i.e., $\theta_t = 0$.

Lemma 3 (Judicial review without persecution externality)**.** *Given $e \geq 2$, starting from $\theta_t = 0$, there exist an MPE, in which, each ordinary council member always contests the kingship; the king at each persecution stage proposes to persecute $e - 1$ ordinary members and makes no transfer to justices; all justices always vote for any persecution proposal.*

We prove Lemma 3 in Appendix I, where the key step is to observe that, without persecution externality, all justices would not care to prevent persecution. The king can thus persecute $e - 1$ ordinary council members even without trying to influence the judiciary. This makes the throne valuable, and thus may attract a war of all against all over it.

Lemma 3 suggests that the risk of civil conflict in Proposition 1 would still be a concern even if there is judicial review, as long as the persecution externality is absent. Taking this concern seriously, we proceed to the scenario in which persecution does incur an externality, obtaining the main result of this section:

Proposition 5 (Judicial review with persecution externality)**.** *Suppose $e \geq 2$ and that everyone assumes everyone to follow the MPE in Lemma 3 whenever $\theta_t = 0$. As $\delta \to 1$,*

1. *if $\kappa > (\bar{N} - w - \bar{e} + 1) c$, there exists an MPE, in which, whenever $\theta_t = 1$, a war of all against all happens, and the resulting king persecutes $e - 1$ ordinary council members;*

2. if $\kappa \leq \left(\bar{N} - w - \bar{e} + 1\right) c$, (a) having a war of all against all whenever $\theta_t = 1$ is not Markov perfect, while (b) there exists an MPE, in which, whenever $\theta_t = 1$, no persecution or contest will happen.

We prove Proposition 5 in Appendix J. About the intuition, for the king to have persecution approved, he would need to buy off $\bar{N} - \bar{e} + 1$ justices to vote for it. Among them, the w political ones are quite cheap, since they have opportunities to join the executive council and thus to contest the lucrative kingship in a future world without persecution externality, as in Lemma 3. Aspiring to that value and understanding that their assets will be eventually destroyed in achieving that value, they do not care much about the persecution externality right now, and would vote for persecution even for a meager bribe from the king.

This leaves still $\bar{N} - w - \bar{e} + 1$ apolitical justices for the king to buy off. For each of them, the stronger the persecution externality, c, the more it will cost the king. Also, the more apolitical justices there are, $\bar{N} - w$, the more it will cost in total. Therefore, if there are enough apolitical justices, *and* if the persecution externality is strong enough, it would be too expensive for the king to buy off the judiciary, making it possible to prevent persecution and thus civil conflict. These two conditions are expressed in the one inequality in Claim 2, i.e., $\kappa \leq \left(\bar{N} - w - \bar{e} + 1\right) c$. Finally, the assumption that the king has a relative significant advantage in a duel, $\Pi^K(2)/\Pi^M(2) \geq \Pi^K(N)/\Pi^M(N)$, deters any ordinary council member from stepping into a duel with the king, thus preserving this possibility of civil peace.

Table 2: Civil conflict and peace under non-unanimous executive rules

	Separated executive and judicial powers	Fused executive and judicial powers
Economically interconnected and socially cohesive elites	Civil conflict not an MPE, peace an MPE	Civil conflict an MPE
Economically disconnected or socially incohesive elites	Civil conflict an MPE	Civil conflict an MPE

Summary of Proposition 5. Executive and judicial powers separated/fused in terms of whether or not many justices' future career paths insulated from executive branch.

Proposition 5 suggests that, to secure civil peace under a non-unanimous rule for executive decisions, only being modern, i.e., embedding a judiciary in an economically interconnected, socially cohesive elite circle, is not enough; judicial and executive powers must also be separated, in terms of justices' future career paths. Table 2 summarizes this point.

5 Implications of Results

5.1 Civil Conflict, Political Domination, and Individual Rights

As one of the founding ideas in modern political philosophy, Hobbes (1996) argues that, in socially primitive settings, everyone will fight against everyone, and the only solution is to have everyone submit to a sovereign with unlimited power. Propositions 1 and 2 suggest that this argument is incomplete, in that unlimited and imperfectly limited power can attract civil conflict over such power, whereas minimizing political domination is key to minimizing the risk of such conflict.

This point is consistent with a large set of anthropological evidence. Many stateless societies decide on collective action effectively by unanimity rule, securing peace (Lee and Daly, 1999, p. 4; Widerquist and McCall, 2017, p. 167, 175). In contrast, with political domination insufficiently checked, "[e]arly states and empires are perhaps the most violent and warlike contexts in which humans have ever lived," since they fail to "break the link between the dominance motive and conflict" (Widerquist and McCall, 2017, p. 138, 166).

Propositions 1 and 2 also imply that protecting fundamental rights at the individual level, i.e., adopting unanimity rule for persecution in the baseline model, is key to eliminating civil conflict over the power to violate these rights. This provides a justification for *individual* rights by their advantage in maintaining civil peace.[10] This also suggests that "illiberal democracies" risk facing potential civil conflict. Indeed, such "illiberal democracies" have majority rule, with which democracy is often identified, but their constraints on executive power are insufficient, which facilitates the oppression of minorities (e.g., Zakaria, 1997).

5.2 Dynamics of Political Regimes and Separation of Legislative and Executive Powers

Propositions 3 and 4 provide implications for the dynamics of political regimes and separation of legislative and executive powers. Expanded from Table 1, Table 3 provides examples of stable regimes and indicates regimes that are resilient to institutional shocks and have strong capacity of emergency management, in line with Propositions 3, 4, and Corollaries 1 and 2.

Bimodality of premodern political regimes. As shown in Table 3, Propositions 3 and 4 predict that, before socio-economic development created dense economic ties, i.e., without externality of persecution in our model, regardless of whether executive and legislative powers are separated, only the two extreme types of executive regimes would be stable: 1) unanimous

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[10]For various approaches to rights in the philosophy literature, see the survey by Wenar (2021).

Table 3: Stability, resilience, and emergency capacity of political regimes

	Fused executive and legislative powers	Separated executive and legislative powers
Unanimous democracy, $e_t = 1$	↺ Early democracies, e.g., medieval/early-modern continental European assemblies, and most ancient city-states	↺ Venetian Republic
Non-unanimous democracies, $e_t \in \{2, 3, \ldots, N-1\}$	↓	
Dictatorship, $e_t = N$	↺ Most ancient bureaucratic, territorial states	

Expanded from Table 1, summary of implications of Propositions 3, 4, Corollaries 1, and 2 with examples. Executive and legislative powers fused/separated in terms of chief executive controlling/denied agenda-setting power on constitutional matters. Self-pointing arrows for stability; straight arrows for directions of transition; dotted frame for resilience to regime shocks, strong emergency capacity, and risk of civil conflict; solid frame for regime resilience, strong emergency capacity, and civil peace. Sources in Section 5.2.

democracy, in which the chief executive is constrained by unanimous consent; 2) dictatorship, in which the chief executive can absolutely dominate others. Any regime in between would collapse into one of the two over time.

This implication is consistent with stylized facts about premodern political regimes. First, based on a comprehensive data set, Stasavage (2020a, p. 4, 6, 17) observes that many "early democracies" have developed throughout human history on multiple continents. Their defining feature was rule by "active" consent, i.e., individual constituencies "could either veto central decisions or opt out of them." Two important examples are ancient city-states, where an intricate network of checks and balances created numerous veto players (Weber, 1978,

p. 949–950; Finer, 1997b, p. 968; Trigger, 2003, p. 103), and medieval and early-modern continental European assemblies, where each individual constituency could opt out of any central policy that its delegates opposed in the assembly (Myers, 1975, p. 148; Weber, 1978, p. 293; Finer, 1997b, p. 1035; Stasavage, 2020a, p. 17, 129–130). Identified as an ideal type by Weber (1978, p. 948–952), such unanimous democracy with individual veto power corresponds to $e_t = 1$ in our model.

Second, Stasavage (2020a, p. 9) observes that "autocracies …were a clear alternative," where "autocrats created bureaucracies staffed with subordinates they themselves had selected and they themselves controlled," which was "fundamentally different from relying on a council or assembly composed of members of society not subject to the ruler's whim." Regimes of this type were often found in territorial states (Trigger, 2003, p. 92). Such autocratic rule corresponds to $e_t = N$ in our model.

There could have been a third, intermediate type of political regime, i.e., non-unanimous democracies, corresponding to $e_t \in \{2, 3, \ldots, N-1\}$ in our model. Nevertheless, Lord (1930, p. 138) and Stasavage (2020a, p. 17) note that this intermediate type, including majority rule, was rarely present among early democracies. As a result, there appeared to be a strong bimodality of premodern political regimes: Stasavage (2020a, p. 9) attests that "[a]utocracy was *the* alternative to early democracy"; Trigger (2003, p. 92) and Roland (2018, 2020) also observe the bimodality between ancient city-states and territorial states in terms of their governance structure.

The literature has explored origins and dynamics of institutions while taking the bimodality as given (e.g., Finer, 1997a,b; Trigger, 2003; Greif and Tabellini, 2017; Mayshar et al., 2017; Roland, 2018, 2020; Greif et al., 2020; Stasavage, 2020a; Jia et al., 2024). Propositions 3 and 4 contribute to the literature by explaining the bimodality itself, i.e., why only dictatorship and unanimous democracies are equilibria when regime dynamics is endogenous. In addition, Stasavage (2020a, p. 17) observes that societies that had the tradition of unanimous democracy would eventually evolve into non-unanimous democracy in modern times. We discuss this rise of non-unanimous democracy in Section 5.4.

Premodern dominance of autocracy. Propositions 3 and 4 suggest that to consolidate unanimity rule and civil peace, executive power must be separated from legislative power. Such separation is primarily a modern idea (e.g., Locke, 2003, p. 164–165; Weber, 1978, p. 283). In premodern times, the chief executive was usually not separated from the legislature, as seen in ancient Greek city-states, the Roman Republic, and most medieval European city-states, with Venice being an exception (Finer, 1997a, p. 347, 402, 405, 436–437; 1997b, p. 967; Greif, 1995, p. 735). Without such separation of powers, the chief executive generally

"had very tight control over the agenda" of the legislature and on constitutional matters (Finer, 1997a, p. 347).

Corollary 1 thus implies that early democracies must have been vulnerable to autocratic shocks. This was evident in ancient Greek cities and medieval European city-states, most of which succumbed to such shocks (Finer, 1997a, p. 331–333; Finer, 1997b, p. 983–984; Greif, 1994, p. 275–276; Greif, 1995, p. 736–737). For example, it was "common …in Italy from the 13th through the 16th centuries" to see the degeneration from "a democratic institution ('communes')" into an autocratic *signorial* rule as the result of "a takeover …by rich and powerful families" (Zingales, 2017, p. 115).

Corollary 1 thus also implies that dictatorship, not democracy, must have dominated in premodern times. Indeed, Finer (1997b, p. 950) observes that "[e]ver since the Roman Republic fell, the ideal and practice of government throughout the entire globe had been, without exception, monarchical." Although once "widespread in human societies" (Stasavage, 2020a, p. 61), early democracies "were exceptional, not the rule, and were short-lived" (Finer, 1997b, p. 951).[11]

Emergency capacity of unanimous democracy.   The ability to respond to emergencies, such as wars, political crises, and natural catastrophes, is a fundamental attribute of state capacity (e.g., Schmitt, 1985, 2014; Agamben, 2005; Sorell, 2013; Lincoln, 1953). Since unanimity rule can paralyze decision-making in emergencies while quick decisions can be taken in a dictatorship, it may be tempting to dismiss unanimous democracy and advocate dictatorship on this ground (e.g., Schmitt, 1985, 2014). Corollary 2 suggests that such dismissal is flawed, and separation of executive and legislative powers, in terms of denying the chief executive agenda-setting power on constitutional matters, is crucial in equipping unanimous democracy with a strong emergency capacity.

Lacking such separation of powers would make temporarily granting emergency power to the executive a one-way road to dictatorship. The danger of losing democracy like this has been well noticed since the fall of the Roman Republican constitution (e.g., Hayek, 1979, p. 124–125; Finer, 1997a, p. 432–438; Qin, 2021, p. 81–106). The Republican constitution imposed numerous checks and balances to constrain executive power, but it was still the executive magistrates (*consuls* and *tribunes*) who had the unrestricted right to convoke and set the agenda for legislative assemblies (Finer, 1997a, p. 388, 402, 405). As a result, when granted extra power to deal with emergencies, executive magistrates exploited their legislative agenda-setting power to constitutionalize their expanded power and further

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[11]Konrad and Skaperdas (2012, p. 417, 419) also observe "the prevalence of autocracy," versus the "problems of long-term viability" of the "consensually organized, self-governing state."

remove checks and balances, leading to the collapse of the Republican constitution (Finer, 1997a, p. 435–437, 528; Bellen, 1975).

By Corollary 2, if instead the legislature's agenda-setting power on constitutional matters is consolidated, unanimous democracy can allow temporary expansion of executive power to deal with emergencies. As shown in Table 3, *only* unanimous democracy with the *necessary* help from a truly independent legislature can secure individual liberty, civil peace, and strong emergency capacity, all three *simultaneously.* This contrasts with a long-held tradition in political theory that tends to pose the first objective against the latter two (e.g., Hobbes, 1996; Schmitt, 1985, 2014; survey by Philpott, 2020).

Florence vs. Venice. To further the point about the emergency capacity of unanimous democracy and separation of executive and legislative powers, we compare the institution of the Florentine Republic, as the representative of medieval Italian city-states (Finer, 1997b, p. 964, 979), with that of the Venetian Republic. Table 4 summarizes the comparison.

Table 4: Medieval Italian city-states: Florence vs. Venice

	Florence the representative	Venice an exception
Political regime	Elaborate checks and balances, i.e., unanimous democracy	
Legislative agenda-setter	Chief executive body *Signoria*	*Savii grandi,* excluding chief executive *doge*
Procedure to grant emergency power	Cumbersome	Routine
Regime resilience	Vulnerable to autocratic shocks	500-year republican constitution

Sources: Maranini (1927), Lane (1973), Greif (1995), Finer (1997b), Kohl (2014).

Both Florence and Venice imposed multiplex, strong checks and balances on their executive magistrates (Finer, 1997b, p. 964, 968, 979, 995–996, 1005, 1007; Greif, 1995, p. 735, 738). These "elaborate checks and balances" were "to prevent any individual or his family …obtaining absolute power" (Finer, 1997b, p. 968, 1018). We thus read both the Florentine and Venetian political systems as requiring consensus from all relevant organs or powers for executive decisions, i.e., unanimous democracy in our model. Nevertheless, a crucial difference lies in who had agenda-setting power on constitutional matters.

In Florence, it was the main executive council (*Signoria*), led by the chief executive (*gonfaloniere della giustizia*), that controlled the agenda of legislative councils, and these legislative councils "did not have legislative initiative: their task was to discuss and vote …on the bills presented by the *Signoria*" (Finer, 1997b, p. 966–967). It was thus clear that the chief executive was not denied agenda-setting power on constitutional matters.

In Venice, although the main executive council (*Collegio*) initiated legislation, the chief executive (*doge*) could not propose any legislative agenda; instead, it was a different set of officials, called the *savii grandi*, who prepared all the agenda for the *Collegio* (Finer, 1997b, p. 1003–1004). In practice, there were six of these officials for each term of six months, and for each week, one of them led to set the legislative agenda for the republic, and the work was done with the *doge* being excluded (Finer, 1997b, p. 1003–1004).[12]

Given this difference in agenda-setting power on constitutional matters, Corollary 2 implies that the Florentines must have been worried about the substantial risk contained in expanding executive power during an emergency; the Venetians, on the contrary, would be more ready to expand executive power when needed, since their legislature would be more confident to reinstall checks and balances after the emergency.

Indeed, the Florentines dealt with emergencies through an extremely cumbersome procedure: the main executive council must first convene a general assembly (*Parliamentum*), which "consisted of every citizen aged over 14," and then the assembly's approval must be required if an extraordinary commission (*Balía*) was to be set up and vested with emergency power (Finer, 1997b, p. 970, 996). Yet even with such precautions, the Republic eventually slipped into "personal rule," and the process began "in the last years of the fourteenth century and the first part of the fifteenth, when …the *Parliamentum* and *Balía* were used more frequently, and to effect dramatic political changes" (Finer, 1997b, p. 970).

In Venice, on the contrary, the fast-track option of acting through a special tribunal (Council of Ten) was permanently ready for the main executive council whenever it "wanted rapid and secret emergency action" (Finer, 1997b, p. 1006). At the same time, such strong emergency power for the executive did not undermine the republican constitution: "[w]hen the other Italian city-republics were almost all extinguished …it was Venice …that became emblematic of republicanism" (Finer, 1997b, p. 985). By its end in 1797, the Venetian Republic "had successfully preserved her independence for over 1300 years and the identical constitution for the last 500" (Finer, 1997b, p. 985). Finer (1997b, p. 996) thus com-

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[12]On the origin of such separation of powers, citing Lane (1973, p. 254–255) and Maranini (1927, p. 252–254), Kohl (2014, p. 35–38, 42–44) points out that the *savii grandi* were initially created to augment the *Collegio*, helping it prepare the legislative agenda, whereas the core of the *Collegio* was the Ducal Council, whose members' main duty was to supervise and constrain the *doge*. It would thus be reasonable to expect the *savii grandi* to exclude the *doge* from their work.

ments that Venice "successfully combined the principle of checks and balances with that of emergency action." Not only that, since the checks and balances "reduced the gains from capturing the Doge's post," Venice "was characterized by internal tranquility," having experienced "hardly any violent internal political conflicts" (Greif, 1995, p. 735, 738). Civil peace and strong emergency capacity were thus both achieved under strong checks and balances, with the chief executive separated from legislative agenda-setting power.

Collapse of the consensual leadership of the Chinese Communist Party. We can also apply Corollary 1 to understand the recent quick collapse of the consensual leadership of the Political Bureau Standing Committee of the Chinese Communist Party (CCP) into the personalistic rule of Xi Jinping.

Since the late 1970s until Xi's ascent to power in 2012, important decisions required consensus within the highest leadership of the Party, so that even the weakest Political Bureau Standing Committee member could constrain the General Secretary, i.e., the chief executive of the Party (e.g., Shirk, 1993, 2018; Huang, 2000; Vogel, 2005; Cai, 2022). This consensual leadership was long hailed as the cornerstone of Chinese political economy from the 1980s to the 2000s (e.g., Shirk, 1993, 2018; Cai, 2022). Yet the General Secretary has long been vested with agenda-setting power on all issues, including constitutional issues of the Party and the state, by the Party's Constitution (CCP, 1982, art. 21).[13]

Corollary 1 suggests that the consensus requirement within the Party leadership must have been vulnerable to shocks of personalistic rule. This is consistent with the reading by Shirk (2018) about Xi's power consolidation since 2012: problems of corruption, inaction, and political rifts within the Party mounted under Xi's predecessor; as a result, when Xi became the General Secretary in 2012, he had a rare window to consolidate his power via an urgently needed anti-corruption campaign.[14] After the campaign, there was no return to consensual leadership, and Xi's rule became increasingly personalistic (e.g., Shirk, 2018; Cai, 2022). In 2018, the Party led the legislative National People's Congress to abolish the term limit for the Presidency of the state (National People's Congress of China, 2018). In October 2022, at the First Plenary Session of the 20th Central Committee of the Party, which was convened immediately after the closing of the 20th Party Congress, Xi was reelected as the General Secretary of the Party for a precedent-breaking third term (Central Committee of CCP, 2022). Not only that, but the degree to which he stacked loyalists into the Party

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[13]Since 1982, the Party's Constitution has always ruled that "the General Secretary is responsible for convening meetings of the Political Bureau and its Standing Committee," which are the highest governing bodies of the Party, "and shall preside over the work of the Secretariat," which is the operational agency of the Party's leadership (CCP, 1982, art. 21).

[14]For theorizing of the campaign, see Lu and Lorentzen (2018), Xi et al. (2018), and Li et al. (2022).

leadership was even beyond the "strong Xi dominance" scenario that analysts had considered before the 20th Party Congress, showing how quickly and successfully he has transformed the consensual leadership of the Party into a one-man rule (e.g., Shih, 2022; Wu, 2022).[15]

Presidential legislative power and stability of presidential democracy. Lastly, Propositions 3 and 4 suggest that if the chief executive controls the legislative agenda while facing insufficient checks and balances, a democratic regime can be vulnerable to autocratic shocks. This is consistent with the observation that many presidential democracies in the modern world have turned into dictatorships (e.g., Linz, 1990; Cheibub and Limongi, 2002). In particular, Shugart and Carey (1992, p. 148) document that those presidential systems where the president enjoys substantial legislative powers, including the agenda-setting power in legislation, "have exhibited the greatest trouble with sustaining stable democracy." Linz (1990, p. 51–52) also observes that "the only presidential democracy with a long history of constitutional continuity is the United States," which is exceptional in that the president is subject to elaborate checks and balances while having little legislative agenda-setting power (e.g., Cheibub and Limongi, 2002, p. 170; Fukuyama, 2014, p. 488–499).

5.3   Socio-economic Development, Separation of Judicial and Executive Powers, and Civil Peace under Non-unanimity Rule

Proposition 5 implies that only when the judiciary is embedded in an economically interconnected, socially cohesive elite circle, *and* when judicial and executive powers are separated in terms of the judiciary's members' future career paths, can society under a non-unanimity rule be free from frequent society-wide political violence. This helps to explain why perpetual civil peace has come to England only since the 18th century.

The English experience.   Adapted from Table 2, Table 5 summarizes the main points in our interpretation of the English experience. First of all, unlike medieval and early-modern continental European assemblies, which functioned under unanimity rule as mentioned in Section 5.2, English monarchs had, since the 14th century, made majority decisions binding, and individual constituencies could not block or opt out these decisions (Stasavage, 2020a, p. 17–18, 212). We thus read the political regime of early-modern England as a non-unanimous, majoritarian rule.

The House of Lords was the judiciary supposed to review persecution of peers (Lovell, 1949, p. 75). Given "local economic isolation" in the late 14th and 15th centuries (Plumb,

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[15]The first version of our paper was dated February 2022, eight months before the 20th Party Congress.

Table 5: England under majority rule since the 14th century

	Executive and judicial powers separated since 18th century	Executive and judicial powers fused until late 17th century
Interconnected, socially cohesive elites since mid-17th century	Peer persecution rare, perpetual civil peace since 18th century	Peer persecution common, civil war every 50 years until late-17th century
Disconnected or socially incohesive elites until early 17th century	(No overlap)	

Summary of the English experience, consistent with Proposition 5. Executive and judicial powers separated/fused in terms of whether or not many judiciary's members' future career paths insulated from executive branch. Arrow for transition over time. Sources in Secion 5.3.

1967, p. 4), bitter rivalries were common among the aristocracy, ready to be escalated into armed conflict (Wilkinson, 1969, p. 310–318). Proposition 5 predicts that a judiciary embedded in such a disconnected or socially incohesive elite circle would not be able to protect elites against persecution. Indeed, in this period, the king could often condemn his rivals through parliamentary acts (Lovell, 1949, p. 70; Bellamy, 1970, p. 177).

For the worse, in 1499, Henry VII elevated the old Court of Chivalry and replaced its head with a palace official, the lord high steward; this Court of the Lord High Steward then took over peer trials when Parliament was not in session, which was more than often the case at the time (Lovell, 1949, p. 75). The Crown selected the judges, placing them under the king's patronage and available for future senior executive or ministerial appointments (Lovell, 1949, p. 71, 75). We thus read almost all these judges as political in our model.

Proposition 5 predicts that such a judiciary, so fused with the Crown, would not be able to constrain the king's persecution power. Indeed, the Court of the Lord High Steward "ensured the crown control of peer trials": from 1499 to 1686, among the 16 peer trials in the Court, only three were acquitted; among the 20 in total during the same period, only four were acquitted; all these cases were capital cases (Lovell, 1949, p. 75, 79).

14th–17th-century England thus lacked economic interconnectedness and social cohesion among the elite and separation of judicial and executive powers. Proposition 5 predicts that the risk of civil conflict must have been significant under majority rule. Indeed, Figure

5 shows that "for [these] centuries the country had scarcely been free from turbulence for more than a decade at a time" (Plumb, 1967, p. 1). In particular, it "experienced a civil war roughly every fifty years" up until the end of 17th century (Fukuyama, 2018, p. 15). "[O]ften extremely bloody," these wars "pitted a monarch ...against various elite opponents" for "political power and ...dominance" (Fukuyama, 2018, p. 15, 17, 20).
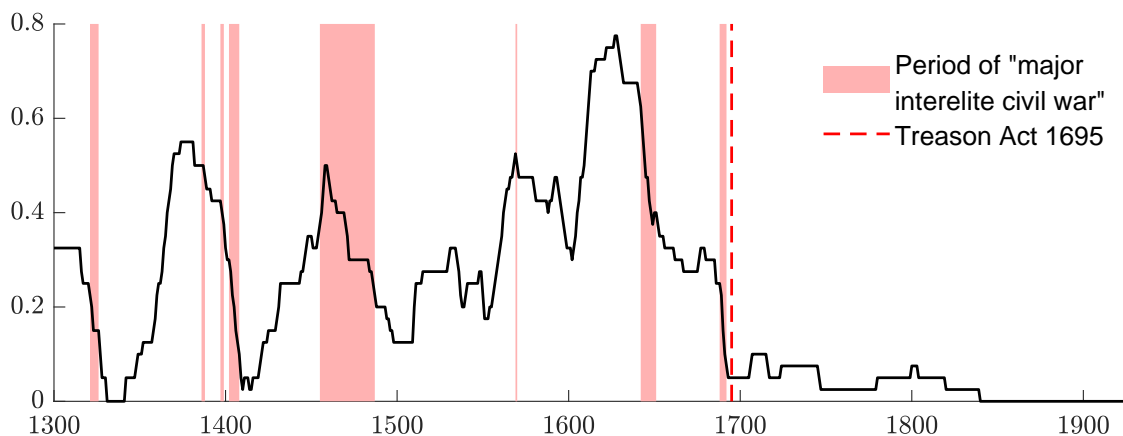
Arithmetic average over window $[t, t + 39]$. Based on all entries in Brecke (2012) of conflicts "primarily within" "England" or "Britain," 1300–1967, i.e., before the Northern Ireland conflict (1968–1993). "Major interelite civil wars" as identified in Fukuyama (2018).

Figure 5: Number of ongoing conflicts within England or Britain each year, 40-year forward moving average

It was only in the mid-17th century that the preconditions for the risk of civil wars started to wane. On the socio-economic front, a rise of economic interconnectedness and social cohesion among the elite was underway (Plumb, 1967, p. 4). England saw "the steady growth of the home market, ...a greater diversification of economic enterprise, ...the gradual obliteration of local economic isolation, [and] ever-greater conglomerations of capital and more sophisticated financial methods, which involved both the Crown and those very rich men on whom all monarchs had to rely" (Plumb, 1967, p. 3–5). The increasingly "complex" and "involved" financial structure further strengthened the interconnectedness and social cohesion among the elite (Plumb, 1967, p. 3).

On the institutional front, several critical developments had helped England separate judicial and executive powers by the beginning of the 18th century. First, after the Glorious Revolution of 1688, the Treason Act 1695 restored the jurisdiction of the House of Lords over peer trials for treason, "thereby destroying the usefulness of the court [of the Lord High Steward] to the crown," which was never reconstituted, "even for simple felony trials" (Lovell, 1949, p. 76). Second, the size of the House of Lords increased during the 17th century from under 60 to nearly 200 members (Russell, 2013, p. 17), admitting many more lords who

were politically inactive but consistently attended only the state trials (Rees, 1987, p. 195, 240, 245–246). Third, as minor offenses or civil cases involving peers had been processed in prerogative or common law courts, the Triennial Act 1641 first abolished all prerogative courts, and then the Act of Settlement 1701 granted all court judges effectively life tenure (Finer, 1997c, p. 1347). The whole judicial system thus became "entirely free-standing [and] decoupled from the main apparatus of central government" (Finer, 1997c, p. 1347). In the language of our model, all this increased the number of apolitical justices and thus helped to separate judicial and executive powers.

Sufficient economic interconnectedness and social cohesion among the elite and total insulation of the judiciary from executive power had thus arrived in England. Proposition 5 predicts that the king's persecution power must have been constrained, preventing England under majority rule from falling into civil wars. Indeed, since the 1690s, the Crown could not control peer trials anymore, and persecution of peers has become extremely rare (Lovell, 1949, p. 76, 79); as seen in Figure 5, from 1695 up until the Northern Ireland conflict starting in the 1960s, England or Britain had largely been peaceful internally, and no "major interelite civil war" had broken out (Fukuyama, 2018, p. 15, 19, 24).

Other medieval or early modern European states. Proposition 5 also implies that societies that have economically disconnected or socially incohesive elites, or judicial power fused with executive power, are prone to judicial abuse and political persecution, thus running the risk of civil conflict. Proposition 2 implies that this consideration could make such societies adopt unanimity rule for executive actions, i.e., creating elaborate checks and balances so that each individual stakeholder has veto power in any executive decisions.

These implications are consistent with the history of a few medieval or early modern European states. Adapted from Table 2, Table 6 provides a classification of them based on our theory. In the top-left quadrant is 18th-century England, the case just discussed; we provide detailed historical narratives about the other quadrants in Appendix K. It is sufficient to note that the medieval Italian city-republics, including Venice, had unanimity rule in the form of multiplex, strong checks and balances, as discussed in Section 5.2. The Polish–Lithuanian Commonwealth adopted the famous *liberum veto,* giving members of the Parliament (*Sejm*) individual veto power. The French *Ancien Régime* and the Crown of Castile kept the mandate system, which was a *de facto* unanimity rule and the common way of medieval and early-modern continental European assemblies, as discussed in Section 5.2. The Dutch Republic had both a form of unanimity rule and a system of mandates.

Table 6: Socio-economic condition, separation of executive and judicial powers, and political regimes of medieval or early modern European states

	Separated executive and judicial powers	Fused executive and judicial powers
Economically interconnected and socially cohesive elite	Majority rule 18th-century England	Unanimity rule Venetian Republic
Economically disconnected or socially incohesive elite	Unanimity rule Polish–Lithuanian Commonwealth, most medieval Italian city-republics	Unanimity rule French *Ancien Régime,* Crown of Castile, Dutch Republic

Examples consistent with implications of Propositions 2 and 5. Executive and judicial powers separated/fused in terms of whether or not many judiciary's members' future career paths insulated from executive branch. Sources in Appendix K.

5.4 Evolution of Separation of Powers and Rise of Parliamentarism

As discussed in Section 1, gathering all our results leads to the hypothesis that socio-economic development may facilitate a transition of the priority of separation of powers from between executive and *legislative* powers, to between executive and *judicial* powers.

This hypothesis is consistent with the English experience during the 17th–18th centuries. Throughout the 17th century, "the crux of politics [was] greater control of Parliament by the executive or greater independence from it" (Plumb, 1967, p. 32). In particular, Parliament fought hard to maintain that "no member of this House shall accept of any office, or place of profit from the Crown without leave of this House," separating the executive away from the legislature (Plumb, 1967, p. 48). Eventually "in 1689 the Commons enjoyed [such] a freedom and …independence that …Parliament …was free to …formulate those constitutional changes that it felt necessary for its protection" (Plumb, 1967, p. 64–65). This focus on legislative independence was reflected in the idea of separation of powers of Locke (2003), which was, developed at that time, primarily about separation of executive and legislative powers, not judicial power (Tuckness, 2020).

This separation between executive and legislative powers, especially on constitutional matters, if accompanied by a unanimous executive rule, could have helped England avoid

the perpetual conflict it had seen under the majoritarian executive rule, when economic interconnectedness and social cohesion among the elite and society in general was too low. Nevertheless, all this would soon become unnecessary. As discussed in Section 5.3, socio-economic modernization had been underway since the second half of the 17th century, so that civil peace under the majoritarian regime had become possible, and this possibility was realized by the decoupling of the judiciary from the executive, largely through the Treason Act of 1695. This English experience inspired Montesquieu (1989, p. 156–157) to elevate judicial power and emphasize separating it and executive power in securing individual rights.

Exactly when separation of executive and judicial powers was institutionalized, "the 'decoupled' Crown and Parliament were 'recoupled'" (Finer, 1997c, p. 1354). In particular, before coming into effect, the provision in the Act of Settlement 1701 that would have disqualified holders of offices under the Crown from membership of Parliament was repealed in 1705, and the Succession to the Crown Act 1707 allowed these office-holders to stand for re-election (Feilden, 1895, p. 143; Plumb, 1967, p. 144–146). This recoupling began a process eventually leading to the rise of parliamentarism, defined by having the executive branch responsible to the legislature and thus controlled by the legislative majority (Finer, 1997c, p. 1590). Fully fledged in Britain by the 1830s, this kind of majoritarian rule was also adopted by many other European countries in the 19th century (Finer, 1997c, p. 1353–1358, 1588–1608). From here arose the modern form of parliamentary democracy.

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Appendix

A Proof of Lemma 1 and Discussion on Robustness

Proof. Consider any particular Markov strategy profile. First, for any given proposal of persecution, consider the voting decision of each ordinary member in a given period. For any ordinary member who is not on the persecution list, she is indifferent about the proposal given the continuation strategies in the Markov strategy profile, so she will vote for it. For any ordinary member who is on the persecution list, passing the proposal will generate a zero payoff and exit, whereas blocking it will generate $R > 0$ at the end of the current period, with the non-negative continuation value of surviving into the next period under the continuation strategies in the Markov strategy profile, so she will vote against it.

Now consider the king's choice of the size of the persecution proposal p_t in the Markov strategy profile. Suppose the strategy profile is subgame perfect. Then the king must be taking the above-characterized voting decision of each ordinary member as given. For any given $e \geq 2$, if the king chooses $p_t \geq e$, the proposal will be rejected, and the king will get δV^K, where V^K is the continuation payoff for the king under the continuation strategies in the Markov strategy profile; if the king chooses $p_t \leq e-1$, the king will get $p_t \kappa R/(1-\delta)+\delta V^K$. Since the payoff from persecution and expropriation $p_t \kappa R/(1 - \delta)$ is positive and is strictly increasing in $p_t \in \{0, 1, \ldots, N-1\}$, the king must thus choose $p_t = e - 1$, the largest size of the persecution proposal that can still be approved by the council.

For $e = 1$, the king cannot get any persecution approved. Given the infinitesimal cost for any $p_t \geq 1$, he will thus choose $p_t = 0$.

Therefore, for the Markov strategy profile to be subgame perfect, i.e., to be an MPE, for any $e \in \{1, 2, \ldots, N\}$ the king must chooses $p_t = e - 1$ and the council will eventually approve to persecute $e - 1$ ordinary members. □

Asset of the very first king. We have assumed in the baseline model that the very first king does not start with any asset. If he does start with an asset, then the king in the proof above will enjoy an additional return R in the current period, if and only if he still holds the asset. Note that this is independent of how many among the current ordinary council members the king will propose to persecute. This additional return will thus not affect the king's decision.

For any ordinary council member, since any contest over the kingship will destroy any incumbent king's asset, if there is any, they will never receive the return of the asset of the first king. Because of this, and of the fact that the first king's asset will not affect any king's

decision, this asset will not affect any ordinary council member's voting decision. Therefore, allowing the very first king to start with an asset will not affect Lemma 1.

Partial destruction of contestants' assets. We have also assumed that any contest will totally destroy the assets of all contestants. Here we entertain a setting in which the contest only reduces the flow payoffs of all contestants' assets by applying a multiplier of $\nu \in [0,1]$ to them, with the flow payoff of an undamaged asset being R, while any player exiting the game survives each period with probability $\mu \in [0,1)$; when an ordinary council member becomes the king by winning a contest, he will not inherit the king's asset, but will hold his own asset, which will generate a flow payoff of νR.

In this setting, the proof of Lemma 1 still applies, except that the king will carry potentially a flow payoff of his asset. That said, this payoff is independent of how many among the current ordinary council members the king will propose to persecute, so it will not affect the king's persecution decision. The result in Lemma 1 thus remains.

Spillover damage of asset by contest. We have also assumed in the baseline model that contests do not damage the assets of the players other than the contestants. Here we entertain a setting in which, not only destroying all contestants' assets, contests do damage the assets of all the others in the political realm, including the potential newcomers', i.e., we assume that the potential return of an asset at the end of period t is

$$R_t = \begin{cases} R_{t-1}, & \text{if no contest happens in period } t; \\ \psi R_{t-1}, & \text{if otherwise,} \end{cases} \tag{A.1}$$

where $\psi \in (0,1]$ and $R_0 = R > 0$, and the king's payoff from expropriation is $p_t \kappa R_t / (1-\delta)$. In this setting, the above proof of Lemma 1 will go through, provided that we denote all R as R_t and all V^K as V_{t+1}^K. Lemma 1 is thus robust with respect to allowing contests to incur spillover damage to the assets of all the others in the political realm.

B   Proof of Proposition 1 and Discussion on Robustness

Proof. We would like to show that as $\delta \to 1$, first, the strategy profile in consideration is an MPE and, second, it is the unique MPE.

Claim 1. As $\delta \to 1$, the strategy profile in consideration is an MPE. To prove Claim 1, as $\delta \to 1$, we need to compare each ordinary member's payoffs 1) under this strategy

profile and 2) under a single deviation from the strategy profile only at the contest stage of period t, where she will unilaterally not contest the kingship. First, consider her payoff under the strategy profile. It is

$$V^M = \left(1 - \Pi^M(N)\right) \cdot 0 + \Pi^M(N) \cdot V^K = \Pi^M(N) \cdot V^K, \tag{B.1}$$

where $\Pi^M(N)$ is her probability to win the contest, and V^K is the value of being the new king under the strategy profile. Notice that the value of being the new king under the strategy profile is

$$V^K = (e-1)\frac{\kappa R}{1-\delta} + \delta \cdot \Pi^K(N) \cdot V^K = \frac{(e-1)\frac{\kappa R}{1-\delta}}{1 - \delta\Pi^K(N)}. \tag{B.2}$$

Therefore, her payoff under the strategy profile is

$$V^M = \Pi^M(N) \cdot \frac{(e-1)\frac{\kappa R}{1-\delta}}{1 - \delta\Pi^K(N)}. \tag{B.3}$$

Second, consider her payoff under the single deviation, i.e., she will unilaterally not contest the kingship only in period t. The payoff is

$$V' = \frac{N-e}{N-1} \cdot \left(R + \delta V^M\right) = \frac{N-e}{N-1} \cdot \left(R + \delta\Pi^M(N) \cdot \frac{(e-1)\frac{\kappa R}{1-\delta}}{1 - \delta\Pi^K(N)}\right), \tag{B.4}$$

where $(N-e)/(N-1)$ is the probability for member i to escape persecution in period t; R is the flow payoff from her asset; V^M is the value of being an ordinary member who survives period t under the continuation strategies in the Markov strategy profile.

Now compare the two payoffs, V^M and V', when $\delta \to 1$. Notice that by Equations (B.3) and (B.4), the difference between them is

$$V^M - V' = \left(1 - \frac{N-e}{N-1} \cdot \delta\right) \cdot \Pi^M(N) \cdot \frac{(e-1)\frac{\kappa R}{1-\delta}}{1 - \delta\Pi^K(N)} - \frac{N-e}{N-1} \cdot R \to \infty \quad \text{as} \quad \delta \to 1, \tag{B.5}$$

because the council's decision rule is non-unanimous, i.e., $e \geq 2$. The ordinary member is thus strictly worse under the single deviation than under the strategy profile in consideration, i.e., $V^M - V' > 0$ as $\delta \to 1$. The strategy profile in consideration is thus an MPE as $\delta \to 1$.

Claim 2. As $\delta \to 1$, this proved MPE is the unique MPE. To prove this claim, suppose that there exists an alternative Markov strategy profile that is an MPE, in which, following Lemma 1, the king and the ordinary council members at each persecution stage

must still have $e-1$ ordinary members persecuted. We would like to show that this alternative Markov strategy profile cannot be an MPE.

To do that, first, we need to further characterize this supposed strategy profile. Since it is different from the one we have considered, then there must exist a period, which we denote as t, in which at least one ordinary member, whom we denote as i, will not contest the kingship at the contest stage. Since this supposed strategy profile is a Markov strategy profile, then under it, this ordinary member i must not contest from period t onwards as long as she survives.

We want to show that this ordinary member i can be better off under a single deviation from the supposed strategy profile, where she will change to contest only in period t. To do that, we need to compare, as $\delta \to 1$, her payoffs 1) under this supposed strategy profile and 2) under the single deviation from it. First, consider her payoff under the supposed strategy profile. It is

$$V^M = \frac{N-e}{N-1} \cdot \left(R + \delta V^M \right) = \frac{\frac{N-e}{N-1} \cdot R}{1 - \frac{N-e}{N-1} \cdot \delta}, \tag{B.6}$$

where $(N-e)/(N-1)$ is the probability for her to escape persecution in period t; R is the flow payoff from her asset; V^M is her value if she survives period t under the continuation strategies of the supposed Markov perfect strategy profile.

Second, consider this ordinary member i's payoff under the single deviation, i.e., she will unilaterally change into contesting only in period t. The payoff is

$$V'' = \left(1 - \Pi^M(Q') \right) \cdot 0 + \Pi^M(Q') \cdot V^K = \Pi^M(Q') \cdot V^K, \tag{B.7}$$

where Q' is the resulting number of participants of the contest under the single deviation, which satisfies $Q' = \max\{2, Q+1\}$; V^K is the value of being the new king at the beginning of the persecution stage under the continuation strategies in the strategy profile.

Notice that this value of being the new king is

$$V^K = (e-1)\frac{\kappa R}{1-\delta} + \delta \cdot \Pi^K(Q) \cdot V^K = \frac{(e-1)\frac{\kappa R}{1-\delta}}{1 - \delta \Pi^K(Q)}, \tag{B.8}$$

where $Q \neq 1$ is the number of participants of the contest for the kingship in each period given the continuation strategies in the supposed Markov perfect strategy profile. We generalize $\Pi^K(Q)$ to cover the case of $Q = 0$ by defining $\Pi^K(0) \equiv 1$. Therefore, this ordinary member i's payoff under the single deviation is

$$V'' = \Pi^M(Q') \cdot \frac{(e-1)\frac{\kappa R}{1-\delta}}{1 - \delta \Pi^K(Q)}, \tag{B.9}$$

Now compare the two payoffs, V^M and V'', when $\delta \to 1$. Notice that by Equation (B.6) and $e \geq 2$, V^M is bounded; by Equation (B.9) and $e \geq 2$, V'' approaches infinity as δ approaches 1. Therefore, we have

$$V'' - V^M = \Pi^M(Q') \cdot \frac{(e-1)\frac{\kappa R}{1-\delta}}{1 - \delta \Pi^K(Q)} - \frac{\frac{N-e}{N-1} \cdot R}{1 - \frac{N-e}{N-1} \cdot \delta} \to \infty \quad \text{as} \quad \delta \to 1. \quad \text{(B.10)}$$

Therefore, as $\delta \to 1$, $V'' - V^M > 0$. As $\delta \to 1$, this ordinary member i can be better off under the single deviation from the supposed strategy profile, which implies that the supposed strategy profile cannot be an MPE. Claim 2 is thus proved by contradiction.

Gather Claims 1 and 2. By Claims 1 and 2, when the council's decision rule is non-unanimous, i.e., $e \geq 2$, as $\delta \to 1$, the strategy profile considered in the proposition is the unique MPE of the baseline model. □

Asset of the very first king. To follow the discussion in Appendix A, if we assume instead that the very first king does have an asset, since Lemma 1 is not affected, and since the argument in Appendix A about ordinary council members' voting decisions also applies to their contest decisions, Proposition 1 will not be affected, either.

Social and personal discount factors. Since we use the same parameter δ for both the social discount factor and the players' personal discount factor, we would like to clarify their different roles in Proposition 1. First, as discussed in Section 2.2, the players' personal discount factor has no role to play here, and Proposition 1 will still hold if we denote the players' personal discount factor as a separate parameter, for example, $\beta \in (0,1)$, and take it as given. Second, note that if the players' personal discount factor rises, and if we take the expected value of staying on the conjectured equilibrium path (V^M) as given, the expected value of the single deviation (V') will increase, making the deviation more appealing. Therefore, we can read Proposition 1 as a strong result that, given any non-unanimity rule of the council, when the social discount factor rises toward one, even if the players' personal discount factor also rises at a similar pace, perpetual wars of all against all can still feature in an MPE.

Comparative statistics with respect to the size of the council and the decision rule. Denoting the personal and social discount factors separately as β and δ, respectively, also helps us derive additional results of comparative statics. For example, with these nota-

tions, Equation (B.3) would become

$$V^M = \frac{\Pi^M(N)}{1 - \beta\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1 - \delta},$$ (B.11)

whereas Equation (B.4) would become

$$V' = \frac{N - e}{N - 1} \cdot \left(R + \beta \cdot V^M\right).$$ (B.12)

Therefore, the strategy profile specified in Proposition 1 will be an MPE, if and only if

$$V^M - V' = \left(1 - \frac{N - e}{N - 1} \cdot \beta\right) \cdot V^M - \frac{N - e}{N - 1} \cdot R \geq 0,$$ (B.13)

or just

$$V^M \geq \frac{N - e}{N - 1 - (N - e) \cdot \beta} \cdot R.$$ (B.14)

By Equation (B.11), this condition is equivalent to

$$\frac{\Pi^M(N)}{1 - \beta\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1 - \delta} \geq \frac{N - e}{N - 1 - (N - e) \cdot \beta} \cdot R,$$ (B.15)

or just

$$\delta \geq 1 - \frac{\Pi^M(N)}{1 - \beta\Pi^K(N)} \cdot \frac{N - 1 - (N - e)\beta}{N - e} \cdot (e-1)\kappa \equiv \underline{\delta},$$ (B.16)

where $\underline{\delta}$ is the lowest value of the social discount factor δ that would still support the strategy profile specified in Proposition 1 as an MPE.

Now examine how $\underline{\delta}$ is affected by the size of the council, N, and the decision rule, e. First, note that

$$\frac{N - 1 - (N - e)\beta}{N - e} = \frac{(1 - \beta)(N - e) + e - 1}{N - e} = 1 - \beta + \frac{e - 1}{N - e}$$ (B.17)

is decreasing in N and increasing in e. Second, $e - 1$ is increasing in e. By these two points, we have already seen that $\underline{\delta}$ is decreasing in e.

Third, it is intuitive to assume in addition that the winning probability of each participant in a war of all against all, either the incumbent king or an ordinary council member, will be lower if the war involves more participants, i.e., $\Pi^K(N)$ and $\Pi^M(N)$ are decreasing in N. Under this assumption, $\Pi^M(N)/\left(1 - \beta\Pi^K(N)\right)$ is decreasing in N. Taking this point and the first point above together, we see that $\underline{\delta}$ is increasing in N.

We summarize these results as follows:

Corollary B.1. *Distinguishing the personal and social discount factors, the lowest social discount factor that supports the strategy profile in Proposition 1 as an MPE is*

$$\underline{\delta} = 1 - \frac{\Pi^M(N)}{1 - \beta\Pi^K(N)} \cdot \frac{N - 1 - (N - e)\beta}{N - e} \cdot (e - 1)\kappa, \tag{B.18}$$

which is decreasing in e. Further assume that $\Pi^K(N)$ and $\Pi^M(N)$ are decreasing in N. Then $\underline{\delta}$ is increasing in N.

The intuition of Corollary B.1 is consistent with the insight contained in Proposition 1: other things equal, if fewer votes are required to block the king (a smaller e) given the size of the council, or if there are more ordinary council members in the council (a greater N) given the council's decision rule, the kingship is effectively more constrained, so the tendency of everyone to contest over it is weaker. For such a kingship to be sufficiently profitable to attract perpetual wars of all against all, a higher social discount factor is thus required.

Partial destruction of contestants' assets. To follow the discussion in Appendix A, here we entertain the setting in which the contest only reduces the flow payoffs of all contestants' assets by applying a multiplier of $\nu \in [0, 1]$ to them, with the flow payoff of an undamaged asset being R, while any player exiting the game survives each period with probability $\mu \in [0, 1)$; when an ordinary council member becomes the king by winning a contest, he will not inherit the king's asset, but will hold his own asset, which will generate a flow payoff of νR.

In this setting, as discussed in Appendix A, Lemma 1 remains. For any ordinary council member at the contest stage of period t, her expected payoff under the strategy profile in Proposition 1 would be

$$\begin{aligned}
V^M = &\left(1 - \Pi^M(N)\right) \cdot \frac{\nu R}{1 - \mu\delta} + \Pi^M(N) \cdot \left(\nu R + \frac{(e - 1)\kappa R}{1 - \delta}\right. \\
&+ \delta\left(1 - \Pi^K(N)\right) \cdot \frac{\nu^2 R}{1 - \mu\delta} + \delta\Pi^K(N) \cdot \left(\nu^2 R + \frac{(e - 1)\kappa R}{1 - \delta}\right. \\
&+ \delta\left(1 - \Pi^K(N)\right) \cdot \frac{\nu^3 R}{1 - \mu\delta} + \delta\Pi^K(N) \cdot \left(\nu^3 R + \frac{(e - 1)\kappa R}{1 - \delta} + \dots\right)\bigg)\bigg), \tag{B.19}
\end{aligned}$$

which is

$$\begin{aligned}
V^M = &\left(1 - \Pi^M(N)\right) \cdot \frac{\nu R}{1 - \mu\delta} + \frac{\Pi^M(N)}{1 - \nu\delta\Pi^K(N)} \cdot \nu R + \frac{\Pi^M(N)}{1 - \delta\Pi^K(N)} \cdot \frac{(e - 1)\kappa R}{1 - \delta} \\
&+ \frac{\Pi^M(N)}{1 - \nu\delta\left(1 - \Pi^K(N)\right)} \cdot \frac{\delta\left(1 - \Pi^K(N)\right)\nu^2 R}{1 - \mu\delta}; \tag{B.20}
\end{aligned}$$

a single deviation would give her an expected payoff of

$$V' = \frac{N - e}{N - 1} \cdot \left(R + \delta V^M \right). \tag{B.21}$$

Therefore, by $e \geq 2$, we still have

$$V^M - V' \to \infty \quad \text{as} \quad \delta \to 1. \tag{B.22}$$

The strategy profile in Proposition 1 would thus still constitute an MPE. In this sense, Proposition 1 is robust with respect to letting contests only partially destroy the assets of contestants.

Spillover damage of asset by contest. To follow the discussion in Appendix A, here we entertain the setting in which we allow contests to also incur a spillover damage to the assets of all the players in the political realm other than the contestants, i.e., we assume that the potential return of an asset at the end of period t is

$$R_t = \begin{cases} R_{t-1}, & \text{if no contest happens in period } t; \\ \psi R_{t-1}, & \text{if otherwise,} \end{cases} \tag{B.23}$$

where $\psi \in (0, 1]$ and $R_0 = R > 0$, and the king's payoff from expropriation is $p_t \kappa R_t/(1 - \delta)$. In this setting, as discussed in Appendix A, Lemma 1 remains. For any ordinary council member at the contest stage of period t, her expected payoff under the strategy profile in Proposition 1 would be

$$V_t^M = \frac{\Pi^M(N)}{1 - \delta\psi\Pi^K(N)} \cdot \frac{(e - 1)\kappa\psi R_t}{1 - \delta}; \tag{B.24}$$

a single deviation would give her an expected payoff of

$$V_t' = \frac{N - e}{N - 1} \cdot \left(\psi R_t + \delta\psi V_t^M \right). \tag{B.25}$$

As $\delta \to 1$, given $\psi \in (0, 1]$, we still have $V_t^M > V_t'$. The strategy profile in Proposition 1 would thus still constitute an MPE. In this sense, Proposition 1 is robust with respect to letting contests incur spillover damage to the assets of all the others in the political realm.

C Proof of Proposition 2 and Discussion on Robustness

Proof. We would like to show first that the strategy profile in consideration is an MPE and second that it is the unique MPE.

Claim 1. The strategy profile in consideration is an MPE. To prove Claim 1, we need to compare each ordinary member's payoffs 1) under this strategy profile and 2) under a single deviation from the strategy profile only at the contest stage of period t, where she will unilaterally contest the kingship. First, her payoff under the strategy profile is

$$V^M = \frac{R}{1-\delta} > 0. \tag{C.1}$$

Second, her payoff under the single deviation is

$$V' = \Pi^M(2) \cdot 0 = 0, \tag{C.2}$$

because any king will not be able to persecute anyone. Obviously, $V^M > V'$. Therefore, the strategy profile in consideration is an MPE.

Claim 2. This proved MPE is the unique MPE. To prove this claim, suppose that there exists an alternative Markov strategy profile that is an MPE, in which, following Lemma 1 and by $e = 1$, the king and the ordinary council members at each persecution stage will still not have any ordinary members persecuted. We would like to show that this alternative Markov strategy profile cannot be an MPE.

Under this supposed strategy profile, there must exist a period t in which at least one ordinary member i, will contest the kingship at the contest stage.

We would like to show that this ordinary member i can be better off under a single deviation from the supposed strategy profile, where she will change into not contesting only in period t. To do that, we need to compare her payoffs 1) under this supposed strategy profile and 2) under the single deviation from it. First, her payoff under the supposed strategy profile is

$$V^M = \Pi^M(Q) \cdot 0 = 0, \tag{C.3}$$

where we denote by Q the number of participants of the contest under the supposed Markov perfect strategy profile, while any king will not be able to persecute anyone. Second, her payoff under the single deviation is

$$V'' = R + \delta \cdot V^M = R. \tag{C.4}$$

Obviously $V'' > V^M$. Therefore, this ordinary member i can be better off under the single deviation from the supposed strategy profile, which implies that the supposed strategy profile cannot be an MPE. Claim 2 is thus proved by contradiction.

Gather Claims 1 and 2. By Claims 1 and 2, when the council's decision rule is unanimous, i.e., $e = 1$, the strategy profile considered in the proposition is the unique MPE of the baseline model. □

Asset of the very first king. To follow the discussion in Appendices A and B, if we assume instead that the very first king does have an asset, the same argument in Appendix B applies here. Proposition 2 will thus not be affected.

Partial destruction of contestants' assets. To follow the discussion in Appendices A and B, here we entertain the setting in which the contest only reduces the flow payoffs of all contestants' assets by applying a multiplier of $\nu \in [0, 1]$ to them, with the flow payoff of an undamaged asset being R, while any player exiting the game survives each period with probability $\mu \in [0, 1)$; when an ordinary council member becomes the king by winning a contest, he will not inherit the king's asset, but will hold his own asset, which will generate a flow payoff of νR.

In this setting, the proof of Claim 1 will go through, provided that now the single deviation will give the ordinary council member an expected payoff of

$$V' = \left(1 - \Pi^M(2)\right) \cdot \frac{\nu R}{1 - \mu\delta} + \Pi^M(2) \cdot \frac{\nu R}{1 - \delta}. \tag{C.5}$$

By $\mu \in [0, 1)$ and $\nu \in [0, 1]$, we have still

$$V' < \left(1 - \Pi^M(2)\right) \cdot \frac{\nu R}{1 - \delta} + \Pi^M(2) \cdot \frac{\nu R}{1 - \delta} \leq \frac{R}{1 - \delta} = V^M \tag{C.6}$$

and thus Claim 1 proved.

The proof of Claim 2 will go through, too, provided that now the supposed strategy profile will give the ordinary council member an expected payoff of

$$V^M = \left(1 - \Pi^M(Q)\right) \cdot \frac{\nu R}{1 - \mu\delta} + \Pi^M(Q) \cdot \frac{\nu R}{1 - \delta}; \tag{C.7}$$

the single deviation will now her an expected payoff of

$$V'' = R + \delta V^M. \tag{C.8}$$

Therefore, by $\mu \in [0, 1)$ and $\nu \in [0, 1]$, we have

$$V'' - V^M = R - (1-\delta)V^M = R - \left(1 - \Pi^M(Q)\right)(1-\delta) \cdot \frac{\nu R}{1 - \mu\delta} - \Pi^M(Q) \cdot \nu R$$
$$> R - \left(1 - \Pi^M(Q)\right) \cdot \nu R - \Pi^M(Q) \cdot \nu R = (1 - \nu)R \geq 0 \qquad \text{(C.9)}$$

and thus Claim 2 proved.

Proposition 2 is thus robust with respect to allowing contests to only partially destroy the assets of contestants.

Spillover damage of asset by contest. To follow the discussion in Appendices A and B, here we entertain the setting in which we allow contests to also incur a spillover damage to the assets of all the players in the political realm other than the contestants, i.e., i.e., we assume that the potential return of an asset at the end of period t is

$$R_t = \begin{cases} R_{t-1}, & \text{if no contest happens in period } t; \\ \psi R_{t-1}, & \text{if otherwise,} \end{cases} \qquad \text{(C.10)}$$

where $\psi \in (0, 1]$ and $R_0 = R > 0$, and the king's payoff from expropriation is $p_t \kappa R_t / (1 - \delta)$. In this setting, the above proof of Proposition 2 will go through, provided that we denote all R, V^M, V', Q, and V'' with a subscript t or $t + 1$ for the focal period, noting that $V_{t+1}^M = V_t^M = 0 < R_t$ in the proof of Claim 2. Proposition 2 is thus robust with respect to letting contests incur spillover damage to the assets of all the others in the political realm.

D Proof of Lemma 2

Proof. We want to show first that an MPE can include the strategies in consideration and second that any MPE cannot include alternative Markov strategies that would lead to unanimity being replaced by a non-unanimous decision rule.

Claim 1. An MPE can include the strategies in consideration. To prove this claim, we want to show, first, that if the agenda-setter proposes $e'_{t+1} \geq 2$, then no ordinary council member will be better off under a single deviation from the strategies in consideration, where she will unilaterally vote for the proposal in period t. Second, we want to show that the agenda-setter will not be better off under a single deviation either, where she would propose a change in the decision rule in period t.

First observe that each ordinary council member's payoff under the strategies in consideration is $V = \delta \cdot R/(1-\delta)$. Second, consider a single deviation and, as required by sincere voting, suppose that the deviating ordinary member is pivotal, i.e., the single deviation can get $e'_{t+1} \geq 2$ approved. Then the deviating ordinary member will contest in period $t+1$, losing her asset for sure. Therefore, under the single deviation, she will not have any asset to generate any safe flow payoff however other players will behave; as a result, the best she will be able to hope for will be to become an ever-expropriating and thus ever-contested king onwards. This means that her expected payoff will be bounded from above by

$$\bar{V}' = \delta\Pi^M(N) \cdot \frac{(N-1)\kappa R}{1-\delta} + \left(\delta\Pi^K(N)\right) \cdot \left(\delta\Pi^M(N)\right) \cdot \frac{(N-1)\kappa R}{1-\delta}$$
$$+ \left(\delta\Pi^K(N)\right)^2 \cdot \left(\delta\Pi^M(N)\right) \cdot \frac{(N-1)\kappa R}{1-\delta} + \cdots = \frac{\delta\Pi^M(N)\frac{(N-1)\kappa R}{1-\delta}}{1-\delta\Pi^K(N)}. \qquad \text{(D.1)}$$

Observe that, by $\delta \in (0,1)$, $\kappa \in (0,1)$, and $(N-1) \cdot \Pi^M(N) + \Pi^K(N) = 1$, we have $V > \bar{V}'$. Therefore, even if the single deviation can get $e'_{t+1} \geq 2$ to be approved, the deviating ordinary member will not be better off.

What about the agenda-setter? Given the ordinary council members' strategies in consideration, no proposal to change the decision rule will be approved and the current decision rule will remain, i.e., $e_{t+1} = e_t = 1$. Second, proposing a change will incur an infinitesimal cost $\epsilon > 0$, making not proposing more advantageous. Therefore, the agenda-setter will not be better off by proposing a change in the decision rule.

No player will thus be better off under a single deviation from the strategies in consideration. The strategies in consideration can thus included by an MPE. Claim 1 is proved.

Claim 2. Any MPE cannot include alternative Markov strategies that would lead to unanimity being replaced. To prove this claim, we suppose that there exist alternative Markov perfect strategies where the agenda-setter will propose an alternative decision rule $e'_{t+1} \geq 2$ and the ordinary council members will vote for it.

Now consider a single deviation for an ordinary council member, where she will unilaterally vote against the proposal in period t. Her expected payoff would be

$$V'' = \delta R + \delta^2 \cdot \Pi^M(N) \cdot V^K, \qquad \text{(D.2)}$$

where R is the safe flow payoff she will receive in period $t+1$, since given $e_t = 1$, she has blocked the change in the decision rule by her single vote and made $e_{t+1} = e_t = 1$; $\Pi^M(N)$ is her possibility to become a king in period t; V^K is the expected payoff for a king after the contest stage in the supposed MPE. In the supposed MPE, instead, the same ordinary

member's expected payoff is

$$V^M = \delta \cdot \Pi^M(N) \cdot V^K \geq 0, \tag{D.3}$$

because everyone will contest in period $t+1$.

Now consider V^K:

$$V^K = \frac{(e'_{t+1} - 1)\kappa R}{1 - \delta} + \delta \cdot V^K_{t+2} \leq \frac{(N-1)\kappa R}{1 - \delta} + \delta \cdot V^K_{t+2}, \tag{D.4}$$

where V^K_{t+2} is the expected payoff for a king before the contest stage at $t+2$. Now consider V^K_s for any $s \geq t+2$:

$$V^K_s \leq \max\left\{\delta \cdot V^K_{s+1}, \Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1 - \delta} + \delta \cdot V^K_{s+1}\right)\right\}, \tag{D.5}$$

where V^K_{s+1} is the expected payoff for a king before the contest stage at $s+1$, because the decision rule will be either unanimity or not at $s \geq t+2$. With these at hand, by careful induction, one can show that $V^K \leq \left(\frac{(N-1)\kappa R}{1-\delta}\right) / \left(1 - \delta\Pi^K(N)\right)$. As the induction is lengthy, we prove it as a separate lemma, Lemma D.1, after this current proof.

With this upper bound of V^K, now compare V'' and V^M:

$$V'' - V^M = \delta R + \delta^2 \cdot \Pi^M(N) \cdot V^K - \delta \cdot \Pi^M(N) \cdot V^K$$
$$= \delta R - \delta \cdot \Pi^M(N) \cdot (1 - \delta) \cdot V^K, \tag{D.6}$$

which derives

$$V'' - V^M \geq \delta R - \delta \cdot \Pi^M(N) \cdot (1 - \delta) \cdot \frac{\frac{(N-1)\kappa R}{1-\delta}}{1 - \delta \cdot \Pi^K(N)}$$
$$= \delta R \left(1 - \frac{(N-1) \cdot \Pi^M(N)\kappa}{1 - \delta \cdot \Pi^K(N)}\right) > 0, \tag{D.7}$$

since $(N-1) \cdot \Pi^M(N) + \Pi^K(N) = 1$, $\delta \in (0,1)$, and $\kappa \in (0,1)$. Therefore, each ordinary council member will be better off under the single deviation. Therefore, the supposed MPE is not an MPE, contradicting what we have supposed. Claim 2 is thus proved by contradiction.

Gather Claims 1 and 2. By Claims 1 and 2, unanimity is thus stable in any MPE. The lemma is thus proved. $\square$

Lemma D.1. *In the proof of Lemma 2, Claim 2, $V^K \leq \left(\frac{(N-1)\kappa R}{1-\delta}\right) / \left(1 - \delta\Pi^K(N)\right)$ holds.*

Proof. Denote the countable set of future periods $s \geq t + 2$ whenever $\delta \cdot V_{s+1}^K > \Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + \delta \cdot V_{s+1}^K \right)$ as $\{s_n\}_{n=1}$. This implies that

$$V_s^K \leq \begin{cases} \delta \cdot V_{s+1}^K, & \text{if } s \in \{s_n\}_{n=1}; \\ \Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + \delta \cdot V_{s+1}^K \right), & \text{if otherwise.} \end{cases} \tag{D.8}$$

Note that this set can be empty, have a finite number of elements, or have an infinite number of elements. Without loss of generality, suppose $s_1 \geq t + 4$ and $s_2 \geq s_1 + 2$. Now first iterate to period s_1: by Inequalities (D.4), (D.5), and (D.8), we have

$$V^K \leq \frac{(N-1)\kappa R}{1-\delta} + \delta \cdot V_{t+2}^K \leq \frac{(N-1)\kappa R}{1-\delta} + \delta \cdot \Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + \delta \cdot V_{t+3}^K \right)$$

$$= \frac{(N-1)\kappa R}{1-\delta} + \delta \Pi^K(N) \cdot \frac{(N-1)\kappa R}{1-\delta} + \Pi^K(N)\delta^2 \cdot V_{t+3}^K$$

$$\leq \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{2} \left(\delta \Pi^K(N) \right)^s + \Pi^K(N)^2 \delta^3 \cdot V_{t+4}^K \tag{D.9}$$

and further

$$V^K \leq \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{s_1-t-2} \left(\delta \Pi^K(N) \right)^s + \Pi^K(N)^{s_1-t-2} \delta^{s_1-t-1} \cdot V_{s_1}^K$$

$$\leq \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{s_1-t-2} \left(\delta \Pi^K(N) \right)^s + \Pi^K(N)^{s_1-t-2} \delta^{s_1-t-1} \cdot \delta \cdot V_{s_1+1}^K. \tag{D.10}$$

Then iterate to period s_2: by Inequalities (D.5), (D.8), and (D.10) and $\delta \in (0,1)$, we have

$$V^K \leq \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{s_1-t-2} \left(\delta \Pi^K(N) \right)^s$$

$$+ \Pi^K(N)^{s_1-t-2} \delta^{s_1-t-1} \cdot \delta \Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + \delta \cdot V_{s_1+2}^K \right), \tag{D.11}$$

which is

$$V^K = \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{s_1-t-2} \left(\delta \Pi^K(N) \right)^s + \Pi^K(N)^{s_1-t-1} \delta^{s_1-t-1} \cdot \delta \cdot \frac{(N-1)\kappa R}{1-\delta}$$

$$+ \Pi^K(N)^{s_1-t-1} \delta^{s_1-t} \cdot \delta \cdot V_{s_1+2}^K, \tag{D.12}$$

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and further

$$V^K < \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{s_1-t-1} \left(\delta \Pi^K(N)\right)^s + \Pi^K(N)^{s_1-t-1}\delta^{s_1-t} \cdot \delta \cdot V_{s_1+2}^K$$

$$\leq \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{s_2-t-3} \left(\delta \Pi^K(N)\right)^s + \Pi^K(N)^{s_2-t-3}\delta^{s_2-t-2} \cdot \delta \cdot V_{s_2}^K$$

$$\leq \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{s_2-t-3} \left(\delta \Pi^K(N)\right)^s + \Pi^K(N)^{s_2-t-3}\delta^{s_2-t-2} \cdot \delta^2 \cdot V_{s_2+1}^K. \qquad \text{(D.13)}$$

Now denote $n_\tau \leq \tau - (t+2)$ as the number of future periods s that are between $t+2$ and $\tau - 1$ and are in $\{s_n\}_{n=1}$. Observing the induction above, when we iterate to period τ, we will have two cases. First, if $n_\tau \geq 1$, then, by $\delta \in (0,1)$, we will have

$$V^K < \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{\tau-t-2-n_\tau} \left(\delta \Pi^K(N)\right)^s + \Pi^K(N)^{\tau-t-2-n_\tau}\delta^{\tau-t-1-n_\tau} \cdot \delta^{n_\tau} \cdot V_\tau^K$$

$$= \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{\tau-t-2-n_\tau} \left(\delta \Pi^K(N)\right)^s + \Pi^K(N)^{\tau-t-2-n_\tau}\delta^{\tau-t-1} \cdot V_\tau^K$$

$$< \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{\tau-t-2} \left(\delta \Pi^K(N)\right)^s + \Pi^K(N)^{\tau-t-2-n_\tau}\delta^{\tau-t-1} \cdot V_\tau^K; \qquad \text{(D.14)}$$

second, if $n_\tau = 0$, then we will have

$$V^K \leq \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{\tau-t-2} \left(\delta \Pi^K(N)\right)^s + \Pi^K(N)^{\tau-t-2}\delta^{\tau-t-1} \cdot V_\tau^K. \qquad \text{(D.15)}$$

Note that these two cases can just collapse into

$$V^K \leq \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{\tau-t-2} \left(\delta \Pi^K(N)\right)^s + \Pi^K(N)^{\tau-t-2-n_\tau}\delta^{\tau-t-1} \cdot V_\tau^K. \qquad \text{(D.16)}$$

Therefore, by iterating the induction to the infinite future, i.e., letting τ approach infinity, we have

$$V^K \leq \frac{\frac{(N-1)\kappa R}{1-\delta}}{1-\delta\Pi^K(N)} + \lim_{\tau\to\infty} \left(\Pi^K(N)^{\tau-t-2-n_\tau}\delta^{\tau-t-1} \cdot V_\tau^K\right). \qquad \text{(D.17)}$$

Note that V_τ^K is always bounded by $\left(\frac{(N-1)\kappa R}{1-\delta}\right)/(1-\delta)$ because the king will not be able to do better than surviving and expropriating $N-1$ ordinary council members for sure in each period, and this upper bound is finite; also, note that $n_\tau \leq \tau - (t+2)$ and $\Pi^K(N) \in (0,1)$,

so $\Pi^K(N)^{\tau-t-2-n_\tau} \in (0,1)$, i.e., it is finite, too. Therefore, by $\delta \in (0,1)$, we have

$$\lim_{\tau\to\infty} \left(\Pi^K(N)^{\tau-t-2-n_\tau} \delta^{\tau-t-1} \cdot V_\tau^K \right) = 0 \qquad \text{(D.18)}$$

and thus

$$V^K \leq \frac{\frac{(N-1)\kappa R}{1-\delta}}{1 - \delta\Pi^K(N)}. \qquad \text{(D.19)}$$

The claim is thus proved. $\qquad\square$

E Proof of Proposition 3

Proof. By Lemma 2, we have known that unanimity is stable. To prove the rest of the proposition, we want to show that, if $e_t \geq 2$, first, the agenda-setting ordinary council member proposing $e'_{t+1} = 1$ and all ordinary council members voting for it can be part of an MPE; second, no MPE can include any alternative Markov strategies that would lead to $e_{t+1} \neq 1$. Also note that we do not need to specify the king's strategy, since when $e_t \geq 2$, he cannot on his own block any proposal of constitutional revision.

Claim 1. If $e_t \geq 2$, the agenda-setting ordinary council member proposing $e'_{t+1} = 1$ and all ordinary council members voting for it can be part of an MPE. Suppose $e_t \geq 2$. To prove this claim, we need to examine whether a single deviation can make the players better off. First, notice that, supposing the continuation strategies constitute an MPE, then by Lemma 2, the decision rule will stay at unanimity under the strategy in consideration, and the expected payoff of each non-agenda-setting ordinary council member in the constitutional convention will be

$$V^M(e_{t+1} = 1) = \delta \cdot \frac{R}{1-\delta}, \qquad \text{(E.1)}$$

and the agenda-setting ordinary council member's expected payoff is simply

$$V_A^M(e_{t+1} = 1) = -\epsilon + \delta \cdot \frac{R}{1-\delta}, \qquad \text{(E.2)}$$

Second, consider a single deviation by an voting ordinary council member, where she will unilaterally vote against $e'_{t+1} = 1$ only in period t. If the deviation can cause the proposal to be rejected, then the deviating ordinary member's expected payoff will be

$$V' = \delta\Pi^M(N) \cdot \frac{(e_t - 1)\kappa R}{1-\delta}, \qquad \text{(E.3)}$$

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i.e., she hopes to become the king in period $t + 1$ so that she can persecute and expropriate, but that would give her no additional payoffs in the future civil peace from period $t + 2$ onwards brought by unanimity, as she will not have any asset then. Note that by $e_t \leq N$, $(N-1)\Pi^M(N) < 1$, and $\kappa \in (0, 1)$, we have

$$V' = \delta\Pi^M(N) \cdot \frac{(e_t - 1)\kappa R}{1 - \delta} \leq \delta \cdot \frac{(N-1)\Pi^M(N)\kappa R}{1 - \delta} < \delta \cdot \frac{R}{1 - \delta} = V^M(e_{t+1} = 1). \quad \text{(E.4)}$$

Therefore, even if the single deviation could get $e'_{t+1} = 1$ rejected, it cannot make the deviating ordinary member better off.

Third, consider another single deviation by the agenda-setting ordinary council member, where she will propose $e'_{t+1} \geq 2$ or not propose any change in the decision rule instead only in period t. Under the single deviation, her expected payoff is, by $e_t \leq N$, at most

$$\bar{V}'' = \delta\Pi^M(N) \cdot \frac{(N-1)\kappa R}{1 - \delta}, \quad \text{(E.5)}$$

i.e., again, she hopes to become the king in period $t + 1$ so that she can persecute and expropriate, but that would give her no additional payoffs in the future civil peace from period $t + 2$ onwards brought by unanimity, as she will not have any asset then. Again, by $(N-1)\Pi^M(N) < 1$ and $\kappa \in (0, 1)$, we have $\bar{V}'' < V_A^M(e_{t+1} = 1)$. Therefore, the single deviation cannot make the agenda-setting ordinary council member better off.

We have thus established that no single deviation from the strategies in consideration can make any ordinary council members better off. Therefore, the strategies in consideration can be part of an MPE. Claim 1 is thus proved.

Claim 2. If $e_t \geq 2$, then any MPE cannot include any alternative Markov strategies that would lead to $e_{t+1} \neq 1$. Suppose $e_t \geq 2$. There are several possibilities for the alternative Markov strategies: first, the agenda-setting ordinary council member does not propose a change in the decision rule; second, she proposes $e'_{t+1} \in \{2, 3, \ldots, N\} \setminus \{e_t\}$ and all ordinary council members vote for the proposal; finally, she proposes $e'_{t+1} = 1$ and all ordinary council members vote against it. We now examine whether a single deviation from these alternatives can make the deviating player better off.

First, note that, under all of these possibilities of the alternative strategies, period $t + 1$ will have an non-unanimity rule. The period-t agenda-setting ordinary council member will thus have her asset destroyed in the war of all against all in period $t + 1$. Therefore, her expected payoff in the constitutional convention in period t is, by $e_{t+1} \leq N$, bounded from

above by

$$\bar{V} = \delta \Pi^M(N) \cdot \frac{\frac{(N-1)\kappa R}{1-\delta}}{1 - \delta \Pi^K(N)}. \tag{E.6}$$

Second, consider a single deviation from either of the first two possibilities of the alternative strategies, where the agenda-setting council member will propose $e'_{t+1} = 1$ instead only in period t. Note that by the proof of Claim 1, in any MPE, if $e'_{t+1} = 1$ is proposed, then all ordinary council members will vote for it; also, by Lemma 2, in any MPE, unanimity is an absorbing state. Therefore, under the single deviation and given the continuation strategies in the supposed MPE, the period-t agenda-setting ordinary council member's expected payoff is

$$V''' = -\epsilon + \delta \cdot \frac{R}{1-\delta}, \tag{E.7}$$

i.e., the safe returns from the asset in perpetual peace brought by unanimity, net of an infinitesimal cost. Further note that, by $(N-1)\Pi^M(N) + \Pi^K(N) = 1$, $\kappa \in (0,1)$, and $\delta \in (0,1)$, we have

$$\bar{V} = \delta \Pi^M(N) \cdot \frac{\frac{(N-1)\kappa R}{1-\delta}}{1 - \delta \Pi^K(N)} < \delta \cdot \frac{\frac{(1-\Pi^K(N)) \cdot R}{1-\delta}}{1 - \delta \Pi^K(N)} < -\epsilon + \delta \cdot \frac{\frac{(1-\delta \Pi^K(N)) \cdot R}{1-\delta}}{1 - \delta \Pi^K(N)}$$
$$= -\epsilon + \delta \cdot \frac{R}{1-\delta} = V'''. \tag{E.8}$$

Therefore, the single deviation can make the agenda-setting ordinary council member better off, suggesting that the supposed MPE is not an MPE.

Third, consider a single deviation from the last possibility of the alternative strategies, where the agenda-setting ordinary council member will not propose any constitutional change only in period t. This single deviation will thus save her an infinitesimal cost. Therefore, the agenda-setting ordinary council member can be better off under the single deviation, suggesting that the supposed MPE is not an MPE. Therefore, she proposing $e'_{t+1} = 1$ and the ordinary members voting against it cannot be part of an MPE.

Therefore, all of these possible alternative strategies cannot be part of an MPE. Claim 2 is thus proved.

Gather Claims 1 and 2. The proposition is thus proved. □

F Proof of Proposition 4 and Discussion on Robustness

Proof. By Lemma 2, we know that unanimity rule is stable. To prove the rest of the proposition, we want to show that, in any MPE, first, if $e_t = N$, the king will not propose to change the decision rule; second, if $2 \leq e_t \leq N - 1$, then the king proposing $e'_{t+1} = N$ and all ordinary council members voting for it can be part of an MPE; third, if $2 \leq e_t \leq N - 1$, no alternative Markov strategies that would lead to $e_{t+1} \neq N$ can be part of an MPE.

Claim 1. In any MPE, if $e_t = N$, the king will not propose to change the decision rule. First, note that if $e_t = N$, the king's proposal e'_{t+1} will become e_{t+1} automatically. Thus, we do not need to specify the voting decisions of the ordinary council members.

Now we check whether a single deviation, where the king will propose $e'_{t+1} \in \{1, 2, \ldots, N\}$, will make the king better off or not. First, note that without any deviation, the king's expected payoff is

$$V^K = \delta \Pi^K(N) \cdot \frac{(N-1)\kappa R}{1-\delta} + \left(\delta \Pi^K(N)\right)^2 \cdot \frac{(N-1)\kappa R}{1-\delta} + \cdots = \frac{\delta \Pi^K(N) \cdot \frac{(N-1)\kappa R}{1-\delta}}{1 - \delta \Pi^K(N)}. \quad \text{(F.1)}$$

Second, if the king deviates to propose $e'_{t+1} = 1$, then by Lemma 2, perpetual civil peace will bring him a payoff of $V' = 0$ since the king has had his asset, if any, destroyed in the preceding contest, given $e_t = N$. Obviously, $V^K > V'$, since unanimity brings perpetual peace without expropriation, while dictatorship brings the opportunity to expropriate. Third, if the king deviates to propose $e'_{t+1} \in \{2, 3, \ldots, N-1\}$, then his expected payoff is at most

$$\bar{V}'' = \delta \Pi^K(N) \cdot \frac{(N-2)\kappa R}{1-\delta} + \left(\delta \Pi^K(N)\right)^2 \cdot \frac{(N-1)\kappa R}{1-\delta}$$
$$+ \left(\delta \Pi^K(N)\right)^3 \cdot \frac{(N-1)\kappa R}{1-\delta} + \cdots = V^K - \delta \Pi^K(N) \cdot \frac{\kappa R}{1-\delta}, \quad \text{(F.2)}$$

i.e., a situation where he could win the contest and expropriate at most $N - 2$ ordinary council members in period $t + 1$ and keep winning and expropriate at most $N - 1$ ordinary members from period $t + 2$ onwards. Observe that $V^K > \bar{V}''$, since she will expropriate at least one fewer ordinary council members at the persecution stage of period $t + 1$ if he proposes $e'_{t+1} \in \{2, 3, \ldots, N-1\}$. Finally, if the king deviates to propose $e'_{t+1} = N$, he will just pay the additional cost of proposal for no change. Any single deviation will thus not make the king better off, i.e., not proposing any change from $e_t = N$ can be part of an MPE.

Now we check whether an MPE can include an alternative strategy for the king. We examine the alternatives one by one. First, consider the strategy where the king will propose $e'_{t+1} = 1$. By Lemma 2, this strategy in an MPE will lead to perpetual peace and no

expropriation, generating a payoff of $-\epsilon$. A single deviation from it, where the king will propose $e'_{t+1} \geq 2$, would at least generate an expected payoff of $\delta\Pi^K(N)\kappa R/(1-\delta) > 0$ because of the possible winning and expropriation in period $t+1$, making the king better off. Therefore, this considered strategy cannot be part of an MPE. Second, consider the strategy where the king will propose $e'_{t+1} = N$. A single deviation from it whereby the king will not propose any change in the decision rule only in period t, will save the king the infinitesimal cost of proposing. Therefore, this considered strategy cannot be part of an MPE, either. Finally, consider any strategy that the king will propose $e'_{t+1} = e' \in \{2, 3, \ldots, N-1\}$. The king's expected payoff is

$$\tilde{V} = \delta\Pi^K(N) \cdot V^K(e_{t+1} = e'), \tag{F.3}$$

where $V^K(e_{t+1} = e')$ is the value of being a king after the contest stage in period $t+1$. Under a single deviation from the supposed MPE, where the king will propose $e'_{t+1} = N$ instead only in period t, will generate the expected payoff

$$V''' = \delta\Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + \delta\Pi^K(N) \cdot V^K(e_{t+1} = e') \right). \tag{F.4}$$

Note that

$$V^K(e_{t+1} = e') < \frac{\frac{(N-1)\kappa R}{1-\delta}}{1 - \delta\Pi^K(N)}, \tag{F.5}$$

since the king can only expropriate $e' - 1 < N - 1$ ordinary members in period $t + 1$. Therefore,

$$\begin{aligned} V''' - \tilde{V} &= \delta\Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} - \left(1 - \delta\Pi^K(N) \right) \cdot V^K(e_{t+1} = e') \right) \\ &> \delta\Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} - \frac{(N-1)\kappa R}{1-\delta} \right) = 0, \end{aligned} \tag{F.6}$$

i.e., the king will be better off under the single deviation. Therefore, this considered strategy cannot be part of an MPE either. Therefore, any MPE cannot include any alternative strategy for the king.

We have now established that not proposing any change from $e_t = N$ can be part of an MPE and any MPE cannot include any alternative strategy for the king. Claim 1 is proved.

Claim 2. If $2 \leq e_t \leq N - 1$, then the king proposing $e'_{t+1} = N$ and all ordinary council members voting for it can be part of an MPE. To prove the claim, we need to check whether the king or an ordinary council member can be better off under a single deviation from the strategies in consideration, supposing that the continuation strategies

constitute an MPE.

Now examine whether an ordinary council member can be better off under a single deviation, where she will vote against the proposal only in period t, supposing that the continuation strategies constitute an MPE. Note that the strategies in consideration will give her an expected payoff of

$$V^M = \delta\Pi^M(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + V^K(e_{t+2} = N) \right) \tag{F.7}$$

where

$$V^K(e_{t+2} = N) = \delta\Pi^K(N) \cdot \frac{\frac{(N-1)\kappa R}{1-\delta}}{1 - \delta\Pi^K(N)}, \tag{F.8}$$

is, by Claim 1, the value of being the king after the contest and persecution stages in period $t+1$ in any MPE. The single deviation, if it can get the proposal rejected, will give the deviating ordinary member an expected payoff of

$$V' = \delta\Pi^M(N) \cdot \left(\frac{(e_t-1)\kappa R}{1-\delta} + V^K(e_{t+2} = N) \right). \tag{F.9}$$

Since $e_t \le N$, we have $V^M > V'$. Therefore, the single deviation cannot make the deviating ordinary member better off, even if the single deviation can get the proposal rejected, supposing that the continuation strategies constitute an MPE.

Now examine whether the king can be better off under a single deviation, where the king instead does not propose a change in the decision rule or proposes $e'_{t+1} = e' \in \{2, 3, \ldots, N-1\} \setminus \{e_t\}$ or $e'_{t+1} = 1$ only in period t. First, note that, supposing that the continuation strategies constitute an MPE, the strategies in consideration will give the king an expected payoff of

$$V^K(e_{t+1} = N) = \delta\Pi^K(N) \cdot \frac{\frac{(N-1)\kappa R}{1-\delta}}{1 - \delta\Pi^K(N)}, \tag{F.10}$$

by Claim 1. Second, if the king does not propose a change in the decision rule only in period t, he will get

$$V'' = \delta\Pi^K(N) \cdot \left(\frac{(e_t-1)\kappa R}{1-\delta} + V^K(e_{t+2} = N) \right). \tag{F.11}$$

Supposing the continuation strategies constitute an MPE, by Claim 1, $V^K(e_{t+1} = N) = V^K(e_{t+2} = N)$. By $e_t \le N-1$, we thus have $V^K(e_{t+1} = N) > V''$, i.e., the king will not be better off under this single deviation. Third, if the king proposes $e'_{t+1} = e' \le N-1$ instead

only in period t, then, no matter whether it will be approved, the king will get at most

$$\bar{V}''' = \delta\Pi^K(N) \cdot \left(\frac{(N-2)\kappa R}{1-\delta} + V^K(e_{t+2} = N)\right). \tag{F.12}$$

Again, we have $V^K(e_{t+1} = N) > \bar{V}'''$, i.e., the king will not be better off under this single deviation. Finally, if the king proposes $e'_{t+1} = 1$ only in period t, then, if it is approved by the council, by Lemma 2 he will not have any opportunity to expropriate in perpetual civil peace, supposing that the continuation strategies constitute an MPE; if it is rejected by the council, by a logic similar to just above, he will still expropriate fewer than $N-1$ ordinary members in period $t+1$. In both cases, he will not be better off. Therefore, we conclude that the king cannot be better off under a single deviation, supposing that the continuation strategies constitute an MPE.

We have now established that neither the king nor an ordinary council member can be better off under a single deviation from the strategies in consideration, supposing the continuation strategies constitute an MPE. The strategies in consideration can thus be part of an MPE. Claim 2 is thus proved.

Claim 3. If $2 \le e_t \le N-1$, any MPE cannot include alternative Markov strategies for the king or the ordinary council members that would lead to $e_{t+1} \ne N$. There are several possibilities for the alternative strategies: first, the king does not propose any change in the decision rule; second, the king proposes $e'_{t+1} = 1$ and the ordinary members vote for it; third, the king proposes $e'_{t+1} = e_t$ and the ordinary members may or may not vote for it; fourth, the king proposes $e'_{t+1} = N$ but the ordinary members vote against it; finally, the king proposes $e'_{t+1} \in \{2, 3, \ldots, N-1\} \setminus \{e_t\}$ and the ordinary members vote for it. We examine these alternatives one by one.

First, suppose that not proposing any change in the decision rule is part of an MPE. The king's expected payoff in the supposed MPE is thus

$$V^K(e_{t+1} = e_t) = \delta\Pi^K(N) \cdot \left(\frac{(e_t - 1)\kappa R}{1-\delta} + V^K(e_{t+2} = e_t)\right), \tag{F.13}$$

where $V^K(e_{t+2} = e_t)$ is the value of being the king after persecution in period $t+1$, knowing that the decision rule $e_{t+2} = e_{t+1} = e_t$ in period $t+2$. Now consider a single deviation where the king will instead propose $e'_{t+1} = N$ only in period t. By the proof of Claim 2, in any MPE the ordinary members will approve $e'_{t+1} = N$, and by Claim 1, in any MPE, $e_{t+1} = N$

is an absorbing state. The king's expected payoff under the single deviation is thus

$$V'''' = \delta \Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + V^K(e_{t+2} = N) \right). \tag{F.14}$$

Since $e_t < N$ and $V^K(e_{t+2} = e_t) \leq V^K(e_{t+2} = N)$ as non-dictatorship, non-unanimous regimes could have persecuted at least one more ordinary members, we have $V^K(e_{t+1} = e_t) < V''''$. Therefore, a single deviation can make the king better off, suggesting that the supposed MPE is not an MPE. Therefore, not proposing any change in the decision rule cannot be part of an MPE.

Second, suppose that the king proposing $e'_{t+1} = 1$ and the ordinary members voting for it can be part of an MPE. The king's expected payoff in the supposed MPE is thus zero, since by Lemma 2, unanimity is an absorbing state in any MPE and will bring civil peace and no persecution, while the king has had his asset, if any, destroyed in the preceding contest, given $e_t \geq 2$. Now consider a single deviation where the king will not propose a change in the decision rule only in period t. The single deviation will bring at least $\delta \Pi^K(N) \cdot \frac{(e_t - 1)\kappa R}{1-\delta} > 0$ to the king in expectation. Therefore, the king can be better off under the single deviation, suggesting that the supposed MPE is not an MPE. Therefore, the king proposing $e'_{t+1} = 1$ and the ordinary members voting for it cannot be part of an MPE.

Third, suppose that the king proposing $e'_{t+1} = e_t$ and the ordinary members voting for or against it can be part of an MPE. A single deviation where the king does not propose anything will thus save him the infinitesimal cost. Therefore, the king can be better off under the single deviation, suggesting that the supposed MPE is not an MPE. Therefore, the king proposing $e'_{t+1} = e_t$ and the ordinary members voting for or against it cannot be part of an MPE.

Fourth, suppose that the king proposing $e'_{t+1} = N$ and the ordinary members voting against it can be part of an MPE. A single deviation where the king does not propose anything will thus save him the infinitesimal cost. The king can thus be better off under the single deviation, suggesting that the supposed MPE is not an MPE. Therefore, the king proposing $e'_{t+1} = N$ and the ordinary members voting against it cannot be part of an MPE.

Finally, suppose that the king proposing $e'_{t+1} = e' \in \{2, 3, \ldots, N-1\} \setminus \{e_t\}$ and the ordinary members voting for it can be part of an MPE. By Claim 1, in any MPE, $e_{t+1} = N$ is an absorbing state, so the king's expected payoff in this supposed MPE is at most

$$\bar{V} = \delta \Pi^K(N) \cdot \left(\frac{(e'-1)\kappa R}{1-\delta} + V^K(e_{t+2} = N) \right). \tag{F.15}$$

Now consider a single deviation where the king proposes $e'_{t+1} = N$ instead only in period t.

By the proof of Claim 2, in any MPE the ordinary members will approve $e'_{t+1} = N$, and by Claim 1, in any MPE, $e_{t+1} = N$ is an absorbing state, again. Therefore, the king's expected payoff under the single deviation is thus, again,

$$V'''' = \delta \Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + V^K(e_{t+2} = N) \right). \tag{F.16}$$

Since $e' < N$, we have $\bar{V} < V''''$. Therefore, a single deviation can make the king better off, suggesting that the supposed MPE is not an MPE. Therefore, the king proposing $e'_{t+1} = e' \in \{2, 3, \ldots, N-1\} \setminus \{e_t\}$ and the ordinary members voting for it cannot be part of an MPE.

We have now established that an MPE cannot include any alternative Markov strategies for the king or the ordinary council members that would lead to $e_{t+1} \neq N$. Claim 2 is proved.

Gather Lemma 2 and Claims 1, 2, and 3.   The proposition is thus proved.   □

Robustness of Proposition 4.   A key force behind the intuition and proof of Proposition 4 is the fact that the king at the constitutional convention after some contest–persecution stages under a non-unanimity rule has no asset. There are two ways to perturb the setting so that this would not hold. The first is to assume that the contest will damage the winner's asset only partially, or not at all. The pattern of regime transition in Proposition 4 can then still be supported by an MPE, as long as the incumbent advantage in a war of all against all, i.e., $\Pi^K(N)/\Pi^M(N)$, is not too small. In that case, it will be sufficiently likely for the king to win in future contests under dictatorship, so that he will prefer dictatorship in the future to unanimity rule.

The second is to assume that, after persecution, instead of automatically selling all the expropriated assets, the king will add some of them to his holdings, which will keep generating cash flows for him to consume until he is dethroned. Under this perturbation, the pattern of regime transition in Proposition 4 can still be supported by an MPE when the incumbent advantage in a war of all against all is sufficiently big, as long as there exists a finite upper bound over the king's holdings, for example, because of a natural limit of one's span of control, making persecution power still attractive under wars of all against all compared to peace under unanimity rule.

G Endogenous Constitutional Dynamics with Endogenous Contest and Persecution

G.1 Setup

In Section 3, we simplify the contest and persecution stages by assuming that all players follow the strategies in the baseline results for their contest and persecution decisions, i.e., if the current decision rule is unanimous ($e_t = 1$), there will be no contest or persecution; if it is non-unanimous ($e_t \geq 2$), a war of all against all will happen and then $e_t - 1$ ordinary members will be persecuted. In this section, instead, we keep the contest and persecution stages endogenous as in Section 2 and examine whether these assumed contest and persecution decisions in Section 3 can be part of an MPE that is not against the regime dynamics in Lemma 2 and Propositions 3 and 4.

To make the analysis tractable, we have to impose an additional assumption. We assume that if there exists a unique most senior ordinary council member at the persecution stage, where seniority is measured by the number of the ends of periods a council member has survived, the king will always initiate a persecution and prioritize persecuting this most senior ordinary council member, and such a persecution proposal will always be supported by ordinary council members whose names are not on it. That is to say that, if there exists a unique most senior ordinary member, the king must propose $p_t \in \{1, 2, \ldots, N - 1\}$, and when drawing the persecution proposal, nature will draw the most senior ordinary member first for sure, and then $p_t - 1$ from the other $N - 2$ ordinary members by equal probability, and the ordinary council members whose names are not on the persecution proposal will vote for the proposal; if otherwise, nature will draw p_t from $N - 1$ ordinary members by equal probability and the ordinary council member will vote just as in Section 2. This assumption makes the same effect of the two additional simplifying assumptions we introduce and discuss in Section 4, i.e., the unique most senior ordinary council member will always be persecuted by the king, with the help of the council.

G.2 Analysis and Results

We first show that, under the additional assumption made above, when the current decision rule is not unanimous, everyone contesting the kingship and subsequently $e_t - 1$ ordinary council members being persecuted can be an equilibrium outcome, which is not against the regime dynamics in Lemma 2 and Propositions 3 and 4:

Lemma G.1. *Starting from the current decision rule being non-unanimous, i.e., $e_t \in$*

$\{2, 3, \ldots, N\}$, *the following strategies in the contest and persecution stages in period t can be part of an MPE together:*

1. *all ordinary council members contest the kingship;*

2. *if all ordinary council members have contested the kingship in the preceding contest stage, then*

   (a) *the king at the persecution stage proposes to persecute $p_t = e_t - 1$ ordinary council members, and*

   (b) *each ordinary council member votes against a persecution proposal if and only if her name is on the proposal;*

3. *if all ordinary council members but one have contested the kingship in the preceding contest stage, then the same strategies apply, i.e.,*

   (a) *the king at the persecution stage proposes to persecute $p_t = e_t - 1$ ordinary council members, and*

   (b) *each ordinary council member votes against a persecution proposal if and only if her name is on the proposal.*

Proof. We consider these strategies one by one. First, consider Strategy 2b. For any ordinary council member whose name is on the persecution proposal, if the proposal gets approved, then she will receive a zero payoff and exit the game; if the proposal is blocked, then she will receive R in the current period and enjoy a non-negative continuation payoff into the next period. Voting sincerely, this ordinary council member will thus vote against this proposal.

For any ordinary council member whose name is not on the persecution proposal, first note that, given that all ordinary council members have contested the kinship in the preceding contest stage, all ordinary council members at the persecution stage must have joined the council right after the contest, and, therefore, all ordinary council members at the constitutional convention of period t must have also joined the council within period t. Therefore, no matter whether the persecution proposal is approved, the seniority pattern in the council at the constitutional convention of period t will be the same, i.e., all ordinary council members then will have not yet survived the end of any period. Therefore, no matter whether the persecution proposal is approved, any ordinary council member whose name is not on the persecution proposal will receive R from the persecution stage while facing the same state of the game at the following constitutional convention, i.e., she is indifferent between voting for and against the persecution proposal. As we have assumed ordinary council members

voting for a persecution proposal when indifferent in Section 2, she will vote for the proposal. Therefore, Strategy 2b can be part of an MPE.

Second, consider Strategy 2a. For the king at the persecution stage, given Strategy 2b, he could receive expropriation profit of at most $(e_t-1)\kappa R/(1-\delta)$ by proposing to persecute e_t-1 ordinary council members, where $e_t-1 > 0$ since $e_t \geq 2$. Also, given that all ordinary council members have contested the kinship in the preceding contest stage, the king's persecution decision will not affect the seniority pattern in the council at the constitutional convention of period t, either, i.e., all ordinary council members then will have not yet survived the end of any period. Therefore, regardless of his persecution decision, the king will face the same state of the game at the following constitutional convention. Therefore, the king will propose to persecute $e_t - 1$ ordinary council members, i.e., given Strategy 2b, Strategy 2a can be part of an MPE.

Third, consider Strategy 3b. For any ordinary council member whose name is on the persecution proposal, following the same argument as for Strategy 2b above, this ordinary council member will vote against this persecution proposal.

For any ordinary council member whose name is not on the persecution proposal, first note that, given that all ordinary council members but one have contested the kinship in the preceding contest stage, there is a unique most senior ordinary council member at the persecution stage, and all the other ordinary members have just joined the council right after the contest. If the king has now proposed to persecute a non-zero number of ordinary council member, by our assumption, this unique most senior ordinary council member must be on the persecution proposal. Therefore, any ordinary council member whose name is not on the persecution proposal must have just joined the council right after the contest. For such an ordinary council member, given that the persecution proposal includes the unique most senior ordinary member at the time, by the additional assumption made in this section, she will vote for the proposal. Therefore, Strategy 3b can be part of an MPE.

Fourth, consider Strategy 3a. For the king at the persecution stage, given Strategy 3b, he could receive expropriation profit of at most $(e_t-1)\kappa R/(1-\delta)$ by proposing to persecute $e_t - 1$ ordinary council members, where, again, $e_t - 1 > 0$ since $e_t \geq 2$. Also, given that all ordinary council members but one have contested the kinship in the preceding contest stage, by the additional assumption made in this section, his persecution decision, which is now restricted to $p_t \in \{1, 2, \ldots, N - 1\}$, will not affect the seniority pattern in the council at the constitutional convention of period t, i.e., all ordinary council members then will have not yet survived the end of any period. Therefore, regardless of his persecution decision, the king will face the same state of the game at the following constitutional convention. Therefore, the king will propose to persecute $e_t - 1$ ordinary council members, i.e., given Strategy 3b,

Strategy 3a can be part of an MPE.

Finally, consider Strategy 1. For any ordinary council member, given Strategies 2a, 2b, and other ordinary council members' Strategy 1, contesting the kingship will give her a strictly positive expected payoff, since her chance to become the king is $\Pi^M(N) > 0$ and, once becoming the king, she will expropriate, by $e_t \geq 2$, $e_t - 1 > 0$ ordinary council members at the persecution stage of period t. Not contesting the kingship, instead, given other ordinary council members' Strategy 1, will make her the unique most senior ordinary member in the council at the persecution stage of period t. Given Strategies 3a and 3b, she will be persecuted and exit the game, receiving a zero payoff. Therefore, this ordinary council member will contest the kingship, i.e., given Strategies 2a, 2b, 3a, and 3b, Strategy 1 can be part of an MPE.

Gathering all these points, all these strategies can be part of an MPE together. The lemma is thus proved. $\square$

We then show that, when the current decision rule is unanimous, instead, no one contesting and no one being persecuted can happen in equilibrium, which is, again, not against the regime dynamics in Lemma 2 and Propositions 3 and 4:

Proposition G.1. *Regardless of who has the agenda-setting power in constitutional conventions, starting from the current decision rule being unanimous, i.e., $e_t = 1$, then the strategies in Lemma G.1 and the following strategies can be part of an MPE together:*

1. *ordinary council members do not contest the kingship;*

2. *the king at the persecution stage does not propose to persecute anyone;*

3. *if the king did propose to persecute someone, any ordinary council member whose name is on the persecution proposal would vote against it;*

4. *the agenda-setter at the constitutional convention does not propose to change the current decision rule;*

5. *if the agenda-setter did propose to change it, then all ordinary council members would vote against the proposal.*

Proof. We consider these strategies one by one. First, consider Strategy 3. For any ordinary council member whose name is on the persecution proposal, if the proposal gets approved, then she will receive a zero payoff and exit the game; if the proposal is blocked, then she will receive R in the current period and enjoy a non-negative continuation payoff into the next

period. Voting sincerely, this ordinary council member will thus vote against this persecution proposal. Therefore, Strategy 3 can be part of an MPE.

Second, consider Strategy 2. For the king at the persecution stage, given Strategy 3, the king will not be able to persecute anyone in period t, and, therefore, whether to propose to persecute someone will lead to the same state of the game for everyone at the following constitutional convention, while proposing to persecute someone will incur an infinitesimal cost for the king. Therefore, the king will not propose to persecute anyone, i.e., given Strategy 3, Strategy 2 can be part of an MPE.

Third, consider Strategy 5. For any ordinary council member, when seeing a proposal to change the current unanimity rule, given Strategies 1–5 in all future periods, if the proposal is blocked, the current unanimity rule will remain forever, bringing R to the ordinary member in each future period, i.e., a net present value of $R/(1-\delta)$ at the beginning of period $t+1$.

If the proposal is approved, instead, then period $t+1$ will begin with a non-unanimity rule. Given the strategies in Lemma G.1, the best the ordinary council member at the constitutional convention of period t can hope for would be, at the beginning of period $t+1$, an expected payoff of

$$\frac{\Pi^M(N)}{1-\delta\Pi^K(N)} \cdot \frac{(N-1)\kappa R}{1-\delta}. \tag{G.1}$$

This upper bound is constructed by considering the scenario in which the decision rule would never return to unanimity rule, while she could become the king after a war of all against all in period $t+1$, keep winning wars of all against all as a king onwards, and persecuting at most $N-1$ ordinary council members in all future periods, given that future unanimity rule would bring no flow payoff to her since her asset would have been destroyed in the war of all against all in period $t+1$.

Note that, by $\kappa \in (0,1)$, $\Pi^K(N) + (N-1) \cdot \Pi^M(N) = 1$, and $\delta \in (0,1)$, we have

$$\frac{\Pi^M(N) \cdot (N-1)\kappa}{1-\delta\Pi^K(N)} < \frac{1-\Pi^K(N)}{1-\Pi^K(N)} = 1, \tag{G.2}$$

i.e.,

$$\frac{R}{1-\delta} > \frac{\Pi^M(N)}{1-\delta\Pi^K(N)} \cdot \frac{(N-1)\kappa R}{1-\delta}. \tag{G.3}$$

Therefore, voting sincerely, the ordinary council member at the constitutional convention of period t, when seeing a proposal to change the current unanimity rule, will vote against the proposal, i.e., given Strategies 1–4 and the strategies in Lemma G.1, Strategy 5 can be part of an MPE.

Fourth, consider Strategy 4. For the agenda-setter at the constitutional convention of

period t, given Strategy 5, the agenda-setter will not be able to change the current unanimity rule, and, therefore, whether to propose a change of the decision rule will lead to the same state of the game for everyone at the beginning of period $t + 1$, while proposing to change the constitutional rule will incur an infinitesimal cost for the agenda-setter. Therefore, the agenda-setter will not propose to change the current unanimity rule, i.e., given Strategy 5, Strategy 4 can be part of an MPE.

Finally, consider Strategy 1. For any ordinary council member, given Strategies 2 and 4 and other ordinary council members' Strategy 1, not contesting will give her an expected payoff of $R/(1 - \delta)$. Contesting the kingship, instead, given Strategy 2 and other ordinary council members' Strategy 1 in period t and Strategies 1–5 in all future periods, will risk her chance to receive her flow payoff R forever, only for a zero payoff as a king under permanent unanimity rule. Therefore, this ordinary council member will not contest the kingship, i.e., given Strategies 2–5, Strategy 1 can be part of an MPE.

Gathering all these points, all these strategies and the strategies in Lemma G.1 can be part of an MPE together. The proposition is thus proved. □

Lemma G.1 and Proposition G.1 suggest that the contest and persecution decisions assumed in Section 3 can be part of an MPE that is not against the regime dynamics in Lemma 2 and Propositions 3 and 4, under the additional assumption made in this section. In this sense, the analysis in Section 3 is robust with respect to endogenizing decisions at the contest and persecution stages.

H Endogenous Constitutional Dynamics with Alternative Sequence of Stages

H.1 Setup

In Section 3, we assume that each constitutional convention happens right after each persecution stage. In this section, we consider the alternative sequence of stages: each constitutional convention happens right after each contest stage. In this alternative sequence, each period t goes as follows:

- First, a constitutional convention as in Section 3 happens. That is, a constitutional agenda-setter chooses whether to propose a new decision rule, $e'_t \in \{1, 2, \ldots, N\} \setminus \{e_{t-1}\}$, at an infinitesimal cost $\epsilon > 0$, where e_{t-1} is the decision rule for period $t - 1$. If this agenda-setter does propose a new decision rule, all council members will vote sincerely on it, and the votes will be counted by the existing decision rule e_{t-1}. As in

Section 3, depending on the voting result, a decision rule e_t, which is either the newly proposed e'_t or the default rule e_{t-1}, is generated for this period, t.

- Second, a persecution stage happens as in Section 3. That is, a random set of $e_t - 1$ ordinary council members could be persecuted, and each ordinary council member's probability to be persecuted would be $(e_t - 1)/(N - 1)$.

  To simplify the analysis, we introduce a restriction on persecution, only in the scenario where, in the preceding constitutional convention, the king, if he was the agenda-setter, did propose a new decision rule: the persecution of the $e_t - 1$ ordinary council members will happen if and only if none of them voted for the king's constitutional proposal in the preceding constitutional convention. If the king was not the agenda-setter in the preceding constitutional convention, or if he did not propose a new decision rule then, then the $e_t - 1$ ordinary council members will be persecuted as in Section 3.

  The rest of this stage then continues as in Section 3. That is, in case of persecution, the king will receive a payoff of $(e_t - 1)\kappa R/(1 - \delta)$. The persecuted exit the game with a zero payoff, and their positions are filled by newcomers with their own assets. These newcomers and the non-persecuted ordinary council members receive a payoff of R. In case of no persecution, everyone will stay in the game, the king will receive a zero payoff, and each incumbent ordinary council member will receive R.

- Finally, a contest stage happens as in Section 3. That is, if the current decision rule is unanimous ($e_t = 1$), then no contest will happen, period t will end here, and period $t + 1$ will arrive. If the current decision rule is not unanimous ($e_t \geq 2$), then all incumbent ordinary council members will contest the kingship, and everyone, including the king and each ordinary council member, will lose his or her asset. The probability for the incumbent king to win this war of all against all is still $\Pi^K(N) > 0$, whereas the probability for each ordinary council member to win is still $\Pi^M(N) > 0$, where $\Pi^K(N) + \Pi^M(N) \cdot (N - 1) = 1$ still holds. In this case, the defeated council members will exit the game, their positions will be filled by newcomers with their own assets, period t will end here, and period $t + 1$ will arrive.

H.2   Analysis and Results

We first show a result parallel to Lemma 2:

Lemma H.1. *Regardless of who has the agenda-setting power in constitutional conventions, in any MPE, if the inherited decision rule is unanimous, then the agenda-setter will not*

propose to change it, and if the agenda-setter did propose to change it, then all ordinary council members would vote against the proposal. Unanimity rule is thus stable, i.e., if $e_t = 1$, then $e_{t+1} = 1$.

Proof. The proof is parallel to the proof of Lemma 2. Again, we want to show first that an MPE can include the strategies in consideration and second that any MPE cannot include alternative Markov strategies that would lead to unanimity being replaced by a non-unanimous decision rule.

Claim 1. An MPE can include the strategies in consideration. The proof of this claim is similar to the proof of Claim 1 in the proof of Lemma 2. There are only two differences between the proofs. First, when voting on any proposal of non-unanimity rule $(e'_{t+1} \geq 2)$, each ordinary council member's payoff under the strategies in consideration is now $V = R/(1 - \delta)$, instead of $\delta R/(1 - \delta)$ as in the proof of Lemma 2, since she will now receive in the persecution stage right after the current constitutional convention an additional payoff of R.

Second, when considering a single deviation for any ordinary council member, the deviating ordinary council member is voting for the proposed new decision rule, so she will survive the following persecution stage and receive R instead of a zero payoff there. She will still engage in a war of all against all in the contest stage right after, losing her asset for sure. Therefore, under the single deviation, the best she can hope for is still to become an ever-expropriating and thus ever-contested king onwards. This means that her expected payoff will be bounded from above by

$$
\begin{aligned}
\bar{V}' &= R + \delta \Pi^M(N) \cdot \left(\frac{(N-1)\kappa R}{1 - \delta} + \delta \Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1 - \delta} + \delta \Pi^K(N) \cdot (\dots) \right) \right) \\
&= R + \frac{\delta \Pi^M(N)}{1 - \delta \Pi^K(N)} \cdot \frac{(N-1)\kappa R}{1 - \delta},
\end{aligned} \tag{H.1}
$$

instead of $\left(\delta \Pi^M(N) \cdot (N-1)\kappa R \right) / \left(\left(1 - \delta \Pi^K(N) \right) \cdot (1 - \delta) \right)$ as in the proof of Lemma 2.

Except for these two differences, the proof of Claim 1 in the proof of Lemma 2 applies here, and Claim 1 here is proved.

Claim 2. Any MPE cannot include alternative Markov strategies that would lead to unanimity being replaced. To prove this claim, we suppose that there exist alternative Markov perfect strategies where, given the existing decision rule $e_t = 1$, the agenda-setter will propose an alternative decision rule $e'_{t+1} \geq 2$ and the ordinary council

members will vote for it.

Now first suppose that the agenda-setter is the king. For any ordinary council member, her expected payoff on the supposed equilibrium path is

$$V^M = R + \delta \Pi^M(N) \cdot V^K(e'_{t+1}), \tag{H.2}$$

where $V^K(e'_{t+1})$ is the expected payoff of a king at the beginning of a period when the inherited decision rule is e'_{t+1}. A single deviation for this ordinary council member would be to unilaterally vote against so that she would block the proposal e'_{t+1}, but will come back to the supposed equilibrium path, voting for the same proposal of a constitutional change in period $t+2$. Under this single deviation, the ordinary council member's expected payoff is

$$V'' = R + \delta V^M = R + \delta \left(R + \delta \Pi^M(N) \cdot V^K(e'_{t+1}) \right), \tag{H.3}$$

where V^M is still the expected payoff of a king at the beginning of a period when the inherited decision rule is unanimous. We thus have $V'' > V^M$ if and only if

$$V^K(e'_{t+1}) < \frac{R}{(1-\delta) \cdot \Pi^M(N)}. \tag{H.4}$$

Note that $V^K(e'_{t+1})$ is bounded from above, i.e.,

$$V^K(e'_{t+1}) \leq \frac{1}{1 - \delta \Pi^K(N)} \cdot \frac{(N-1)\kappa R}{1-\delta}, \tag{H.5}$$

since the best he can hope for is to expropriate $N-1$ ordinary council members and survive the war of all against all in each period. By $\delta \in (0,1)$, $\kappa \in (0,1)$, and $\Pi^K(N) + (N-1) \cdot \Pi^M(N) = 1$, we have indeed

$$\frac{1}{1 - \delta \Pi^K(N)} \cdot \frac{(N-1)\kappa R}{1-\delta} < \frac{R}{(1-\delta) \cdot \Pi^M(N)}. \tag{H.6}$$

Therefore, we have

$$V^K(e'_{t+1}) < \frac{R}{(1-\delta) \cdot \Pi^M(N)}. \tag{H.7}$$

and thus $V'' > V^M$, i.e., the ordinary council member can be better off under a single deviation. Therefore, the supposed MPE is not an MPE, contradicting what we have supposed.

Now second suppose that the agenda-setting power lies in the council. For any ordinary

council member, her expected payoff on the supposed equilibrium path is

$$V^M = \frac{N - e'_{t+1}}{N - 1} \cdot \left(R + \delta \Pi^M(N) \cdot V^K(e'_{t+1})\right), \tag{H.8}$$

where $V^K(e'_{t+1})$ still denotes the expected payoff of a king at the beginning of a period when the inherited decision rule is e'_{t+1}. A single deviation for this ordinary council member would still be to unilaterally vote against so that she would block the proposal e'_{t+1}, and will come back to the supposed equilibrium path, voting for the same proposal of a constitutional change in period $t + 2$. This single deviation would give her an expected payoff of

$$V''' = R + \delta V^M = R + \delta \left(\frac{N - e'_{t+1}}{N - 1} \cdot \left(R + \delta \Pi^M(N) \cdot V^K(e'_{t+1})\right)\right), \tag{H.9}$$

Comparing these two expected payoffs, we have $V''' > V^M$ if and only if

$$\frac{N - e'_{t+1}}{N - 1} \cdot \left(R + \delta \Pi^M(N) \cdot V^K(e'_{t+1})\right) < \frac{R}{1 - \delta}. \tag{H.10}$$

Note that we have shown that $V^K(e'_{t+1})$ is bounded from above, i.e.,

$$V^K(e'_{t+1}) < \frac{R}{(1 - \delta) \cdot \Pi^M(N)}. \tag{H.11}$$

By this upper bound and $e'_{t+1} \geq 2$, we have indeed

$$\frac{N - e'_{t+1}}{N - 1} \cdot \left(R + \delta \Pi^M(N) \cdot V^K(e'_{t+1})\right) < \frac{R}{1 - \delta}. \tag{H.12}$$

We thus have $V''' > V^M$, i.e., the ordinary council member can be better off under a single deviation. The supposed MPE is thus not an MPE, contradicting what we have supposed.

Gathering the two cases about where the agenda-setting power lies, we see that, regardless of who sets the constitutional agenda, the supposed MPE would not be an MPE, contradicting what we have supposed. Claim 2 is thus proved by contradiction.

Gather Claims 1 and 2. By Claims 1 and 2, unanimity is thus stable in any MPE. The lemma is thus proved. $\qquad\square$

We can now show a proposition parallel to Proposition 4:

Proposition H.1. *If the agenda-setting power in constitutional conventions lies in the kingship, then in any MPE, unanimity rule, dictatorship, and rules close to dictatorship are*

stable; any other rules will transition to dictatorship, i.e., if $e_t = 1$, or if $e_t \geq \delta \Pi^K(N) \cdot (N - 1) + 1$, then $e_{t+1} = e_t$; if $1 < e_t < \delta \Pi^K(N) \cdot (N - 1) + 1$, then $e_{t+1} = N$.

Proof. First note that, by $\delta \in (0, 1)$ and $0 < \Pi^K(N) < 1$, we have $1 < \delta \Pi^K(N) \cdot (N - 1) + 1 < N$. The proof is then parallel to the proof of Proposition 4. By Lemma H.1, we know that unanimity rule is stable. To prove the rest of the proposition, we want to show that, first, if the inherited decision rule $e_t \geq \delta \Pi^K(N) \cdot (N - 1) + 1$, then the king not proposing to change it can be part of an MPE; second, if $e_t \geq \delta \Pi^K(N) \cdot (N - 1) + 1$, then no alternative Markov strategies that would lead to $e_{t+1} \neq e_t$ can be part of an MPE; third, if $1 < e_t < \delta \Pi^K(N) \cdot (N - 1) + 1$, then the king proposing $e'_{t+1} = N$ and all ordinary council members voting for it can be part of an MPE; fourth, if $1 < e_t < \delta \Pi^K(N) \cdot (N - 1) + 1$, no alternative Markov strategies that would lead to $e_{t+1} \neq N$ can be part of an MPE.

Claim 1. If $e_t \geq \delta \Pi^K(N)(N - 1) + 1$, then the king not proposing to change the decision rule can be part of an MPE. Suppose $e_t \geq \delta \Pi^K(N)(N - 1) + 1$. The king's expected payoff under the strategy in consideration is

$$
\begin{aligned}
V^K &= \frac{(e_t - 1)\kappa R}{1 - \delta} + \delta \Pi^K(N) \cdot \frac{(e_t - 1)\kappa R}{1 - \delta} + \left(\delta \Pi^K(N)\right)^2 \cdot \frac{(e_t - 1)\kappa R}{1 - \delta} + \dots \\
&= \frac{(e_t - 1)\kappa R}{1 - \delta} + \frac{\delta \Pi^K(N) \cdot (e_t - 1)\kappa R}{(1 - \delta)\left(1 - \delta \Pi^K(N)\right)}.
\end{aligned} \tag{H.13}
$$

A single deviation from it, where the king proposes to change the decision rule only for period $t + 1$, will give him an expected payoff of either

$$
V' = -\epsilon + V^K < V^K, \tag{H.14}
$$

which is for the case where the king's proposal is blocked so that things will go as if he did not propose any new decision rule, or at most

$$
\bar{V}' = -\epsilon + \frac{\delta \Pi^K(N) \cdot (N - 1)\kappa R}{(1 - \delta)\left(1 - \delta \Pi^K(N)\right)}, \tag{H.15}
$$

which is for the case where the king's proposal is approved by the council members, each playing Markov strategies, so that he will not be able to persecute anyone in the following persecution stage, only hoping to survive perpetual wars of all against all and always persecute at most $N - 1$ ordinary council members onwards.

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Since $V' < V^K$, we only need to compare V^K and $\bar{V}'$. By $e_t \geq \delta\Pi^K(N) \cdot (N-1) + 1$,

$$\frac{(e_t - 1)\kappa R}{1 - \delta} + \frac{\delta\Pi^K(N) \cdot (e_t - 1)\kappa R}{(1 - \delta)\left(1 - \delta\Pi^K(N)\right)} > -\epsilon + \frac{\delta\Pi^K(N) \cdot (N-1)\kappa R}{(1 - \delta)\left(1 - \delta\Pi^K(N)\right)} \tag{H.16}$$

holds. Therefore, we have $V^K > \bar{V}'$. Therefore, in both cases, the king cannot be better off under a single deviation from the strategy in consideration. Claim 1 is thus proved.

Claim 2. If $e_t \geq \delta\Pi^K(N) \cdot (N-1) + 1$, **then no alternative Markov strategies that would lead to $e_{t+1} \neq e_t$ can be part of an MPE.** To prove this claim, we suppose $e_t \geq \delta\Pi^K(N) \cdot (N-1) + 1$. We also suppose that there exist alternative Markov perfect strategies where, given the inherited decision rule e_t, the king will propose $e'_{t+1} \neq e_t$, and the ordinary council members will vote for it. The king's expected payoff on the supposed equilibrium path is thus

$$\tilde{V} = -\epsilon + \delta\Pi^K(N) \cdot V^K(e'_{t+1}), \tag{H.17}$$

where $V^K(e'_{t+1})$ is the expected payoff of the king at the beginning of a period when the inherited decision rule is e'_{t+1}, on the supposed equilibrium path. Now consider a single deviation, where the king delays the proposal just for one period. The king's expected payoff under this single deviation is

$$V'' = \frac{(e_t - 1)\kappa R}{1 - \delta} + \delta\Pi^K(N) \cdot \tilde{V} = \frac{(e_t - 1)\kappa R}{1 - \delta} + \delta\Pi^K(N) \cdot \left(-\epsilon + \delta\Pi^K(N) \cdot V^K(e'_{t+1})\right). \tag{H.18}$$

Comparing these two expected payoffs, we have $V'' > \tilde{V}$ if and only if

$$V^K(e'_{t+1}) \leq \frac{(e_t - 1)\kappa R}{(1 - \delta) \cdot \delta\Pi^K(N) \cdot \left(1 - \delta\Pi^K(N)\right)}. \tag{H.19}$$

Note that, for the king at the beginning of a period when the inherited decision rule is e'_{t+1}, the best he can hope for is to persecute $N-1$ ordinary council members in each period and survive perpetual wars of all against all. Therefore, his expected payoff is bounded from above, i.e.,

$$V^K(e'_{t+1}) \leq \frac{(N-1)\kappa R}{(1 - \delta) \cdot \left(1 - \delta\Pi^K(N)\right)}. \tag{H.20}$$

Since $e_t \geq \delta\Pi^K(N) \cdot (N-1) + 1$, we have

$$\frac{(e_t - 1)\kappa R}{(1 - \delta) \cdot \delta\Pi^K(N) \cdot \left(1 - \delta\Pi^K(N)\right)} \geq \frac{(N-1)\kappa R}{(1 - \delta) \cdot \left(1 - \delta\Pi^K(N)\right)}. \tag{H.21}$$

Therefore, we have

$$V^K(e'_{t+1}) \leq \frac{(N-1)\kappa R}{(1-\delta)\cdot\left(1-\delta\Pi^K(N)\right)} \leq \frac{(e_t-1)\kappa R}{(1-\delta)\cdot\delta\Pi^K(N)\cdot\left(1-\delta\Pi^K(N)\right)}. \tag{H.22}$$

We thus have $V'' > \tilde{V}$, i.e., the king can be better off under a single deviation. Therefore, the supposed MPE is not an MPE, contradicting what we have supposed. Claim 2 is thus proved by contradiction.

Claim 3. If $1 < e_t < \delta\Pi^K(N)\cdot(N-1)+1$, then the king proposing $e'_{t+1} = N$ and all ordinary council members voting for it can be part of an MPE. To prove the claim, we need to check whether the king or an ordinary council member can be better off under a single deviation from the strategies in consideration, supposing that the continuation strategies constitute an MPE.

Now examine whether an ordinary council member can be better off under a single deviation, where she will vote against the proposal only in period $t + 1$, supposing that the continuation strategies constitute an MPE. Note that, by Claims 1 and 2, dictatorship $(e_{t+1} = N)$ is an absorbing state. The strategies in consideration will thus give the ordinary council member an expected payoff of

$$V^M = R + \delta\Pi^M(N)\cdot\frac{(N-1)\kappa R}{(1-\delta)\cdot(1-\delta\Pi^K(N))}. \tag{H.23}$$

The single deviation, if it can get the proposal rejected, will give the deviating ordinary council member an expected payoff of at most

$$\bar{V}''' = \frac{N-e_t}{N-1}\cdot\left(R + \delta\Pi^M(N)\cdot\frac{(N-1)\kappa R}{(1-\delta)\cdot(1-\delta\Pi^K(N))}\right), \tag{H.24}$$

since the best she can hope for is to survive and get R in the following persecution stage, then win a war of all against all to become the king, and keep prosecuting $N-1$ ordinary council members and winning perpetual wars of all against all onwards. Since $e_t > 1$, we have $V^M > \bar{V}'''$. Therefore, the single deviation cannot make the deviating ordinary member better off, even if the single deviation can get the proposal rejected, supposing that the continuation strategies constitute an MPE.

Now examine whether the king can be better off under a single deviation, where the king instead does not propose a change in the decision rule or proposes $e'_{t+1} \in \{1, 2, \ldots, N-1\} \setminus \{e_t\}$ only in period $t + 1$. First, note that, supposing that the continuation strategies constitute an MPE, by Claims 1 and 2, the strategies in consideration will leave the king

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in the absorbing state of dictatorship from period $t + 2$ onwards. Therefore, the expected payoff for the king under the strategies in consideration is

$$V^K = \delta \Pi^K(N) \cdot \frac{(N-1)\kappa R}{(1-\delta) \cdot (1 - \delta \Pi^K(N))}. \tag{H.25}$$

Second, if the king does not propose a change in the decision rule only in period $t + 1$, his expected payoff will be

$$V'''' = \frac{(e_t - 1)\kappa R}{1 - \delta} + \delta \Pi^K(N) \cdot V^K = \frac{(e_t - 1)\kappa R}{1 - \delta} + \left(\delta \Pi^K(N)\right)^2 \cdot \frac{(N-1)\kappa R}{(1-\delta) \cdot (1 - \delta \Pi^K(N))}. \tag{H.26}$$

By $e_t < \delta \Pi^K(N) \cdot (N-1) + 1$, we have $V^K > V''''$, i.e., the king will not be better off under this single deviation.

Third, if the king proposes $e'_{t+1} \in \{2, \ldots, N-1\} \setminus \{e_t\}$ only in period $t + 1$, then, the king's expected payoff is either

$$V''''' = -\epsilon + V'''' < V'''' < V^K, \tag{H.27}$$

which is for the case where the king's proposal is rejected and things will then go as if he did not propose a new decision rule, or at most

$$\bar{V}''''' = -\epsilon + V^K < V^K, \tag{H.28}$$

which is for the case where the king's proposal is approved by the council members, each playing Markov strategies, so that he will not be able to persecute anyone in the following persecution stage, only hoping to survive perpetual wars of all against all and always persecute $N - 1$ ordinary council members onwards, i.e., like the king under the strategies in consideration. In both cases, the king will thus not be better off under this single deviation.

Finally, if the king proposes $e'_{t+1} = 1$ only in period $t + 1$, then, if it is approved by the council, by Lemma H.1, he will not have any opportunity to expropriate in perpetual civil peace, i.e., receiving a zero payoff, at a cost of ϵ, supposing that the continuation strategies constitute an MPE; if it is rejected by the council, his expected payoff would be $V''''' < V^K$, at a cost of ϵ. In both cases, he will not be better off under this single deviation.

Therefore, we conclude that the king cannot be better off under any single deviation, supposing that the continuation strategies constitute an MPE.

We have now established that neither the king nor an ordinary council member can be better off under a single deviation from the strategies in consideration, supposing the

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continuation strategies constitute an MPE. The strategies in consideration can thus be part of an MPE. Claim 3 is thus proved.

Claim 4. If $1 < e_t < \delta\Pi^K(N)\cdot(N-1)+1$, no alternative Markov strategies that would lead to $e_{t+1} \neq N$ can be part of an MPE. Suppose $1 < e_t < \delta\Pi^K(N)\cdot(N-1)+1$. There are several possibilities for the alternative strategies: first, the king does not propose any change in the decision rule; second, the king proposes $e'_{t+1} = 1$ and the ordinary council members vote for it; third, the king proposes $e'_{t+1} = e_t$ and the ordinary council members may or may not vote for it; fourth, the king proposes $e'_{t+1} = N$ and the ordinary council members vote against it; finally, the king proposes $e'_{t+1} \in \{2, 3, \ldots, N-1\} \setminus \{e_t\}$ and the ordinary council members vote for it. We examine these alternatives one by one.

First, suppose that not proposing any change in the decision rule is part of an MPE. The king's expected payoff in the supposed MPE is thus

$$\check{V}^K = \frac{(e_t-1)\kappa R}{1-\delta} + \delta\Pi^K(N) \cdot \frac{(e_t-1)\kappa R}{(1-\delta)\left(1-\delta\Pi^K(N)\right)}. \tag{H.29}$$

Now consider a single deviation where the king will instead propose $e'_{t+1} = N$ only in period $t+1$. By the proof of Claim 3, in any MPE the ordinary council members will approve $e'_{t+1} = N$, and by Claims 1 and 2, in any MPE, $e_{t+1} = N$ is an absorbing state. Therefore, the king's expected payoff under the single deviation is thus

$$V'''''' = -\epsilon + \delta\Pi^K(N) \cdot \frac{(N-1)\kappa R}{(1-\delta)\left(1-\delta\Pi^K(N)\right)}. \tag{H.30}$$

Comparing these two expected payoffs, we have $V'''''' > \check{V}$ if and only if

$$e_t < \delta\Pi^K(N) \cdot (N-1) + 1, \tag{H.31}$$

which is exactly what we have supposed. Therefore, we have $V'''''' > \check{V}$, i.e., a single deviation can make the king better off, suggesting that the supposed MPE is not an MPE. Therefore, not proposing any change in the decision rule cannot be part of an MPE.

Second, suppose that the king proposing $e'_{t+1} = 1$ and the ordinary members voting for it can be part of an MPE. The king's expected payoff in the supposed MPE is thus $-\epsilon$, since by Lemma H.1, unanimity is an absorbing state in any MPE and will bring civil peace and no persecution. Now consider a single deviation where the king will not propose a change in the decision rule only in period $t+1$. The single deviation will bring at least $(e_t-1)\kappa R/(1-\delta) > 0 > -\epsilon$ to the king in expectation, since $e_t > 1$. Therefore, the king

can be better off under the single deviation, suggesting that the supposed MPE is not an MPE. Therefore, the king proposing $e'_{t+1} = 1$ and the ordinary members voting for it cannot be part of an MPE.

Third, suppose that the king proposing $e'_{t+1} = e_t$ and the ordinary council members voting for or against it can be part of an MPE. A single deviation where the king does not propose anything will thus save him at least the infinitesimal cost. Therefore, the king can be better off under the single deviation, suggesting that the supposed MPE is not an MPE. Therefore, the king proposing $e'_{t+1} = e_t$ and the ordinary council members voting for or against it cannot be part of an MPE.

Fourth, suppose that the king proposing $e'_{t+1} = N$ and the ordinary members voting against it can be part of an MPE. A single deviation where the king does not propose anything will thus save him the infinitesimal cost. The king can thus be better off under the single deviation, suggesting that the supposed MPE is not an MPE. The king proposing $e'_{t+1} = N$ and the ordinary members voting against it thus cannot be part of an MPE.

Finally, suppose that the king proposing some $e'_{t+1} \in \{2, 3, \ldots, N-1\} \setminus \{e_t\}$ and the ordinary council members voting for it can be part of an MPE. By Claims 1 and 2, in any MPE, $e_{t+1} = N$ is an absorbing state, so the king's expected payoff in this supposed MPE is bounded from above, i.e.,

$$\hat{V}^K < -\epsilon + \delta \Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + V^K(N) \right), \tag{H.32}$$

where $V^K(N)$ is the king's expected payoff at the beginning of a period when the inherited decision rule is dictatorship, since the best he can hope for is to survive a war of all against all in period $t+1$, persecute $N-1$ ordinary council members in period $t+2$, and get into the absorbing state of dictatorship onwards. Now consider a single deviation where the king proposes $e'_{t+1} = N$ instead only in period $t+1$. By the proof of Claim 3, in any MPE the ordinary members will approve $e'_{t+1} = N$, and by Claims 1 and 2, in any MPE, $e_{t+1} = N$ is an absorbing state, again. This single deviation would thus give him an expected payoff of

$$V'''''' = -\epsilon + \delta \Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + V^K(N) \right). \tag{H.33}$$

Therefore, we have $\hat{V}^K < V''''''$. Therefore, a single deviation can make the king better off, suggesting that the supposed MPE is not an MPE. Therefore, the king proposing $e'_{t+1} \in \{2, 3, \ldots, N-1\} \setminus \{e_t\}$ and the ordinary members voting for it cannot be part of an MPE.

We have now established that an MPE cannot include any alternative Markov strategies for the king or the ordinary council members that would lead to $e_{t+1} \neq N$. Claim 4 is proved.

Gather Lemma H.1 and Claims 1–4. The proposition is thus proved. □

We can also show the same result as in Proposition 3:

Proposition H.2. *If the agenda-setting power in constitutional conventions lies in the council, then in any MPE, unanimity rule is stable, and any non-unanimity rule will transition to unanimity rule, i.e., for any $e_t \in \{1, 2, \ldots, N\}$, $e_{t+1} = 1$.*

Proof. The proof is parallel to the proof of Proposition 3. By Lemma H.1, we have known that unanimity is stable. To prove the rest of the proposition, we want to show that, if $e_t \geq 2$, first, the agenda-setting ordinary council member proposing $e'_{t+1} = 1$ and all ordinary council members voting for it can be part of an MPE; second, no MPE can include any alternative Markov strategies that would lead to $e_{t+1} \neq 1$. Also note that we do not need to specify the king's strategy, since when $e_t \geq 2$, he cannot on his own block any constitutional change.

Claim 1. If $e_t \geq 2$, the agenda-setting ordinary council member proposing $e'_{t+1} = 1$ and all ordinary council members voting for it can be part of an MPE. Suppose $e_t \geq 2$. To prove this claim, we need to examine whether a single deviation can make a player better off. First, notice that, supposing the continuation strategies constitute an MPE, then by Lemma H.1, the decision rule will stay at unanimity under the strategy in consideration, and the expected payoff of each non-agenda-setting ordinary council member in the constitutional convention will be

$$V^M = \frac{R}{1 - \delta}, \tag{H.34}$$

and the agenda-setting ordinary council member's expected payoff is simply

$$V_A^M = -\epsilon + \frac{R}{1 - \delta}. \tag{H.35}$$

Second, consider a single deviation by an voting ordinary council member, where she will unilaterally vote against $e'_{t+1} = 1$ only in period $t + 1$. If the deviation can cause the proposal to be rejected, then the deviating ordinary member's expected payoff will be

$$V' = \frac{N - e_t}{N - 1} \cdot R, \tag{H.36}$$

as she hopes to survive and receive R in the following persecution stage, but engaging in a war of all against all after will give her no additional payoffs in the future civil peace from period $t + 2$ onwards brought by unanimity, since she will not have any asset then. Note

that by $e_t \geq 2$ and $\delta \in (0,1)$, we have

$$V^M = \frac{R}{1-\delta} > R > \frac{N-e_t}{N-1} \cdot R = V'. \tag{H.37}$$

Therefore, even if the single deviation could get $e'_{t+1} = 1$ rejected, it cannot make the deviating ordinary member better off.

Third, consider another single deviation by the agenda-setting ordinary council member, where she will propose $e'_{t+1} \geq 2$ or not propose any change in the decision rule instead only in period $t+1$. Under the single deviation, her expected payoff is bounded from above by

$$\bar{V}'' = \frac{N-2}{N-1} \cdot R, \tag{H.38}$$

as her probability to survive and receive R in the following persecution stage is at most $(N-2)/(N-1)$, and engaging in a war of all against all after will give her no additional payoffs in the future civil peace from period $t+2$ onwards brought by unanimity. Again, by $e_t \geq 2$ and $\delta \in (0,1)$, we have

$$\bar{V}'' = \frac{N-2}{N-1} \cdot R < -\epsilon + \frac{R}{1-\delta} = V_A^M, \tag{H.39}$$

i.e., the single deviation cannot make the agenda-setting ordinary council member better off.

We have thus established that no single deviation from the strategies in consideration can make any ordinary council members better off. Therefore, the strategies in consideration can be part of an MPE. Claim 1 is thus proved.

Claim 2. If $e_t \geq 2$, then any MPE cannot include any alternative Markov strategies that would lead to $e_{t+1} \neq 1$. Suppose $e_t \geq 2$. There are several possibilities for the alternative Markov strategies: first, the agenda-setting ordinary council member does not propose a change in the decision rule; second, she proposes $e'_{t+1} \in \{2, 3, \ldots, N\} \setminus \{e_t\}$ and all ordinary council members vote for the proposal; finally, she proposes $e'_{t+1} = 1$ but all ordinary council members vote against the proposal. We now examine whether a single deviation from these alternatives can make the deviating player better off.

First, note that, under all of theses possibilities of the alternative strategies, period $t+1$ will have an non-unanimity rule. The period-$t+1$ agenda-setting ordinary council member will thus have her asset destroyed in the war of all against all in period $t+1$. Therefore, her

expected payoff in the constitutional convention in period $t+1$ is bounded from above by

$$\bar{V} = \frac{N-2}{N-1} \cdot \left(R + \delta\Pi^M(N) \cdot \frac{(N-1)\kappa R}{(1-\delta)\left(1 - \delta\Pi^K(N)\right)} \right), \tag{H.40}$$

as her probability to survive and receive R in the following persecution stage is at most $(N-2)/(N-1)$, and the best she can hope for onwards is to survive perpetual wars of all against all and persecute $N-1$ ordinary council members in each future period.

Second, consider a single deviation from either of the first two possibilities of the alternative strategies, where the agenda-setting council member will propose $e'_{t+1} = 1$ instead only in period $t+1$. Note that by the proof of Claim 1, in any MPE, if $e'_{t+1} = 1$ is proposed, then all ordinary council members will vote for it; also, by Lemma H.1, in any MPE, unanimity is an absorbing state. Therefore, under the single deviation and given the continuation strategies in the supposed MPE, the period-$t+1$ agenda-setting ordinary council member's expected payoff is

$$V''' = -\epsilon + \frac{R}{1-\delta}, \tag{H.41}$$

i.e., the safe returns from the asset in perpetual peace brought by unanimity, net of an infinitesimal cost. Further note that, by $(N-1)\Pi^M(N) + \Pi^K(N) = 1$, $\kappa \in (0,1)$, and $\delta \in (0,1)$, we have

$$\begin{aligned}
\bar{V} &= \frac{N-2}{N-1} \cdot \left(R + \delta\Pi^M(N) \cdot \frac{(N-1)\kappa R}{(1-\delta)\left(1 - \delta\Pi^K(N)\right)} \right) \\
&< R + \delta\Pi^M(N) \cdot \frac{(N-1)\kappa R}{(1-\delta)\left(1 - \delta\Pi^K(N)\right)} < -\epsilon + \frac{R}{1-\delta} = V'''. \tag{H.42}
\end{aligned}$$

Therefore, the single deviation can make the agenda-setting ordinary council member better off, suggesting that the supposed MPE is not an MPE.

Third, consider a single deviation from the last possibility of the alternative strategies, where the agenda-setting ordinary council member will not propose any constitutional change only in period $t+1$. This single deviation will thus save her an infinitesimal cost. Therefore, the agenda-setting ordinary council member can be better off under the single deviation, suggesting that the supposed MPE is not an MPE. Therefore, she proposing $e'_{t+1} = 1$ and the ordinary members voting against it cannot be part of an MPE.

Therefore, all of the possible alternative strategies cannot be part of an MPE. Claim 2 is thus proved.

Gather Claims 1 and 2. The proposition is thus proved. □

Table H.1: Endogenous constitutional dynamics, constitutional convention after contest

	Fused executive and legislative powers	Separated executive and legislative powers
Unanimous democracy, $e_t = 1$	↻	↻
Non-unanimous democracies, $1 < e_t < \delta\Pi^K(N) \cdot (N-1) + 1$		
Near-dictatorships, $\delta\Pi^K(N) \cdot (N-1) + 1 \leq e_t < N$	↻	↑
Dictatorship, $e_t = N$	↻	

Summary of Propositions H.1 and H.2. Executive and legislative powers fused/separated in terms of chief executive controlling/denied agenda-setting power on constitutional matters. Self-pointing arrows for stability; straight and curved arrows for directions of transition.

Gathering Propositions H.1 and H.2, we can produce Table H.1, which is parallel to Table 1. Compared with Table 1, the only difference in Table H.1 is that a new group of stable regimes emerge: these regimes are those that are close to dictatorship ($\delta\Pi^K(N)\cdot(N-1)+1 \leq e_t < N$), and they are stable still only when the agenda-setting power on constitutional issues lies in the kingship. In this sense, results in Section 3 are robust when we consider the alternative sequence of the constitutional convention, contest, and persecution.

I Proof of Lemma 3

Proof. We need to examine whether each player would be better off by switching to a single deviation from the considered strategy profile. First, consider any apolitical justice i. Facing any persecution proposal and any transfer $T_{it} \geq 0$, her expected payoff under the considered strategy profile is

$$V^N = T_{it} + \frac{R_{i,t-1}}{1-\delta}; \tag{I.1}$$

her expected payoff under a single deviation, i.e., voting against only the current persecution proposal, is

$$V' = \frac{R_{i,t-1}}{1-\delta} \leq V^N, \tag{I.2}$$

regardless of whether she is pivotal. She is thus not better off under the single deviation.

Second, consider any political justice i. Facing any persecution proposal and any transfer $T_{it} \geq 0$, her expected payoff under the considered strategy profile is

$$V^P = T_{it} + R_{i,t-1} + \delta \left(z \cdot V^M + (1-z)V^P \right), \tag{I.3}$$

where V^M is the expected value of being an ordinary council member at the start of period $t+1$; her expected payoff under a single deviation, i.e., voting against only the current persecution proposal, is

$$V'' = R_{i,t-1} + \delta \left(z \cdot V^M + (1-z)V^P \right) \leq V^P, \tag{I.4}$$

regardless of whether she is pivotal. She is thus not better off under the single deviation.

Third, consider the king at the persecution stage. Given the continuation strategies in the considered strategy profile, no transfer is needed to influence the justices into voting for the persecution proposal; when he is choosing the number of ordinary council members to persecute, his choice does not affect his continuation value after period t, but choosing $p_t = e - 1$ maximizes his expected expropriation profit in period t. Therefore, no single deviation from the considered strategy profile can better him off.

Fourth, consider any ordinary council member at the contest stage. Her expected payoff under the considered strategy profile is

$$V^M = \Pi^M(N) \cdot \left(\frac{(e-1)\kappa R}{1-\delta} + \delta V^K \right) \geq 0, \tag{I.5}$$

where V^K is the expected value of being the king at the start of period $t+1$ and $e \geq 2$. Her expected payoff under a single deviation, i.e., not contesting only in period t, is

$$\bar{V} = 0 \leq V^M, \tag{I.6}$$

because, given others' strategies in the considered strategy profile, she will become the unique most senior ordinary member at the following persecution stage and thus be persecuted for sure. Therefore, the single deviation cannot be profitable.

No player could be better off by switching to a single deviation from the considered strategy profile. The lemma is thus proved. $\qquad\square$

J Proof of Proposition 5

We first prove another lemma:

Lemma J.1 (Just before persecution externality disappears). *Suppose that there has been a contest for the kingship in period t with $\theta_t = 1$ and everyone assumes everyone to follow the MPE in Lemma 3 from period $t + 1$ onwards. The following claims about period t are true:*

1. *in any MPE, any apolitical justice i will vote for any persecution proposal if and only if the transfer proposed to her satisfies $T_{it} \geq cp_t \cdot R/(1 - \delta)$, and*

2. *any political justice i will do so if and only if $T_{it} \geq cp_t \cdot R/\left(1 - \delta(1 - z)\right)$;*

3. *as $\delta \to 1$, in any MPE, the king will propose to persecute $p_t = e - 1$ council members if $\kappa > \left(\bar{N} - w - \bar{e} + 1\right)c$, and will propose to persecute none if $\kappa \leq \left(\bar{N} - w - \bar{e} + 1\right)c$.*

Proof. We prove the three claims one by one.

Claim 1.   First, examine any apolitical justice i's strategy given any persecution proposal with p_t ordinary members to be persecuted. Suppose that she is pivotal. Her expected payoff from voting for the proposal is

$$V^N = (1 - cp_t)R + T_{it} + \delta \cdot \frac{(1 - cp_t)R}{1 - \delta} = T_{it} + \frac{(1 - cp_t)R}{1 - \delta}, \tag{J.1}$$

where R is her potential return to asset because $\theta_t = 1$, while $(1 - cp_t)R$ is the current and future flow payoff from her asset given the persecution externality in the current period and everyone following the MPE in Lemma 3 in all future periods. Her expected payoff under a single deviation, i.e., voting against and thus blocking the proposal, is

$$V' = R + \delta \cdot \frac{R}{1 - \delta} = \frac{R}{1 - \delta}, \tag{J.2}$$

where R is her current and future flow payoff because no persecution would happen in the current persecution stage and everyone will still follow the MPE in Lemma 3 in all future periods, while she receives no transfer because she votes against the current persecution proposal. Given that we have assumed that she will vote for the proposal even if indifferent, she will thus vote for the proposal if and only if $V^N \geq V'$, i.e.,

$$T_{it} \geq cp_t \cdot \frac{R}{1 - \delta}. \tag{J.3}$$

The claim is thus proved.

Claim 2. Second, examine any political justice i's strategy given any persecution proposal of p_t ordinary members. Suppose that she is pivotal. Her expected payoff from voting for the proposal is

$$
V^P = (1 - cp_t)R + T_{it} + \delta \bigg(z \cdot V^M + (1 - z)
$$

$$
\cdot \Big((1 - cp_t)R + \delta \Big(z \cdot V^M + (1 - z) \cdot \dots \Big) \Big) \bigg)
$$

$$
= T_{it} + \frac{(1 - cp_t)R}{1 - \delta(1 - z)} + \frac{\delta z V^M}{1 - \delta(1 - z)}, \tag{J.4}
$$

where
$$
V^M = \frac{\pi^M(N)}{1 - \delta \Pi^K(N)} \cdot \frac{(e - 1)\kappa R}{1 - \delta} \tag{J.5}
$$

is the value of being an ordinary council member at the beginning of period $t + 1$ following the MPE in Lemma 3 in all future periods. Her expected payoff under a single deviation, i.e., voting against and thus blocking the proposal, is

$$
V'' = R + \delta \bigg(z \cdot V^M + (1 - z) \cdot \Big(R + \delta \Big(z \cdot V^M + (1 - z) \cdot \dots \Big) \Big) \bigg)
$$

$$
= \frac{R}{1 - \delta(1 - z)} + \frac{\delta z V^M}{1 - \delta(1 - z)}. \tag{J.6}
$$

Given that we have assumed that she will vote for the proposal even if indifferent, she will thus vote for the proposal if and only if $V^P \geq V''$, i.e.,

$$
T_{it} \geq cp_t \cdot \frac{R}{1 - \delta(1 - z)}. \tag{J.7}
$$

The claim is thus proved.

Claim 3. Finally, examine the king's decision at the persecution stage. Suppose that he proposes to persecute p_t ordinary council members. For the proposal to be approved, he needs to commit sufficient transfers to $\bar{N} - \bar{e} + 1$ justices. By Claims 1 and 2 and $z \in (0, 1)$, it is cheaper to influence a political justice than an apolitical one. Therefore, the total amount of transfers needed is

$$
T = \min\{\bar{N} - \bar{e} + 1, w\} \cdot cp_t \cdot \frac{R}{1 - \delta(1 - z)} + \max\{\bar{N} - \bar{e} + 1 - w, 0\} \cdot cp_t \cdot \frac{R}{1 - \delta}, \tag{J.8}
$$

which is

$$
T = \begin{cases} \left(\bar{N} - \bar{e} + 1\right) \cdot cp_t \cdot \frac{R}{1-\delta(1-z)}, & \text{if } w \geq \bar{N} - \bar{e} + 1; \\ w \cdot cp_t \cdot \frac{R}{1-\delta(1-z)} + \left(\bar{N} - \bar{e} + 1 - w\right) \cdot cp_t \cdot \frac{R}{1-\delta}, & \text{if } w < \bar{N} - \bar{e} + 1, \end{cases} \tag{J.9}
$$

subject to the budget

$$
B = p_t \cdot \frac{\kappa R}{1 - \delta}. \tag{J.10}
$$

Note as $\delta \to 1$, if $w \geq \bar{N} - \bar{e} + 1$, then $T \leq B$ will always hold; when $w < \bar{N} - \bar{e} + 1$, $T \leq B$ will hold if and only if

$$
\left(\bar{N} - \bar{e} + 1 - w\right) c < \kappa. \tag{J.11}
$$

Note that if $w \geq \bar{N} - \bar{e} + 1$, then $\left(\bar{N} - \bar{e} + 1 - w\right) c \leq 0 < \kappa$. Therefore, as $\delta \to 1$, the king can get any persecution proposal approved if $\left(\bar{N} - \bar{e} + 1 - w\right) c < \kappa$, and cannot get any persecution proposal approved if otherwise. Given the infinitesimal cost of a persecution proposal, he will thus not propose to persecute any ordinary council members if he cannot get the proposal approved.

Now consider how many ordinary council members the king would like to persecute, given that he can get the proposal approved as $\delta \to 1$. The king's expected payoff from proposing to persecute p_t ordinary members is

$$
V^K(p_t) = p_t \cdot \frac{\kappa R}{1 - \delta} - T + \delta V_{t+1}^K, \tag{J.12}
$$

subject to

$$
p_t \in \{0, 1, \ldots, e - 1\}, \quad \left(\bar{N} - \bar{e} + 1 - w\right) c < \kappa. \tag{J.13}
$$

where T is the total transfers, which depends on p_t, and where V_{t+1}^K is the value of being the king at the beginning of period $t + 1$ following the MPE in Lemma 3 in all future periods, which is not dependent on the current p_t. The king will thus choose $p_t = e - 1$ to maximize his expected payoff.

The claim and the lemma are thus proved. □

We now prove Proposition 5.

Proof. We prove the three claims one by one.

Claim 1. Consider the following strategy profile for any period t:

- at $\theta_t = 0$, all players follow the MPE in Lemma 3;

- at $\theta_t = 1$,

  - at the contest stage, all ordinary council members contest;
  - at the persecution stage,

    * if there has been a contest in the contest stage,

      · the king proposes to persecute $e - 1$ ordinary members and commits to transfer $T_{it} = c(e-1) \cdot \frac{R}{1-\delta(1-z)}$ to each of $\min\{\bar{N} - \bar{e} + 1, w\}$ political justices and $T_{it} = c(e-1) \cdot \frac{R}{1-\delta}$ to each of $\max\{\bar{N} - \bar{e} + 1 - w, 0\}$ apolitical justices;

      · any apolitical justice i will vote for any persecution proposal that would persecutes p_t ordinary council members at the current persecution stage if and only if the transfer proposed to her satisfies $T_{it} \geq cp_t \cdot R/(1 - \delta)$;

      · any political justice i will vote for any persecution proposal at the current persecution stage if and only if the transfer proposed to her satisfies $T_{it} \geq cp_t \cdot R/\left(1 - \delta(1 - z)\right)$;

    * if there has not been a contest in the preceding contest stage,

      · the king proposes to persecute $e - 1$ ordinary members and commits to transfer $T_{it} = c(e-1) \cdot \frac{R}{1-\delta(1-z)} - \delta z \Pi^M(N) \cdot T^*$ to each of $\min\{\bar{N} - \bar{e} + 1, w\}$ political justices and $T_{it} = c(e - 1) \cdot \frac{R}{1-\delta}$ to each of $\max\{\bar{N} - \bar{e} + 1 - w, 0\}$ apolitical justices;

      · any apolitical justice i will vote for any persecution proposal that would persecutes p_t ordinary council members at the current persecution stage if and only if the transfer proposed to her satisfies $T_{it} \geq cp_t \cdot R/(1 - \delta)$;

      · any political justice i will vote for any persecution proposal at the current persecution stage if and only if the transfer proposed to her satisfies $T_{it} \geq cp_t \cdot \frac{R}{1-\delta(1-z)} - \delta z \Pi^M(N) \cdot T^*$,

where

$$T^* = \begin{cases} \left(\bar{N} - \bar{e} + 1\right) \cdot c(e - 1) \cdot \frac{R}{1-\delta(1-z)}, & \text{if } w \geq \bar{N} - \bar{e} + 1; \\ w \cdot c(e - 1) \cdot \frac{R}{1-\delta(1-z)} + \left(\bar{N} - \bar{e} + 1 - w\right) \cdot c(e - 1) \cdot \frac{R}{1-\delta}, & \text{if } w < \bar{N} - \bar{e} + 1. \end{cases} \tag{J.14}$$

We want to show that this strategy profile is an MPE. Note that, by Lemma 3, the strategies at $\theta_t = 0$ are Markov perfect; by $\kappa > \left(\bar{N} - w - \bar{e} + 1\right)c$, $\delta \to 1$, and Lemma J.1, the strategy of the king at the persecution stage at $\theta_t = 1$ when there has been a contest in the preceding contest stage is feasible and Markov perfect; by Lemma J.1, the strategies

of the justices at $\theta_t = 1$ when there has been a contest in the preceding contest stage are Markov perfect, too. We thus only need to examine, first, whether the strategy of each ordinary council member at the contest stage with $\theta_t = 1$ is Markov perfect and, second, whether the strategies of the king and justices at the persecution stage with $\theta_t = 1$ when there has not been a contest in the contest stage are Markov perfect.

First, consider the strategy of each ordinary council member at the contest stage with $\theta_t = 1$. Under the strategy profile in consideration, if $\kappa > \left(\bar{N} - w - \bar{e} + 1 \right) c$ and $\delta \to 1$, each ordinary council member's expected payoff is $V^M = \Pi^M(N) \cdot V^K$, where $V^K > 0$ is the value of being the king at the beginning of the persecution stage, since the king will afford to persecute $e - 1 \geq 1$ ordinary members and gain a strictly positive profit in the current period. Under a single deviation, i.e., not contesting only in the current contest stage, her expected payoff is $V' = 0 < V^K$, since she will become the most senior ordinary member in the persecution stage and thus will be persecuted for sure. Therefore, the strategy of each ordinary council member at the contest stage with $\theta_t = 1$ is Markov perfect.

Second, consider the strategies of the king and justices at the persecution stage with $\theta_t = 1$ when there has not been a contest in the contest stage. First, consider any apolitical justice i. Suppose she is pivotal. Under the strategy profile in consideration, as in the proof of Lemma J.1, her expected payoff is

$$V^N = (1 - cp_t)R + T_{it} + \delta \cdot \frac{(1 - cp_t)R}{1 - \delta} = T_{it} + \frac{(1 - cp_t)R}{1 - \delta}, \tag{J.15}$$

where R is her potential return to asset because $\theta_t = 1$, while $(1 - cp_t)R$ is the current and future flow payoff from her asset given the persecution externality in the current period and everyone following the MPE in Lemma 3 in all future periods. Her expected payoff under a single deviation, i.e., voting against and thus blocking the proposal, is

$$
\begin{aligned}
V' = R + \delta \cdot &\Bigg(\left(1 - c(e-1) \right) R + T^*_{i,t+1} \\
&+ \delta \left(\left(1 - c(e-1) \right) R + \delta \cdot \left(\left(1 - c(e-1) \right) R + \ldots \right) \right) \Bigg) \\
= R + \delta &\left(T^*_{i,t+1} + \frac{\left(1 - c(e-1) \right) R}{1 - \delta} \right) = R + \delta \left(\frac{c(e-1)R}{1 - \delta} + \frac{\left(1 - c(e-1) \right) R}{1 - \delta} \right) \\
= \frac{R}{1 - \delta}, &\tag{J.16}
\end{aligned}
$$

where no persecution would happen in the current persecution stage, everyone will still follow the continuation strategies in the strategy profile in consideration in all future periods, and

the focal apolitical justice will be prioritized to receive a transfer in period $t+1$, i.e.,

$$T^*_{i,t+1} = \frac{c(e-1)R}{1-\delta}. \tag{J.17}$$

Given that we have assumed that she will vote for the proposal even if indifferent, she will thus vote for the proposal if and only if $V^N \geq V'$, i.e.,

$$T_{it} \geq cp_t \cdot \frac{R}{1-\delta}. \tag{J.18}$$

Therefore, the strategy of each apolitical justice at the persecution stage with $\theta_t = 1$ when there has not been a contest in the preceding contest stage is Markov perfect.

Second, consider any political justice i at the persecution stage with $\theta_t = 1$ when there has not been a contest in the preceding contest stage. Suppose she is pivotal. Under the strategy profile in consideration, as in the proof of Lemma J.1, her expected payoff is

$$V^P = (1-cp_t)R + T_{it} + \delta\bigg(z \cdot V^M + (1-z)$$

$$\cdot \bigg((1-cp_t)R + \delta\bigg(z \cdot V^M + (1-z) \cdot \dots\bigg)\bigg)\bigg)$$

$$= T_{it} + \frac{(1-cp_t)R}{1-\delta(1-z)} + \frac{\delta z V^M}{1-\delta(1-z)}, \tag{J.19}$$

where
$$V^M = \frac{\Pi^M(N)}{1-\delta\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta} \tag{J.20}$$

is the value of being an ordinary council member at the beginning of period $t+1$ following the MPE in Lemma 3 in all future periods. Her expected payoff under a single deviation, i.e., voting against and thus blocking the proposal, is

$$V'' = R + \delta \cdot \bigg(z \cdot \tilde{V}^M + (1-z) \cdot \bigg(\big(1-c(e-1)\big)R + T^*_{i,t+1}$$

$$+ \delta\bigg(z \cdot V^M + (1-z) \cdot \bigg(\big(1-c(e-1)\big)R + \delta\bigg(z \cdot V^M + (1-z) \cdot \dots\bigg)\bigg)\bigg)\bigg)\bigg)$$

$$= R + \delta\bigg(z\tilde{V}^M + (1-z)T^*_{i,t+1} + \frac{(1-z)\big(1-c(e-1)\big)R}{1-\delta(1-z)} + \frac{\delta z V^M}{1-\delta(1-z)}\bigg), \tag{J.21}$$

which is

$$V'' = R + \delta \left(z\tilde{V}^M + \frac{(1-z)c(e-1)R}{1-\delta(1-z)} + \frac{(1-z)\left(1-c(e-1)\right)R}{1-\delta(1-z)} + \frac{\delta z V^M}{1-\delta(1-z)} \right)$$

$$= \frac{R}{1-\delta(1-z)} + \delta z \left(\tilde{V}^M + \frac{\delta V^M}{1-\delta(1-z)} \right) \qquad \text{(J.22)}$$

and further

$$V'' = \frac{R}{1-\delta(1-z)} + \delta z \left(V^M - \Pi^M(N) \cdot T^* + \frac{\delta V^M}{1-\delta(1-z)} \right)$$

$$= \frac{R}{1-\delta(1-z)} + \frac{\delta z V^M}{1-\delta(1-z)} - \delta z \Pi^M(N) \cdot T^*, \qquad \text{(J.23)}$$

where no persecution would happen in the current persecution stage;

$$\tilde{V}^M = \Pi^M(N) \left(\frac{(e-1)\kappa R}{1-\delta} - T^* + \delta \cdot \frac{\Pi^K(N)}{1-\delta\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta} \right)$$

$$= V^M - \Pi^M(N) \cdot T^* \qquad \text{(J.24)}$$

is the value of being an ordinary council member at the beginning of period $t+1$ with $\theta_{t+1} = 1$ under the continuation strategies in the strategy profile in consideration from then onwards;

$$T^* = \begin{cases} \left(\bar{N} - \bar{e} + 1 \right) \cdot c(e-1) \cdot \frac{R}{1-\delta(1-z)}, & \text{if } w \geq \bar{N} - \bar{e} + 1; \\ w \cdot c(e-1) \cdot \frac{R}{1-\delta(1-z)} + \left(\bar{N} - \bar{e} + 1 - w \right) \cdot c(e-1) \cdot \frac{R}{1-\delta}, & \text{if } w < \bar{N} - \bar{e} + 1 \end{cases} \qquad \text{(J.25)}$$

is the total amount of transfer the king at the persecution stage in period $t+1$ would need to pay under the strategy profile in consideration, as adapted from the proof of Claim 3 in Lemma J.1; everyone will follow the continuation strategies in the strategy profile in consideration in all future periods; the focal political justice, if remains as a justice during period $t+1$, will be prioritized to receive a transfer in period $t+1$, i.e.,

$$T^*_{i,t+1} = \frac{c(e-1)R}{1-\delta(1-z)}. \qquad \text{(J.26)}$$

Given that we have assumed that she will vote for the proposal even if indifferent, she will

thus vote for the proposal if and only if $V^P \geq V''$, i.e.,

$$T_{it} \geq cp_t \cdot \frac{R}{1 - \delta(1-z)} - \delta z \Pi^M(N) \cdot T^*. \tag{J.27}$$

Therefore, the strategy of each political justice at the persecution stage when there has not been a contest in the preceding contest stage is Markov perfect.

Finally, consider the king at the persecution stage with $\theta_t = 1$ when there has not been a contest in the contest stage. Suppose that he proposes to persecute p_t ordinary council members. For the proposal to be approved, he needs to commit sufficient transfers to $\bar{N} - \bar{e} + 1$ justices. By $z \in (0, 1)$, it is cheaper to influence a political justice than an apolitical one. Therefore, the total amount of transfers needed is

$$
\begin{aligned}
\tilde{T} &= \min\{\bar{N} - \bar{e} + 1, w\} \cdot \left(cp_t \cdot \frac{R}{1 - \delta(1-z)} - \delta z \Pi^M(N) \cdot T^* \right) \\
&\quad + \max\{\bar{N} - \bar{e} + 1 - w, 0\} \cdot cp_t \cdot \frac{R}{1 - \delta} \\
&= \begin{cases}
(\bar{N} - \bar{e} + 1) \cdot \left(cp_t \cdot \frac{R}{1 - \delta(1-z)} - \delta z \Pi^M(N) \cdot T^* \right), & \text{if } w \geq \bar{N} - \bar{e} + 1; \\
w \cdot \left(cp_t \cdot \frac{R}{1 - \delta(1-z)} - \delta z \Pi^M(N) \cdot T^* \right) + (\bar{N} - \bar{e} + 1 - w) \cdot cp_t \cdot \frac{R}{1 - \delta}, & \text{if } w < \bar{N} - \bar{e} + 1,
\end{cases}
\end{aligned}
\tag{J.28}
$$

subject to the budget

$$B = p_t \cdot \frac{\kappa R}{1 - \delta}. \tag{J.29}$$

Note as $\delta \to 1$, if $w \geq \bar{N} - \bar{e} + 1$, then $\tilde{T} \leq B$ will always hold; when $w < \bar{N} - \bar{e} + 1$, given $\kappa > (\bar{N} - \bar{e} + 1 - w) c$, $\tilde{T} \leq B$ will hold, too. Therefore, given $\delta \to 1$ and $\kappa > (\bar{N} - \bar{e} + 1 - w) c$, the king can get any persecution proposal approved.

Now consider how many ordinary council members the king would like to persecute. The king's expected payoff from proposing to persecute $p_t \in \{1, \ldots, e-1\}$ ordinary members is

$$V^K(p_t) = p_t \cdot \frac{\kappa R}{1 - \delta} - \tilde{T} + \delta V_{t+1}^K, \tag{J.30}$$

where $\tilde{T}$ is the total transfers to give out, which is depending on p_t, and V_{t+1}^K is the value of being the king at the beginning of period $t + 1$ following the MPE in Lemma 3 in all future periods, which is not depending on the current p_t. The king will thus choose $p_t = e - 1$ to maximize his expected payoff, getting

$$V^K(e - 1) = \frac{(e-1)\kappa R}{1 - \delta} - \tilde{T}|_{p_t = e-1} + \delta V_{t+1}^K. \tag{J.31}$$

If the king decides not to persecute any ordinary member instead, then his expected payoff will be

$$V^K(0) = \delta \tilde{V}^K_{t+1} = \delta \Pi^K(N) \cdot \left(\frac{(e-1)\kappa R}{1-\delta} - T^* + \delta V^K_{t+1} \right), \tag{J.32}$$

where $\tilde{V}^K_{t+1}$ is the value of being the king at the beginning of period $t+1$ under the continuation strategies in the strategy profile in consideration with $\theta_{t+1} = 1$. Notice that $\tilde{T}|_{p_t=e-1} < T^*$. Therefore, by $\delta \in (0,1)$, $\Pi^K(N) \in (0,1)$, and $\tilde{T}|_{p_t=e-1} < T^*$, we have $V^K(0) < V^K(e-1)$. Therefore, the king will choose to persecute $p_t = e - 1$ ordinary council members. The king persecuting $e - 1$ ordinary members is thus Markov perfect.

To summarize, we have proved that, first, the strategy of each ordinary council member at the contest stage with $\theta_t = 1$ is Markov perfect and, second, the strategies of the king and justices at the persecution stage with $\theta_t = 1$ when there has not been a contest in the preceding contest stage are Markov perfect, too. The strategy profile in consideration is thus an MPE. The claim is thus proved.

Claim 2a. First, by $\kappa \le (\bar{N} - w - \bar{e} + 1) c$, $\delta \to 1$, and Lemma J.1, in any MPE, if there has been a contest in the preceding contest stage with $\theta_t = 1$, the king at the following persecution stage will not be able to persecute any ordinary council members. Given that, we now examine whether each ordinary member contesting at the contest stage of any period t with $\theta_t = 1$ can be part of an MPE.

Under the strategies in consideration, her expected payoff is

$$V^M = \Pi^M(N) \cdot \delta V^K, \tag{J.33}$$

where

$$\begin{aligned} V^K &= \Pi^K(N) \cdot \left(\frac{(e-1)\kappa R}{1-\delta} + \delta \cdot \Pi^K(N) \cdot \left(\frac{(e-1)\kappa R}{1-\delta} + \delta \cdot \Pi^K(N) \cdot \ldots \right) \right) \\ &= \frac{\Pi^K(N)}{1 - \delta \Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta} \end{aligned} \tag{J.34}$$

is the value of being the king at the beginning of period $t + 1$, since if she becomes the king after the current contest stage, by Lemma J.1, she will not be able to persecute anyone as $\delta \to 1$, and everyone will follow the MPE in Lemma 3 from period $t + 1$ onwards.

Under a single deviation, i.e., not contesting unilaterally only in the current contest stage,

her expected payoff is

$$V'' = R + \delta \left(z \cdot \frac{R}{1-\delta} + (1-z)V^M \right) = R + \delta \left(z \cdot \frac{R}{1-\delta} + (1-z)\Pi^M(N) \cdot \delta V^K \right), \quad (\text{J.35})$$

where the king at the persecution stage will still not be able to persecute anyone given there has still been a contest in the contest stage, so the ordinary member will survive for sure the current period, get R given $\theta_t = 1$ and no persecution in period t, retire with probability z, and remain as an ordinary council member in period $t+1$ and follow the MPE in Lemma 3 onwards with probability $1 - z$.

Now compare V^M and V'': we have

$$
\begin{aligned}
V'' - V^M &= R + \delta \left(z \cdot \frac{R}{1-\delta} + (1-z)\Pi^M(N) \cdot \delta V^K \right) - \Pi^M(N) \cdot \delta V^K \\
&= \frac{\left(1 - \delta(1-z) \right) R}{1-\delta} - \left(1 - \delta(1-z) \right) \Pi^M(N)\delta V^K \\
&= \left(1 - \delta(1-z) \right) \left(\frac{R}{1-\delta} - \Pi^M(N)\delta V^K \right) > 0
\end{aligned}
\quad (\text{J.36})
$$

if and only if

$$\frac{R}{1-\delta} - \Pi^M(N)\delta V^K > 0. \quad (\text{J.37})$$

Observe that, by $e \leq N$, $\delta \in (0,1)$, $\kappa \in (0,1)$, $\Pi^K(N) \in (0,1)$, and $(N-1)\Pi^M(N)+\Pi^K(N) = 1$, we have

$$
\begin{aligned}
\frac{R}{1-\delta} - \Pi^M(N)\delta V^K &= \frac{R}{1-\delta} - \Pi^M(N)\delta \cdot \frac{\Pi^K(N)}{1-\delta\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta} \\
&> \frac{R}{1-\delta} \cdot \left(1 - \frac{(N-1)\Pi^M(N)}{1-\Pi^K(N)} \right) = \frac{R}{1-\delta} \cdot (1-1) = 0. \quad (\text{J.38})
\end{aligned}
$$

Therefore, $V'' - V^M > 0$, i.e., the ordinary member can benefit from the single deviation. Contesting at $\theta_t = 1$ given that everyone else is contesting cannot thus be part of an MPE. The claim is thus proved.

Claim 2b. Consider the following strategy profile for any period t:

- at $\theta_t = 0$, all players follow the MPE in Lemma 3;

- at $\theta_t = 1$,

    - at the contest stage, no ordinary council members contest;

– at the persecution stage,

* if there has been a contest in the preceding contest stage, the king and justices follow the strategies in Lemma J.1;

* if there has not been a contest in the preceding contest stage,

· the king proposes not to persecute any ordinary council members;

· any apolitical justice i will vote for any persecution proposal that would persecute p_t ordinary council members at the current persecution stage if and only if the transfer proposed to her satisfies $T_{it} \geq cp_t \cdot R/(1-\delta)$;

· any political justice i will vote for any persecution proposal at the current persecution stage if and only if the transfer proposed to her satisfies $T_{it} \geq \frac{R}{1-\delta} - \frac{(1-cp_t)R}{1-\delta(1-z)} - \frac{\delta z V^M}{1-\delta(1-z)}$,

where

$$V^M = \frac{\pi^M(N)}{1-\delta\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta}. \tag{J.39}$$

We want to show that this strategy profile is an MPE. Note that, by Lemma 3, the strategies at $\theta_t = 0$ are Markov perfect; by $\kappa \leq (\bar{N} - w - \bar{e} + 1)c$, $\delta \to 1$, and Lemma J.1, the strategies at $\theta_t = 1$ when there has been a contest in the preceding contest stage are Markov perfect. We thus only need to examine, first, whether the strategy of each ordinary council member at the contest stage with $\theta_t = 1$ is Markov perfect and, second, whether the strategies of the king and justices at the persecution stage with $\theta_t = 1$ when there has not been a contest in the preceding contest stage are Markov perfect.

First, consider the strategy of each ordinary council member at the contest stage with $\theta_t = 1$. Under the strategy profile in consideration, each ordinary council member's expected payoff is $V^M = R/(1-\delta)$, since she will enjoy the flow payoff of her asset forever given perpetual peace and absence of persecution, regardless of when she will retire. Under a single deviation, i.e., contesting the kingship unilaterally only in period t, her expected payoff will be

$$V''' = \Pi^M(2) \cdot \left(0 + \delta \cdot V_{t+1}^K\right), \tag{J.40}$$

where $\Pi^M(2)$ is her probability to win the contest, she will not persecute anyone in the following persecution stage given $\delta \to 1$ and $\kappa \leq (\bar{N} - w - \bar{e} + 1)c$, and

$$V_{t+1}^K = \frac{\Pi^K(N)}{1-\delta\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta} \tag{J.41}$$

is the value of being the king at the beginning of period $t+1$ with $\theta_{t+1} = 0$. Now compare V^M and V''': by $\Pi^K(2) \in (0,1)$, $\delta \in (0,1)$, $e \leq N$, $\kappa \in (0,1)$, and $(N-1)\Pi^M(N) + \Pi^K(N) = 1$,

we have

$$
\begin{aligned}
V^M - V''' &= \frac{R}{1-\delta} - \Pi^M(2) \cdot \delta \cdot V_{t+1}^K \\
&= \frac{R}{1-\delta} - \Pi^M(2) \cdot \delta \cdot \frac{\Pi^K(N)}{1-\delta\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta} \\
&= \frac{R}{1-\delta} \cdot \left(1 - \Pi^M(2) \cdot \delta \cdot \frac{\Pi^K(N)}{1-\delta\Pi^K(N)} \cdot (e-1)\kappa \right) \qquad \text{(J.42)}
\end{aligned}
$$

and further

$$
\begin{aligned}
V^M - V''' &> \frac{R}{1-\delta} \cdot \left(1 - \frac{\Pi^M(2)}{\Pi^K(2)} \cdot \frac{(N-1)\Pi^K(N)}{1-\Pi^K(N)} \right) \\
&= \frac{R}{1-\delta} \cdot \left(1 - \frac{\Pi^M(2)}{\Pi^K(2)} \cdot \frac{\Pi^K(N)}{\Pi^M(N)} \right) \geq 0 \qquad \text{(J.43)}
\end{aligned}
$$

if and only if

$$
\frac{\Pi^K(N)}{\Pi^M(N)} \leq \frac{\Pi^K(2)}{\Pi^M(2)}, \qquad \text{(J.44)}
$$

which we have assumed. Therefore, we have $V^M > V'''$. Every ordinary council member not contesting at $\theta_t = 1$ is thus Markov perfect.

Second, consider the strategies of the king and justices at the persecution stage with $\theta_t = 1$ when there has not been a contest in the contest stage. First, consider any apolitical justice i. Suppose she is pivotal. Under the strategy profile in consideration, as in the proof of Lemma J.1 and the proof of Claim 1 in the current proposition, her expected payoff is

$$
V^N = T_{it} + \frac{(1-cp_t)R}{1-\delta}. \qquad \text{(J.45)}
$$

Her expected payoff under a single deviation, i.e., voting against and thus blocking the proposal, is

$$
V'''' = \frac{R}{1-\delta}. \qquad \text{(J.46)}
$$

Given that we have assumed that she will vote for the proposal even if indifferent, she will thus vote for the proposal if and only if $V^N \geq V''''$, i.e.,

$$
T_{it} \geq cp_t \cdot \frac{R}{1-\delta}. \qquad \text{(J.47)}
$$

Therefore, the strategy of each apolitical justice at the persecution stage with $\theta_t = 1$ when there has not been a contest in the preceding contest stage is Markov perfect.

Second, consider any political justice i at the persecution stage with $\theta_t = 1$ when there has not been a contest in the preceding contest stage. Suppose she is pivotal. Under the strategy profile in consideration, as in the proof of Lemma J.1 and the proof of Claim 1 in the current proposition, her expected payoff is

$$V^P = T_{it} + \frac{(1 - cp_t)R}{1 - \delta(1 - z)} + \frac{\delta z V^M}{1 - \delta(1 - z)}, \tag{J.48}$$

where

$$V^M = \frac{\Pi^M(N)}{1 - \delta\Pi^K(N)} \cdot \frac{(e - 1)\kappa R}{1 - \delta} \tag{J.49}$$

is the value of being an ordinary council member at the beginning of period $t + 1$ following the MPE in Lemma 3 in all future periods. Her expected payoff under a single deviation, i.e., voting against and thus blocking the proposal, is

$$V''''' = \frac{R}{1 - \delta}, \tag{J.50}$$

since she will enjoy the flow payoff of her asset forever given perpetual peace and absence of persecution, regardless of when she will become an ordinary council member and when she will retire. Given that we have assumed that she will vote for the proposal even if indifferent, she will thus vote for the proposal if and only if $V^P \geq V'''''$, i.e.,

$$T_{it} \geq \frac{R}{1 - \delta} - \frac{(1 - cp_t)R}{1 - \delta(1 - z)} - \frac{\delta z V^M}{1 - \delta(1 - z)}. \tag{J.51}$$

Therefore, the strategy of each political justice at the persecution stage with $\theta_t = 1$ when there has not been a contest in the preceding contest stage is Markov perfect.

Finally, consider the king at the persecution stage with $\theta_t = 1$ when there has not been a contest in the contest stage. Suppose that he proposes to persecute p_t ordinary council members. For the proposal to be approved, he needs to commit sufficient transfers to $\bar{N} - \bar{e} + 1$ justices. Now consider whether the king can afford such transfers. First, suppose the king prioritizes apolitical justices. Note that, by $w > 0$ and $\kappa \leq (\bar{N} - w - \bar{e} + 1)c$, for any $p_t \in \{1, 2, \ldots, e - 1\}$, the transfers for $\bar{N} - \bar{e} + 1$ apolitical justices, if there are, will cost

$$(\bar{N} - \bar{e} + 1) \cdot cp_t \cdot \frac{R}{1 - \delta} > (\bar{N} - w - \bar{e} + 1) \cdot cp_t \cdot \frac{R}{1 - \delta} \geq p_t \cdot \frac{\kappa R}{1 - \delta}, \tag{J.52}$$

so the king will not be able to afford such transfers. Second, suppose that the king prioritizes political justices. Note that, by $\kappa \leq (\bar{N} - w - \bar{e} + 1)c$ and $\kappa > 0$, we have $\bar{N} - w - \bar{e} + 1 > 0$, i.e., there are fewer than $\bar{N} - \bar{e} + 1$ political justices. Also note that, as $\delta \to 1$, we have, by

$e \leq N$ and $(N-1)\Pi^M(N) + \Pi^K(N) = 1$,

$$\frac{R}{1-\delta} - \frac{(1-cp_t)R}{1-\delta(1-z)} - \frac{\delta z V^M}{1-\delta(1-z)}$$
$$= \frac{R}{1-\delta} - \frac{(1-cp_t)R}{1-\delta(1-z)} - \frac{\delta z}{1-\delta(1-z)} \cdot \frac{\Pi^M(N)}{1-\delta\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta}$$
$$\rightarrow \frac{R}{1-\delta} - \frac{\Pi^M(N)}{1-\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta}, \tag{J.53}$$

while

$$\frac{R}{1-\delta} - \frac{\Pi^M(N)}{1-\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta} \geq \frac{R}{1-\delta} - \frac{(N-1)\Pi^M(N)}{1-\Pi^K(N)} \cdot \frac{\kappa R}{1-\delta}$$
$$= \frac{R}{1-\delta} - \frac{\kappa R}{1-\delta} = \frac{(1-\kappa)R}{1-\delta} > 0, \tag{J.54}$$

so, as $\delta \rightarrow 1$, for any $p_t \in \{1, 2, \ldots, e-1\}$, the total transfers needed will cost, by $\kappa \leq (\bar{N} - w - \bar{e} + 1)c$,

$$w \cdot \left(\frac{R}{1-\delta} - \frac{(1-cp_t)R}{1-\delta(1-z)} - \frac{\delta z V^M}{1-\delta(1-z)} \right) + (\bar{N} - w - \bar{e} + 1) \cdot cp_t \cdot \frac{R}{1-\delta}$$
$$> (\bar{N} - w - \bar{e} + 1) \cdot cp_t \cdot \frac{R}{1-\delta} \geq p_t \cdot \frac{\kappa R}{1-\delta}. \tag{J.55}$$

The king will thus not be able to afford such transfers. Gathering the two possible cases of prioritization, we know that as $\delta \rightarrow 1$, the king will not be able to get any persecution approved in the current persecution stage. Given the infinitesimal cost of proposing persecution, the king not proposing to persecute anyone is thus Markov perfect.

To summarize, we have proved that, first, the strategy of each ordinary council member at the contest stage with $\theta_t = 1$ is Markov perfect and, second, the strategies of the king and justices at the persecution stage with $\theta_t = 1$ when there has not been a contest in the contest stage are Markov perfect, too. The strategy profile in consideration is thus an MPE. The claim and the proposition are thus proved. □

K   Other Medieval or Early Modern European States

Polish–Lithuanian Commonwealth and most medieval Italian city-republics.   In the bottom-left quadrant of Table 6 are states that had a quite insulated judiciary but disconnected or socially incohesive elites.

For example, in the Polish–Lithuanian Commonwealth, "the principal legislative body,"

i.e., the *Sejm,* "reserved its right to act as the supreme court [and] tried important cases of treason" and other state trials (Davies, 2005, p. 267). On the one hand, the *Sejm*'s membership was entitled to "every one of the …noblemen" (Finer, 1997b, p. 1047). Such a "wide …ruling stratum" counted for "8 to 12 per cent [of] the population," even "much higher than in England," and included "many [lower noblemen] as poor as some of their peasants," who were never politically "ambitious" to join the crown's executive (Finer, 1997b, p. 1047; Frost, 2015, p. 352–353). In the language of our model, the Polish–Lithuanian judiciary was thus quite insulated from the executive.

On the other hand, given that Poland was "a land of vast distances, sparse communications, and comparatively feeble urbanization" in the late Middle Ages, the Polish noble estate had always featured "an intense particularism" that were closely attached to "tribal divisions, …regional loyalties, [and] local magnates" (Finer, 1997b, p. 1045). In addition, the bitterness between the Polish and Lithuanian elites was "soured considerably" by the Union of Lublin (Frost, 2015, p. 494). It is thus reasonable to conclude that elite interconnectedness and cohesion in the Commonwealth was low.

A similar characterization can be made for most medieval Italian city-republics. A "common characteristic [of the Italian] city-republics of the fourteenth century," except for Venice, was "the *podestà* in charge of judicial business" (Finer, 1997b, p. 963–964, 980). The "*podestà* and judges" had an "independent status," to which "the executive [was] subject" (Finer, 1997b, p. 967, 979). One key feature of the *podestarial* judiciary was that "all the …cities [other than Venice] perforce drew their *podestà* and their judges from other places, [not] call[ing] on its own native population" (Finer, 1997b, p. 1008). These foreign judicial officials were not eligible to join the executive bodies of the city in the future, so they were perfectly insulated from the executive branch in the language of our model (Finer, 1997b, p. 963, 966, 968–970; Waley and Dean, 2010, p. 40).

In addition to being foreign, the *podestà* should "have no relatives [or] have had offices" recently in the city; the appointment was very short, typically "only …six months or a year"; "when in office," he was not "to eat or drink in the company of any citizen [and] could not engage in trade"; "at the end of his term, …he [was to] undergo …the routine investigation of his tenure [and] not immediately re-eligible for appointment …in the same city" (Waley and Dean, 2010, p. 41–42). Given all these restrictions, it is safe to say that the *podestarial* judiciary of a typical Italian city-republic was not much connected with the native elites.

Venetian Republic. The top-right quadrant of Table 6 is for states that had interconnected and socially cohesive elites but a judiciary that was not insulated from the executive. One such example is the Venetian Republic.

In the Venetian Republic, the judicial power was held by the Council of *Quarantia* (Forty) (Finer, 1997b, p. 989–990). Notably, "[t]he high magistracies" of the Republic, including members of the judicial Forty and executive councils, "were drawn …from [an] inner circle …consisted of not more than about 150 men" (Finer, 1997b, p. 1004, 1009). These "great families intermarried," creating an "undoubtedly mitigating effect" on inter-clan tensions, and "one clan might assist another on a particular occasion and then be repaid in kind by that other clan many years later," building "graft …[b]y way of this association" (Finer, 1997b, p. 1010–1011). In addition, "Venice was [such] a gerontocracy" that "[t]he *vecchi*, [i.e., the old,] shared the experiences of a lifetime of wheeling and dealing and negotiating with one another" (Finer, 1997b, p. 1011–1012). Venice thus had closely interconnected and socially cohesive elites, "not …as murderously rival factions" (Finer, 1997b, p. 1011).

At the same time, these elites "constantly revolved from one elected post to another" (Finer, 1997b, p. 1004). In particular, "this rapid rotation [could be] from …the [judicial] Forty …to …a ducal councillor," who sat with the doge in the highest-executive *Collegio* (Finer, 1997b, p. 994, 1004). In the language of our model, the judiciary of the Venetian Republic was thus not much insulated from its executive branch.

French *Ancien Régime,* Crown of Castile, and Dutch Republic. In the bottom-right quadrant of Table 6 are states that had neither an insulated judiciary nor interconnected and socially cohesive elites. The very first example is the French *Ancien Régime.* This regime is of special interest because its social background was "typical of the European political situation," its institutional arrangement was "the …preeminent …model in Europe," and the political development of "[m]ost European states of the late medieval and early modern periods conformed …to the French pattern" (Strayer, 1970, p. 49).

Under the French *Ancien Régime,* "[f]eudal custom provided that a peer could be tried in the *curia regis* by the other peers when his life or his fief were in question" (Cuttler, 1981, p. 94). Note that in this tradition, the *curia regis,* literally the "royal council," could be read as the executive council in our model. Legally, although "the *Parlement* [of Paris] was the highest court in the kingdom," still, "a king could …override" it by "send[ing] it *lettres de jussion,* [i.e.,] orders for immediate registration [of] the edicts of the king, …hold a *lit de justice,* [i.e., 'a sitting of justice,' or even] exile recalcitrant members …and …abolish the [*Parlement*] altogether" (Cuttler, 1981, p. 115; Finer, 1997c, p. 1310–1311). In practice, "the custom by which the peers themselves pronounced sentence …was a privilege and not a right [and] fell into desuetude during the fourteenth century" (Cuttler, 1981, p. 94). From then until the 18th century the principle applied that "*adveniente principe, cessat magistratus,*" literally "arrives the king, ceases the court": in the *Parlement* "it was the

king who pronounced judgement …with the attendance of …royal councillors selected by the king," while "the peers had only an advisory, if not simply a decorative, rôle" (Villers, 1984, p. 264; Cuttler, 1981, p. 114). In addition, "for a long time …the members [of] the *Parlement* [and the] 'King's Council' …remained interchangeable" (Langlois, 1922, p. 72). Therefore, traditionally, legally, practically, and personnel-wise, the judicial power of the French *Ancien Régime* was not only uninsulated from the executive but also ultimately held by senior members, or simply the head, of the executive.

To understand the relationship among the players who held judicial or executive power under the *Ancien Régime,* note that both the *Parlement* and the King's Council "had taken shape …at the expense of the former *Curia Regis*," and "traces of their original unity [from the *Curia*] persisted" (Langlois, 1922, p. 71–72). Within this tradition the "[g]reat seigneurs and prelates," who "frequently adopted the practice of attending the *curia regis* by proxy," often tended to "indefinitely …remain …in the seclusion of their estate" (Ulph, 1951, p. 226). Over time, as new territories were acquired through annexations, these regional powers and noble houses clearly had their "own …custom [with] a wide degree of diversity in local practices," making "France …a mosaic state, made up of many pieces …with widely divergent characteristics" and strong "particularism and sense of local identity" (Strayer, 1970, p. 50, 52–53; Myers, 1975, p. 71). This encouraged the development of "widely differing institutions" that were "peculiar" while "deep-rooted" and "entrenched" in many regions under the respective noble houses (Strayer, 1970, p. 48, 51; Myers, 1975, p. 71). French politics thus had "conflicting" and "narrow local views and interests" to "reconcile" (Lord, 1930, p. 138; Strayer, 1970, p. 52). In the extreme, regional and family rivalries could lead to assassinations or even civil wars, as in the case of the Armagnac–Burgundian feud (Langlois, 1922, p. 126–127). We thus read the French *Ancien Régime* as having a low level of interconnectedness and social cohesion among the elite.

A similar case was the Crown of Castile. Since Alfonso X, "the royal tribunal [was] the judicial arm" of the Crown and "claimed exclusive jurisdiction …over …treason to the king" and other high crimes committed by nobles (O'Callaghan, 1993, p. 42–44). Although the nobility "repeated the request" for "trial by their peers" and later kings "promised to include noble justices," the king-appointed justices in the tribunal were seldom the peers but "men who feared …the king," sometimes "all laymen" (O'Callaghan, 1989, p. 159–160; 1993, p. 43). Legally, in Castile "appeals would be carried from the ordinary royal judges to the *adelantado mayor* of Castile," who was "a territorial administrator," hence "ultimately to the king," and the king "s[at] in judgement" on a regular schedule (O'Callaghan, 1989, p. 159–160; 1993, p. 43). Castilian judicial power was thus uninsulated from and eventually held by the executive in the same way as in France. At the same time, the nobility held

"suspicion of the judges," and the general "enmity between the Castilians and Leonese" pervaded (O'Callaghan, 1989, p. 43, 160). The remarks about "narrow local views and interests" in France thus also apply here (Lord, 1930, p. 138). We thus categorize the Crown of Castile as having insufficient interconnectedness and social cohesion among the elite.

The final example is the Dutch Republic. In the decentralized state, "there was no central court of justice for the Republic as a whole" (Price, 1994, p. 215). Instead, state trials were held in an "*ad hoc* court set up by the States General," while the "States General consisted of the delegations from [the] provinces" to decide over "certain important matters" for the Republic (Price, 1994, p. 211, 215). In particular, during state trials and "for [this] specific purpose, the States General was able to exercise powers that were unambiguously sovereign" (Price, 1994, p. 215). We can thus read the judiciary as part of the executive, rather than insulated from it.

It is important to note that the United provinces, which sent delegates to the States General, were "not so united" but had a "rather limited sense of common identity" (Price, 1994, p. 221). Indeed, "their traditions were of mutual conflict rather than of co-operation," and "sharp differences [in] economic and social development and structure" generated "deep jealousies, even …hostility" among them (Price, 1994, p. 221, 223). These "had inevitable and important effects on the politics of the Union" given "their different interests and …values" (Price, 1994, p. 225, 233). "[W]here language and culture were concerned," the differences did not help either, especially when complicated by the religious "conflict between remonstrants and contraremonstrants," as they saw each other "as a threat to the survival of the state" (Price, 1994, p. 223; 1998, p. 101, 103). Given all this, we consider these delegates to the States General, who held executive and judicial powers of the Dutch Republic, as socially incohesive.

Political trials and political regimes. History of political trials and political regimes of these European states is consistent with the implications of Proposition 2 and 5, as discussed in Section 5.3. In the Polish–Lithuanian case, the 1505 principle of *Nihil Novi* stated that "nothing new …should be decreed …without the common agreement" from the *Sejm,* but individual veto power was not recognized (Frost, 2015, p. 349). The bigger players thus still had "their carefully concocted plans" to override lesser members in the *Sejm* (Finer, 1997b, p. 1049). As a result, in 1652, "[m]ajority voting was consciously rejected" because of "the prospect of chaos" (Davies, 2005, p. 259). Instead, "to check the absolutist designs of the Polish monarchy," the famous *liberum veto* was adopted, granting veto power to each individual member of the *Sejm* (Finer, 1997b, p. 1049; Davies, 2005, p. 266).

For most medieval Italian city-republics, the *podestarial* judiciary worked to "promote

political order" only when a "delicate balance of power [was] maintained" by "elaborate checks and balances" (Finer, 1997b, p. 1018; Greif, 2006, p. 241). Under autocratic shocks when the unanimity rule was temporarily broken by an individual or family capturing multiple important organs or powers, especially when required by emergency management, the *podestarial* judiciary was not able to maintain the political order (Greif, 2006, p. 245–246). This was also consistent with the institutional features that the *podestà* was "appointed by and responsible to the [executive] *Signoria*" and required "a sufficiently high wage," which would have made him easy to be captured by the chief executive during a general emergency, i.e., when the chief executive had extensive authority while the republic was under pressure (Finer, 1997b, p. 967; Greif, 2005, p. 751; Greif, 2006, p. 240). As discussed in Section 5.2, the unanimity rule was vulnerable to autocratic shocks and eventually slipped into dictatorship-like regimes.

It is difficult to speculate whether political persecution in the Venetian Republic would occur under a non-unanimity rule, because the unanimity rule in Venice, as shown in Section 5.2, had been strong and resilient. What we do know is that under this unanimity rule, Venice had "impartial justice" and "a freedom of speech and a toleration for individual views that were a byword throughout ...the whole Europe" (Finer, 1997b, p. 1017). Also, Venice "was never prey to civil war and even its civil disturbances were small beer, absolutely and relatively" (Finer, 1997b, p. 1016).

In both the French *Ancien Régime* and the Crown of Castile, it had been easy for the king to capture the judiciary. In France, the king "could use ...the authority with which [the *Parlement*] was endowed ...for his own purposes" (Cuttler, 1981, p. 115). In Castile, "the potential for abuse [of judicial power] was ever present," since the king "fail[ed] to adhere to the legal standards set forth in the royal codes" by "deceitful inquests" and "execution without trial" of noblemen (O'Callaghan, 1993, p. 45).

Under this background, when "the old [executive] *curia regis* [was] enlarged [and] turned into parliaments, ...the system of imperative mandates," under which "prox[ies] of great seigneurs and prelates [acted in] the *curia regis* ...only as instructed by those who employed [them]," was kept "as a convenient safeguard for the interests of the lay and ecclesiastical lords" and "'men of the good towns' or ...the commons" (Lord, 1930, p. 128, 138; Ulph, 1951, p. 226). The mandate system "was ...the norm in the French Estates General when it met," and the consultation "talk[ing] directly to local notables or deputies [or] assembl[ies]" continued even when the Estates General did not meet regularly (Stasavage, 2020a, p. 129; Myers, 1975, p. 70). On the Iberian Peninsula, "[m]andates were widely applied by towns ...who sent representatives to assemblies," and "in Castile and Leon [they were] ...almost constantly used, ...explicit and almost unchangeable" (Stasavage, 2020a, p. 129; Holden, 1930, p. 889,

895). As discussed in Section 5.2, the system in practice made a *de facto* unanimity rule by granting each constituency individual veto because of their right to "indefinitely postpone" and "suspend" decisions (Holden, 1930, p. 898; Ulph, 1951, p. 226; Lewis, 1962, p. 14).

In the Dutch Republic, the *ad hoc* judiciary's "arrests and …trials …of Oldenbarnevelt and his associates …were totally illegal [a]ccording to any strict interpretation of the principle of provincial sovereignty" (Price, 1994, p. 214). This was accompanied by the "purge [of] pro-Remonstrant nobles" by "Maurits, …now the presiding figure in the state" (Israel, 1995, p. 450). Although Maurits "took …steps to …subordinate the States of Holland to himself," the mandate system and individual veto power of each province in the States General "remained unchanged": "[i]n principle, the delegations [from the provinces] were strictly bound by their instructions"; "it was clear that in principle unanimity was necessary in all important matters," and each province "had a veto in the States General" (Israel, 1995, p. 450–451; Price, 1994, p. 212–213, 279).[K.1] The logic behind the unanimity rule was that, "[i]t is evident that neither …the subordination of Holland to the will of the majority of the provinces [n]or …subjection of the weaker provinces to the direction of Holland," i.e., no non-unanimity rule, "could have …construct[ed] a stable and workable system," and "either was likely to lead to the break-up of the Union, or …severe domestic unrest" (Price, 1994, p. 278–279). Price (1994, p. 279) elaborates that "[a]ny …system which allowed Holland to be …coerced into …support[ing] policies …against its …interests could not have lasted long," whereas unanimity rule "also afforded the weaker provinces [a] protection from …being overwhelmed by Holland." The unanimity rule was thus "the cornerstone of the Union" (Price, 1994, p. 279).

[K.1]Although "the refusal of any one of them to agree to a given measure could …be ignored," the consequence of such rare breaches of unanimity had been limited by the design that "[t]he presidency of the assembly changed every week, being held by …each province in turn" (Price, 1994, p. 212, 279).