Appendix

A Proof of Lemma 1

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. □

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

$$V^M = \Big(1 - \Pi^M(N)\Big) \cdot 0 + \Pi^M(N) \cdot V^K = \Pi^M(N) \cdot V^K, \tag{8}$$

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

$$V^K = (e-1)\frac{\kappa R}{1-\delta} + \delta \cdot \Pi^K(N) \cdot V^K = \frac{(e-1)\frac{\kappa R}{1-\delta}}{1-\delta\Pi^K(N)}. \tag{9}$$

Therefore, her payoff under the strategy profile is

$$V^M = \Pi^M(N) \cdot \frac{(e-1)\frac{\kappa R}{1-\delta}}{1-\delta\Pi^K(N)}. \tag{10}$$

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

$$V' = \frac{N-e}{N-1} \cdot \Big(R + \delta V^M\Big) = \frac{N-e}{N-1} \cdot \left(R + \delta\Pi^M(N) \cdot \frac{(e-1)\frac{\kappa R}{1-\delta}}{1-\delta\Pi^K(N)}\right), \tag{11}$$

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 (10) and (11), the difference between them is

$$V^M - V' = \left(1 - \frac{N-e}{N-1} \cdot \delta\right) \cdot \Pi^M(N) \cdot \frac{(e-1)\frac{\kappa R}{1-\delta}}{1-\delta\Pi^K(N)} - \frac{N-e}{N-1} \cdot R \to \infty \quad \text{as} \quad \delta \to 1, \tag{12}$$

because the council's decision rule is non-unanimous, i.e., $e \geq 2$. Therefore, the ordinary member is 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

$$V^M = \frac{N-e}{N-1} \cdot \left(R + \delta V^M\right) = \frac{\frac{N-e}{N-1} \cdot R}{1 - \frac{N-e}{N-1} \cdot \delta}, \tag{13}$$

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

$$V'' = \left(1 - \Pi^M(Q')\right) \cdot 0 + \Pi^M(Q') \cdot V^K = \Pi^M(Q') \cdot V^K, \tag{14}$$

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

$$V^K = (e-1)\frac{\kappa R}{1-\delta} + \delta \cdot \Pi^K(Q) \cdot V^K = \frac{(e-1)\frac{\kappa R}{1-\delta}}{1 - \delta \Pi^K(Q)}, \tag{15}$$

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

$$V'' = \Pi^M(Q') \cdot \frac{(e-1)\frac{\kappa R}{1-\delta}}{1 - \delta \Pi^K(Q)}, \tag{16}$$

Now compare the two payoffs, V^M and V'', when $\delta \to 1$. Notice that by Equation (13) and $e \geq 2$, V^M is bounded; by Equation (16) and $e \geq 2$, V'' approaches infinity as δ approaches 1. Therefore, we have

$$V'' - V^M = \Pi^M(Q') \cdot \frac{(e-1)\frac{\kappa R}{1-\delta}}{1 - \delta \Pi^K(Q)} - \frac{\frac{N-e}{N-1} \cdot R}{1 - \frac{N-e}{N-1} \cdot \delta} \to \infty \quad \text{as} \quad \delta \to 1. \tag{17}$$

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. □

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.[19] 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 Hobbesian wars can still feature in an MPE.

C Proof of Proposition 2

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

[19] When denoting the personal discount factor as β and taking it as given, we can derive a few additional comparative statics results. For example, one can show that the threshold of δ above which perpetual Hobbesian wars can feature in equilibrium is decreasing in $e \in \{2, \ldots, N\}$, i.e., weaker domination of the king makes it more difficult for perpetual Hobbesian wars to feature in equilibrium.

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

$$V^M = \frac{R}{1-\delta} > 0. \tag{18}$$

Second, her payoff under the single deviation is

$$V' = \Pi^M(2) \cdot 0 = 0, \tag{19}$$

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

$$V^M = \Pi^M(Q) \cdot 0 = 0, \tag{20}$$

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

$$V'' = R + \delta \cdot V^M = R. \tag{21}$$

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. □

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 her expected payoff will be bounded from above by

$$\begin{aligned}\bar{V}' = {} & \delta\Pi^M(N) \cdot \frac{(N-1)\kappa R}{1-\delta} + \Big(\delta\Pi^K(N)\Big) \cdot \Big(\delta\Pi^M(N)\Big) \cdot \frac{(N-1)\kappa R}{1-\delta} \\ & + \Big(\delta\Pi^K(N)\Big)^2 \cdot \Big(\delta\Pi^M(N)\Big) \cdot \frac{(N-1)\kappa R}{1-\delta} + \cdots = \frac{\delta\Pi^M(N)\frac{(N-1)\kappa R}{1-\delta}}{1-\delta\Pi^K(N)}. \qquad (22)\end{aligned}$$

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 one ordinary council member, where she will unilaterally vote against the proposal in period t. Her expected payoff under this single deviation is

$$V'' = \delta R + \delta^2 \cdot \Pi^M(N) \cdot V^K, \tag{23}$$

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

$$V^M = \delta \cdot \Pi^M(N) \cdot V^K \geq 0, \tag{24}$$

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

Now consider V^K:

$$V^K = \frac{(e'_{t+1} - 1)\kappa R}{1-\delta} + \delta \cdot V^K_{t+2} \leq \frac{(N-1)\kappa R}{1-\delta} + \delta \cdot V^K_{t+2}, \tag{25}$$

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 $s \geq t+2$:

$$V^K_s \leq \max\left\{\delta \cdot V^K_{s+1}, \Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + \delta \cdot V^K_{s+1}\right)\right\}, \tag{26}$$

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:

$$V'' - V^M = \delta R + \delta^2 \cdot \Pi^M(N) \cdot V^K - \delta \cdot \Pi^M(N) \cdot V^K = \delta R - \delta \cdot \Pi^M(N) \cdot (1-\delta) \cdot V^K$$
$$\geq \delta R - \delta \cdot \Pi^M(N) \cdot (1-\delta) \cdot \frac{\frac{(N-1)\kappa R}{1-\delta}}{1 - \delta \cdot \Pi^K(N)} = \delta R \left(1 - \frac{(N-1) \cdot \Pi^M(N)\kappa}{1-\delta \cdot \Pi^K(N)}\right) > 0, \tag{27}$$

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 proposition is thus proved. □

Lemma D.1. *In the proof of Lemma 2, when proving Claim 2, the claim*

$$V^K \leq \frac{\frac{(N-1)\kappa R}{1-\delta}}{1 - \delta \Pi^K(N)} \tag{28}$$

is true.

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

$$V^K_s \leq \begin{cases} \delta \cdot V^K_{s+1}, & \text{if } s \in \{s_n\}_{n=1}; \\ \Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + \delta \cdot V^K_{s+1}\right), & \text{if otherwise.} \end{cases} \tag{29}$$

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 Inequations (25), (26), and (29), we have

$$
\begin{aligned}
V^K &\le \frac{(N-1)\kappa R}{1-\delta} + \delta \cdot V^K_{t+2} \le \frac{(N-1)\kappa R}{1-\delta} + \delta \cdot \Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + \delta \cdot V^K_{t+3} \right) \\
&= \frac{(N-1)\kappa R}{1-\delta} + \delta \Pi^K(N) \cdot \frac{(N-1)\kappa R}{1-\delta} + \Pi^K(N)\delta^2 \cdot V^K_{t+3} \\
&\le \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{2} \Big(\delta \Pi^K(N)\Big)^s + \Pi^K(N)^2 \delta^3 \cdot V^K_{t+4} \\
&\le \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{s_1-t-2} \Big(\delta \Pi^K(N)\Big)^s + \Pi^K(N)^{s_1-t-2} \delta^{s_1-t-1} \cdot V^K_{s_1} \\
&\le \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{s_1-t-2} \Big(\delta \Pi^K(N)\Big)^s + \Pi^K(N)^{s_1-t-2} \delta^{s_1-t-1} \cdot \delta \cdot V^K_{s_1+1}.
\end{aligned} \tag{30}
$$

Then iterate to period s_2: by Inequations (26), (29), and (30) and $\delta \in (0,1)$, we have

$$
\begin{aligned}
V^K &\le \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{s_1-t-2} \Big(\delta \Pi^K(N)\Big)^s + \Pi^K(N)^{s_1-t-2} \delta^{s_1-t-1} \cdot \delta \Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + \delta \cdot V^K_{s_1+2} \right) \\
&= \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{s_1-t-2} \Big(\delta \Pi^K(N)\Big)^s + \Pi^K(N)^{s_1-t-1} \delta^{s_1-t-1} \cdot \delta \cdot \frac{(N-1)\kappa R}{1-\delta} \\
&\qquad + \Pi^K(N)^{s_1-t-1} \delta^{s_1-t} \cdot \delta \cdot V^K_{s_1+2} \\
&< \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{s_1-t-1} \Big(\delta \Pi^K(N)\Big)^s + \Pi^K(N)^{s_1-t-1} \delta^{s_1-t} \cdot \delta \cdot V^K_{s_1+2} \\
&\le \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{s_2-t-3} \Big(\delta \Pi^K(N)\Big)^s + \Pi^K(N)^{s_2-t-3} \delta^{s_2-t-2} \cdot \delta \cdot V^K_{s_2} \\
&\le \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{s_2-t-3} \Big(\delta \Pi^K(N)\Big)^s + \Pi^K(N)^{s_2-t-3} \delta^{s_2-t-2} \cdot \delta^2 \cdot V^K_{s_2+1}.
\end{aligned} \tag{31}
$$

Now denote $n_\tau \le \tau - (t+2)$ 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

$$\begin{aligned} V^K &< \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{\tau-t-2-n_\tau} \Big(\delta \Pi^K(N)\Big)^s + \Pi^K(N)^{\tau-t-2-n_\tau} \delta^{\tau-t-1-n_\tau} \cdot \delta^{n_\tau} \cdot V_\tau^K \\ &= \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{\tau-t-2-n_\tau} \Big(\delta \Pi^K(N)\Big)^s + \Pi^K(N)^{\tau-t-2-n_\tau} \delta^{\tau-t-1} \cdot V_\tau^K \\ &< \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{\tau-t-2} \Big(\delta \Pi^K(N)\Big)^s + \Pi^K(N)^{\tau-t-2-n_\tau} \delta^{\tau-t-1} \cdot V_\tau^K; \end{aligned} \tag{32}$$

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

$$V^K \leq \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{\tau-t-2} \Big(\delta \Pi^K(N)\Big)^s + \Pi^K(N)^{\tau-t-2} \delta^{\tau-t-1} \cdot V_\tau^K. \tag{33}$$

Note that these two cases can just collapse into

$$V^K \leq \frac{(N-1)\kappa R}{1-\delta} \cdot \sum_{s=0}^{\tau-t-2} \Big(\delta \Pi^K(N)\Big)^s + \Pi^K(N)^{\tau-t-2-n_\tau} \delta^{\tau-t-1} \cdot V_\tau^K. \tag{34}$$

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

$$V^K \leq \frac{\frac{(N-1)\kappa R}{1-\delta}}{1-\delta\Pi^K(N)} + \lim_{\tau\to\infty} \Big(\Pi^K(N)^{\tau-t-2-n_\tau} \delta^{\tau-t-1} \cdot V_\tau^K\Big). \tag{35}$$

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

$$\lim_{\tau\to\infty} \Big(\Pi^K(N)^{\tau-t-2-n_\tau} \delta^{\tau-t-1} \cdot V_\tau^K\Big) = 0 \tag{36}$$

and thus

$$V^K \leq \frac{\frac{(N-1)\kappa R}{1-\delta}}{1-\delta\Pi^K(N)}. \tag{37}$$

□

E Proof of Proposition 3 and Discussion on Robustness

Proof. By Lemma 2, we know that unanimity 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

$$V^K = \delta\Pi^K(N) \cdot \frac{(N-1)\kappa R}{1-\delta} + \Big(\delta\Pi^K(N)\Big)^2 \cdot \frac{(N-1)\kappa R}{1-\delta} + \cdots = \frac{\delta\Pi^K(N) \cdot \frac{(N-1)\kappa R}{1-\delta}}{1-\delta\Pi^K(N)}. \quad (38)$$

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 does not have any asset. 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

$$\begin{aligned} \bar{V}'' = {} & \delta\Pi^K(N) \cdot \frac{(N-2)\kappa R}{1-\delta} + \Big(\delta\Pi^K(N)\Big)^2 \cdot \frac{(N-1)\kappa R}{1-\delta} \\ & + \Big(\delta\Pi^K(N)\Big)^3 \cdot \frac{(N-1)\kappa R}{1-\delta} + \cdots = V^K - \delta\Pi^K(N) \cdot \frac{\kappa R}{1-\delta}, \end{aligned} \quad (39)$$

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. Therefore, any single deviation will 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

$$\tilde{V} = \delta\Pi^K(N) \cdot V^K(e_{t+1} = e'), \tag{40}$$

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

$$V''' = \delta\Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + \delta\Pi^K(N) \cdot V^K(e_{t+1} = e') \right). \tag{41}$$

Note that

$$V^K(e_{t+1} = e') < \frac{\frac{(N-1)\kappa R}{1-\delta}}{1 - \delta\Pi^K(N)}, \tag{42}$$

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

$$\begin{aligned} V''' - \tilde{V} &= \delta\Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} - \Big(1 - \delta\Pi^K(N)\Big) \cdot V^K(e_{t+1} = e') \right) \\ &> \delta\Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} - \frac{(N-1)\kappa R}{1-\delta} \right) = 0, \end{aligned} \tag{43}$$

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 thus 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

$$V^M = \delta\Pi^M(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + V^K(e_{t+2} = N) \right) \tag{44}$$

where

$$V^K(e_{t+2} = N) = \delta\Pi^K(N) \cdot \frac{\frac{(N-1)\kappa R}{1-\delta}}{1 - \delta\Pi^K(N)}, \tag{45}$$

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

$$V' = \delta\Pi^M(N) \cdot \left(\frac{(e_t - 1)\kappa R}{1-\delta} + V^K(e_{t+2} = N) \right). \tag{46}$$

Since $e_t \leq N$, 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

$$V^K(e_{t+1} = N) = \delta\Pi^K(N) \cdot \frac{\frac{(N-1)\kappa R}{1-\delta}}{1 - \delta\Pi^K(N)}, \tag{47}$$

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

$$V'' = \delta\Pi^K(N) \cdot \left(\frac{(e_t - 1)\kappa R}{1-\delta} + V^K(e_{t+2} = N) \right). \tag{48}$$

Supposing the continuation strategies constitute an MPE, by Claim 1, $V^K(e_{t+1} = N) = V^K(e_{t+2} = N)$. Therefore, by $e_t \leq N-1$, we 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 $e'_{t+1} = e' \leq N-1$

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

$$\bar{V}''' = \delta \Pi^K(N) \cdot \left(\frac{(N-2)\kappa R}{1-\delta} + V^K(e_{t+2} = N) \right). \tag{49}$$

Again, we have $V^K(e_{t+1} = N) > V'''$, 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; finally, the king proposes $e'_{t+1} \in \{2, 3, \dots, N-1\} \setminus \{e_t\}$ 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

$$V^K(e_{t+1} = e_t) = \delta \Pi^K(N) \cdot \left(\frac{(e_t - 1)\kappa R}{1-\delta} + V^K(e_{t+2} = e_t) \right), \tag{50}$$

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. Therefore, the king's expected payoff under the single deviation is thus

$$V'''' = \delta \Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + V^K(e_{t+2} = N) \right). \tag{51}$$

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. 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.

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

$$\bar{V} = \delta\Pi^K(N) \cdot \left(\frac{(e'-1)\kappa R}{1-\delta} + V^K(e_{t+2} = N) \right). \tag{52}$$

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,

$$V'''' = \delta\Pi^K(N) \cdot \left(\frac{(N-1)\kappa R}{1-\delta} + V^K(e_{t+2} = N) \right). \tag{53}$$

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 3. A driving force behind the intuition and proof of Proposition 3 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 3 can then still be supported by an MPE, as long as the incumbent advantage in a Hobbesian war, 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 3 can still be supported by an MPE when the incumbent advantage in a Hobbesian war 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 Hobbesian wars compared to peace under unanimity rule.

F Proof of Proposition 4

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. 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. 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 ordinary council member in the constitutional convention will be

$$V^M(e_{t+1} = 1) = \delta \cdot \frac{R}{1-\delta}. \tag{54}$$

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

$$V' = \delta \Pi^M(N) \cdot \frac{(e_t - 1)\kappa R}{1-\delta}, \tag{55}$$

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

$$V' = \delta \Pi^M(N) \cdot \frac{(e_t - 1)\kappa R}{1-\delta} \leq \delta \cdot \frac{(N-1)\Pi^M(N)\kappa R}{1-\delta} < \delta \cdot \frac{R}{1-\delta} = V^M(e_{t+1} = 1). \tag{56}$$

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

$$\bar{V}'' = \delta \Pi^M(N) \cdot \frac{(N-1)\kappa R}{1-\delta}, \tag{57}$$

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 $\bar{V}'' < V^M(e_{t+1} = 1)$. 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. Any MPE cannot include any alternative Markov strategies that would lead to $e_{t+1} \neq 1$. There are two 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. We now examine whether a single deviation from these alternatives can make the deviating player better off.

First, note that, under both of the 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 Hobbesian war in period t. Therefore, her expected payoff in the constitutional convention in period t is, by $e_{t+1} \leq N$, at most

$$\bar{V} = \delta \Pi^M(N) \cdot \frac{\frac{(N-1)\kappa R}{1-\delta}}{1 - \delta \Pi^K(N)}. \tag{58}$$

Second, consider a single deviation from either 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

$$V''' = \delta \cdot \frac{R}{1-\delta}, \tag{59}$$

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

$$\bar{V} = \delta \Pi^M(N) \cdot \frac{\frac{(N-1)\kappa R}{1-\delta}}{1 - \delta \Pi^K(N)} < \delta \cdot \frac{\frac{\left(1-\Pi^K(N)\right)\cdot R}{1-\delta}}{1 - \delta \Pi^K(N)} < \delta \cdot \frac{\frac{\left(1-\delta\Pi^K(N)\right)\cdot R}{1-\delta}}{1 - \delta \Pi^K(N)} = \delta \cdot \frac{R}{1-\delta} = V'''. \tag{60}$$

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

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

$$V^N = T_{it} + \frac{R_{i,t-1}}{1-\delta}; \tag{61}$$

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

$$V' = \frac{R_{i,t-1}}{1-\delta} \leq V^N, \tag{62}$$

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

$$V^P = T_{it} + R_{i,t-1} + \delta\left(z \cdot V^M + (1-z)V^P\right), \tag{63}$$

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

$$V'' = R_{i,t-1} + \delta\left(z \cdot V^M + (1-z)V^P\right) \leq V^P, \tag{64}$$

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

$$V^M = \Pi^M(N) \cdot \left(\frac{(e-1)\kappa R}{1-\delta} + \delta V^K\right) \geq 0, \tag{65}$$

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

$$\bar{V} = 0 \leq V^M, \tag{66}$$

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. □

H Proof of Lemma 4

Proof. We prove the three claims one by one.

Claim 1. First, examine any non-political 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

$$V^N = (1 - cp_t)R + T_{it} + \delta \cdot \frac{(1 - cp_t)R}{1 - \delta} = T_{it} + \frac{(1 - cp_t)R}{1 - \delta}, \tag{67}$$

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

$$V' = R + \delta \cdot \frac{R}{1 - \delta} = \frac{R}{1 - \delta}, \tag{68}$$

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.,

$$T_{it} \geq cp_t \cdot \frac{R}{1 - \delta}. \tag{69}$$

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

$$\begin{aligned}V^P &= (1 - cp_t)R + T_{it} + \delta\Bigg(z \cdot V^M + (1 - z) \\ &\qquad \cdot \left((1 - cp_t)R + \delta\left(z \cdot V^M + (1 - z) \cdot \ldots\right)\right)\Bigg) \\ &= T_{it} + \frac{(1 - cp_t)R}{1 - \delta(1 - z)} + \frac{\delta z V^M}{1 - \delta(1 - z)}, \end{aligned} \tag{70}$$

where

$$V^M = \frac{\pi^M(N)}{1 - \delta\Pi^K(N)} \cdot \frac{(e - 1)\kappa R}{1 - \delta} \tag{71}$$

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

$$\begin{aligned}V'' &= R + \delta\left(z \cdot V^M + (1 - z) \cdot \left(R + \delta\left(z \cdot V^M + (1 - z) \cdot \ldots\right)\right)\right) \\ &= \frac{R}{1 - \delta(1 - z)} + \frac{\delta z V^M}{1 - \delta(1 - z)}. \end{aligned} \tag{72}$$

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.,

$$T_{it} \geq cp_t \cdot \frac{R}{1 - \delta(1 - z)}. \tag{73}$$

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 a non-political one. Therefore, the total amount of transfers needed is

$$\begin{aligned}T &= \min\{\bar{N} - \bar{e} + 1, w\} \cdot cp_t \cdot \frac{R}{1 - \delta(1 - z)} + \max\{\bar{N} - \bar{e} + 1 - w, 0\} \cdot cp_t \cdot \frac{R}{1 - \delta} \\ &= \begin{cases} \left(\bar{N} - \bar{e} + 1\right) \cdot cp_t \cdot \frac{R}{1 - \delta(1 - z)}, & \text{if } w \geq \bar{N} - \bar{e} + 1; \\ w \cdot cp_t \cdot \frac{R}{1 - \delta(1 - z)} + \left(\bar{N} - \bar{e} + 1 - w\right) \cdot cp_t \cdot \frac{R}{1 - \delta}, & \text{if } w < \bar{N} - \bar{e} + 1. \end{cases} \end{aligned} \tag{74}$$

subject to the budget

$$B = p_t \cdot \frac{\kappa R}{1-\delta}. \tag{75}$$

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

$$\left(\bar{N} - \bar{e} + 1 - w\right) c < \kappa. \tag{76}$$

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

$$V^K(p_t) = p_t \cdot \frac{\kappa R}{1-\delta} - T + \delta V^K_{t+1}, \tag{77}$$

subject to

$$p_t \in \{0, 1, \ldots, e-1\}, \quad \left(\bar{N} - \bar{e} + 1 - w\right) c < \kappa. \tag{78}$$

where T is the total transfers, which depends on p_t, and where V^K_{t+1} 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. □

I Proof of 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 $\max\{\bar{N} - \bar{e} + 1 - w, 0\}$ non-political justices;
  - any non-political 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 $T_{it} \geq cp_t \cdot R/\big(1-\delta(1-z)\big)$;
* 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 $\max\{\bar{N} - \bar{e} + 1 - w, 0\}$ non-political justices;
  - any non-political 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

$$T^* = \begin{cases} \big(\bar{N} - \bar{e} + 1\big) \cdot c(e-1) \cdot \frac{R}{1-\delta(1-z)}, & \text{if } w \geq \bar{N} - \bar{e} + 1; \\ w \cdot c(e-1) \cdot \frac{R}{1-\delta(1-z)} + \big(\bar{N} - \bar{e} + 1 - w\big) \cdot c(e-1) \cdot \frac{R}{1-\delta}, & \text{if } w < \bar{N} - \bar{e} + 1. \end{cases} \tag{79}$$

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 $\kappa > \big(\bar{N} - w - \bar{e} + 1\big)\, c$, $\delta \to 1$, and Lemma 4, 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 4, 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 non-political justice i. Suppose she is pivotal. Under the strategy profile in consideration, as in the proof of Lemma 4, her expected payoff is

$$V^N = (1 - cp_t)R + T_{it} + \delta \cdot \frac{(1 - cp_t)R}{1 - \delta} = T_{it} + \frac{(1 - cp_t)R}{1 - \delta}, \tag{80}$$

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

$$\begin{aligned} V' &= R + \delta \cdot \Bigg(\big(1 - c(e-1)\big) R + T^*_{i,t+1} \\ &\qquad + \delta \bigg(\big(1 - c(e-1)\big) R + \delta \cdot \Big(\big(1 - c(e-1)\big) R + \dots \Big) \bigg) \Bigg) \\ &= R + \delta \left(T^*_{i,t+1} + \frac{\big(1 - c(e-1)\big) R}{1 - \delta} \right) = R + \delta \left(\frac{c(e-1)R}{1 - \delta} + \frac{\big(1 - c(e-1)\big) R}{1 - \delta} \right) \\ &= \frac{R}{1 - \delta}, \end{aligned} \tag{81}$$

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 non-political justice will be prioritized to receive a transfer in period $t+1$, i.e.,

$$T^*_{i,t+1} = \frac{c(e-1)R}{1-\delta}. \tag{82}$$

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.,

$$T_{it} \geq cp_t \cdot \frac{R}{1-\delta}. \tag{83}$$

Therefore, the strategy of each non-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.

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 4, her expected payoff is

$$\begin{aligned} V^P = {} & (1-cp_t)R + T_{it} + \delta\Bigg(z \cdot V^M + (1-z) \\ & \cdot \left((1-cp_t)R + \delta \left(z \cdot V^M + (1-z) \cdot \ldots \right) \right) \Bigg) \\ = {} & T_{it} + \frac{(1-cp_t)R}{1-\delta(1-z)} + \frac{\delta z V^M}{1-\delta(1-z)}, \end{aligned} \tag{84}$$

where

$$V^M = \frac{\Pi^M(N)}{1-\delta\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta} \tag{85}$$

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

$$
\begin{aligned}
V'' &= R + \delta \cdot \Bigg(z \cdot \tilde{V}^M + (1-z) \cdot \Bigg(\big(1 - c(e-1)\big) R + T^*_{i,t+1} \\
&\quad + \delta \bigg(z \cdot V^M + (1-z) \cdot \bigg(\big(1-c(e-1)\big) R + \delta \Big(z \cdot V^M + (1-z) \cdot \ldots \Big) \bigg) \bigg) \Bigg) \Bigg) \\
&= R + \delta \left(z\tilde{V}^M + (1-z) T^*_{i,t+1} + \frac{(1-z)\big(1-c(e-1)\big) R}{1-\delta(1-z)} + \frac{\delta z V^M}{1-\delta(1-z)} \right) \\
&= R + \delta \left(z\tilde{V}^M + \frac{(1-z)c(e-1)R}{1-\delta(1-z)} + \frac{(1-z)\big(1-c(e-1)\big) R}{1-\delta(1-z)} + \frac{\delta z V^M}{1-\delta(1-z)} \right) \\
&= \frac{R}{1-\delta(1-z)} + \delta z \left(\tilde{V}^M + \frac{\delta V^M}{1-\delta(1-z)} \right) \\
&= \frac{R}{1-\delta(1-z)} + \delta z \left(V^M - \Pi^M(N) \cdot T^* + \frac{\delta V^M}{1-\delta(1-z)} \right) \\
&= \frac{R}{1-\delta(1-z)} + \frac{\delta z V^M}{1-\delta(1-z)} - \delta z \Pi^M(N) \cdot T^*,
\end{aligned} \tag{86}
$$

where no persecution would happen in the current persecution stage;

$$
\tilde{V}^M = \Pi^M(N) \left(\frac{(e-1)\kappa R}{1-\delta} - T^* + \delta \cdot \frac{\Pi^K(N)}{1-\delta\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta} \right) = V^M - \Pi^M(N) \cdot T^* \tag{87}
$$

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;

$$
T^* = \begin{cases} \big(\bar{N} - \bar{e} + 1\big) \cdot c(e-1) \cdot \frac{R}{1-\delta(1-z)}, & \text{if } w \geq \bar{N} - \bar{e} + 1; \\ w \cdot c(e-1) \cdot \frac{R}{1-\delta(1-z)} + \big(\bar{N} - \bar{e} + 1 - w\big) \cdot c(e-1) \cdot \frac{R}{1-\delta}, & \text{if } w < \bar{N} - \bar{e} + 1 \end{cases} \tag{88}
$$

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 4; 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.,

$$
T^*_{i,t+1} = \frac{c(e-1)R}{1-\delta(1-z)}. \tag{89}
$$

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.,

$$T_{it} \geq cp_t \cdot \frac{R}{1-\delta(1-z)} - \delta z \Pi^M(N) \cdot T^*. \tag{90}$$

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 a non-political one. Therefore, the total amount of transfers needed is

$$\begin{aligned}
\tilde{T} &= \min\{\bar{N}-\bar{e}+1, w\} \cdot \left(cp_t \cdot \frac{R}{1-\delta(1-z)} - \delta z \Pi^M(N) \cdot T^*\right) \\
&\qquad + \max\{\bar{N}-\bar{e}+1-w, 0\} \cdot cp_t \cdot \frac{R}{1-\delta} \\
&= \begin{cases} \left(\bar{N}-\bar{e}+1\right) \cdot \left(cp_t \cdot \frac{R}{1-\delta(1-z)} - \delta z \Pi^M(N) \cdot T^*\right), & \text{if } w \geq \bar{N}-\bar{e}+1; \\ w \cdot \left(cp_t \cdot \frac{R}{1-\delta(1-z)} - \delta z \Pi^M(N) \cdot T^*\right) + \left(\bar{N}-\bar{e}+1-w\right) \cdot cp_t \cdot \frac{R}{1-\delta}, & \text{if } w < \bar{N}-\bar{e}+1, \end{cases}
\end{aligned} \tag{91}$$

subject to the budget

$$B = p_t \cdot \frac{\kappa R}{1-\delta}. \tag{92}$$

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 $\kappa > \left(\bar{N}-\bar{e}+1-w\right)c$, $\tilde{T} \leq B$ will hold, too. Therefore, given $\delta \to 1$ and $\kappa > \left(\bar{N}-\bar{e}+1-w\right)c$, 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

$$V^K(p_t) = p_t \cdot \frac{\kappa R}{1-\delta} - \tilde{T} + \delta V^K_{t+1}, \tag{93}$$

where $\tilde{T}$ is the total transfers to give out, which is depending on p_t, and V^K_{t+1} 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

$$V^K(e-1) = \frac{(e-1)\kappa R}{1-\delta} - \tilde{T}|_{p_t=e-1} + \delta V^K_{t+1}. \tag{94}$$

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

$$V^K(0) = \delta \tilde{V}^K_{t+1} = \delta \Pi^K(N) \cdot \left(\frac{(e-1)\kappa R}{1-\delta} - T^* + \delta V^K_{t+1} \right), \tag{95}$$

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 $\kappa \leq \left(\bar{N} - w - \bar{e} + 1\right) c$, $\delta \to 1$, and Lemma 4, 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

$$V^M = \Pi^M(N) \cdot \delta V^K, \tag{96}$$

where

$$\begin{aligned} V^K &= \Pi^K(N) \cdot \left(\frac{(e-1)\kappa R}{1-\delta} + \delta \cdot \Pi^K(N) \cdot \left(\frac{(e-1)\kappa R}{1-\delta} + \delta \cdot \Pi^K(N) \cdot \ldots \right) \right) \\ &= \frac{\Pi^K(N)}{1-\delta \Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta} \end{aligned} \tag{97}$$

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 4, 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

$$V'' = R + \delta \left(z \cdot \frac{R}{1-\delta} + (1-z)V^M \right) = R + \delta \left(z \cdot \frac{R}{1-\delta} + (1-z)\Pi^M(N) \cdot \delta V^K \right), \quad (98)$$

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

$$\begin{aligned} V'' - V^M &= R + \delta \left(z \cdot \frac{R}{1-\delta} + (1-z)\Pi^M(N) \cdot \delta V^K \right) - \Pi^M(N) \cdot \delta V^K \\ &= \frac{\big(1 - \delta(1-z)\big) R}{1-\delta} - \big(1-\delta(1-z)\big) \Pi^M(N)\delta V^K \\ &= \big(1-\delta(1-z)\big) \left(\frac{R}{1-\delta} - \Pi^M(N)\delta V^K \right) > 0 \end{aligned} \quad (99)$$

if and only if

$$\frac{R}{1-\delta} - \Pi^M(N)\delta V^K > 0. \quad (100)$$

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

$$\begin{aligned} \frac{R}{1-\delta} - \Pi^M(N)\delta V^K &= \frac{R}{1-\delta} - \Pi^M(N)\delta \cdot \frac{\Pi^K(N)}{1-\delta\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta} \\ &> \frac{R}{1-\delta} \cdot \left(1 - \frac{(N-1)\Pi^M(N)}{1-\Pi^K(N)} \right) = \frac{R}{1-\delta} \cdot (1-1) = 0. \end{aligned} \quad (101)$$

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 4;
  * if there has not been a contest in the preceding contest stage,
    · the king proposes not to persecute any ordinary council members;
    · any non-political 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

$$V^M = \frac{\pi^M(N)}{1-\delta\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta}. \tag{102}$$

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 $\kappa \leq \left(\bar{N} - w - \bar{e} + 1\right) c$, $\delta \to 1$, and Lemma 4, 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

$$V''' = \Pi^M(2) \cdot \left(0 + \delta \cdot V^K_{t+1}\right), \tag{103}$$

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 $\kappa \leq \left(\bar{N} - w - \bar{e} + 1\right) c$, and

$$V^K_{t+1} = \frac{\Pi^K(N)}{1-\delta\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta} \tag{104}$$

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

$$\begin{aligned}
&V^M - V''' \\
&= \frac{R}{1-\delta} - \Pi^M(2)\cdot\delta\cdot V^K_{t+1} = \frac{R}{1-\delta} - \Pi^M(2)\cdot\delta\cdot\frac{\Pi^K(N)}{1-\delta\Pi^K(N)}\cdot\frac{(e-1)\kappa R}{1-\delta} \\
&= \frac{R}{1-\delta}\cdot\left(1-\Pi^M(2)\cdot\delta\cdot\frac{\Pi^K(N)}{1-\delta\Pi^K(N)}\cdot(e-1)\kappa\right) \\
&> \frac{R}{1-\delta}\cdot\left(1-\frac{\Pi^M(2)}{\Pi^K(2)}\cdot\frac{(N-1)\Pi^K(N)}{1-\Pi^K(N)}\right) = \frac{R}{1-\delta}\cdot\left(1-\frac{\Pi^M(2)}{\Pi^K(2)}\cdot\frac{\Pi^K(N)}{\Pi^M(N)}\right)\geq 0 \qquad (105)
\end{aligned}$$

if and only if

$$\frac{\Pi^K(N)}{\Pi^M(N)}\leq\frac{\Pi^K(2)}{\Pi^M(2)}, \qquad (106)$$

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 non-political justice i. Suppose she is pivotal. Under the strategy profile in consideration, as in the proof of Lemma 4 and the proof of Claim 1 in the current proposition, her expected payoff is

$$V^N = T_{it} + \frac{(1-cp_t)R}{1-\delta}. \qquad (107)$$

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

$$V'''' = \frac{R}{1-\delta}. \qquad (108)$$

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.,

$$T_{it}\geq cp_t\cdot\frac{R}{1-\delta}. \qquad (109)$$

Therefore, the strategy of each non-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.

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 4 and the proof of Claim 1 in the current proposition, her expected payoff is

$$V^P = T_{it} + \frac{(1 - cp_t)R}{1 - \delta(1 - z)} + \frac{\delta z V^M}{1 - \delta(1 - z)}, \tag{110}$$

where

$$V^M = \frac{\Pi^M(N)}{1 - \delta \Pi^K(N)} \cdot \frac{(e - 1)\kappa R}{1 - \delta} \tag{111}$$

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

$$V''''' = \frac{R}{1 - \delta}, \tag{112}$$

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.,

$$T_{it} \geq \frac{R}{1 - \delta} - \frac{(1 - cp_t)R}{1 - \delta(1 - z)} - \frac{\delta z V^M}{1 - \delta(1 - z)}. \tag{113}$$

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 non-political 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 $\bar{N} - \bar{e} + 1$ non-political justices, if there are, will cost

$$(\bar{N} - \bar{e} + 1) \cdot cp_t \cdot \frac{R}{1 - \delta} > (\bar{N} - w - \bar{e} + 1) \cdot cp_t \cdot \frac{R}{1 - \delta} \geq p_t \cdot \frac{\kappa R}{1 - \delta}, \tag{114}$$

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 $(N-1)\Pi^M(N) + \Pi^K(N) = 1$,

$$\begin{aligned}
&\frac{R}{1-\delta} - \frac{(1-cp_t)R}{1-\delta(1-z)} - \frac{\delta z V^M}{1-\delta(1-z)} \\
&= \frac{R}{1-\delta} - \frac{(1-cp_t)R}{1-\delta(1-z)} - \frac{\delta z}{1-\delta(1-z)} \cdot \frac{\Pi^M(N)}{1-\delta\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta} \\
&\to \frac{R}{1-\delta} - \frac{\Pi^M(N)}{1-\Pi^K(N)} \cdot \frac{(e-1)\kappa R}{1-\delta} \geq \frac{R}{1-\delta} - \frac{(N-1)\Pi^M(N)}{1-\Pi^K(N)} \cdot \frac{\kappa R}{1-\delta} \\
&= \frac{R}{1-\delta} - \frac{\kappa R}{1-\delta} = \frac{(1-\kappa)R}{1-\delta} > 0, \qquad (115)
\end{aligned}$$

so, as $\delta \to 1$, for any $p_t \in \{1, 2, \ldots, e-1\}$, the total transfers needed will cost, by $\kappa \leq (\bar{N} - w - \bar{e} + 1)c$,

$$\begin{aligned}
&w \cdot \left(\frac{R}{1-\delta} - \frac{(1-cp_t)R}{1-\delta(1-z)} - \frac{\delta z V^M}{1-\delta(1-z)} \right) + (\bar{N} - w - \bar{e} + 1) \cdot cp_t \cdot \frac{R}{1-\delta} \\
&> (\bar{N} - w - \bar{e} + 1) \cdot cp_t \cdot \frac{R}{1-\delta} \geq p_t \cdot \frac{\kappa R}{1-\delta}. \qquad (116)
\end{aligned}$$

The king will thus not be able to afford such transfers. Gathering the two possible cases of prioritization, we know that as $\delta \to 1$, 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. □

J American Vetocracy vs. Consensual Leadership of the Chinese Communist Party

To further illustrate the relevance of Propositions 3 and 4, we compare American "vetocracy" with the consensus requirement in decision-making within the Politburo Standing Committee of the Chinese Communist Party that was largely effective from the late 1970s to 2012. Table 6 summarizes the comparison.

Both regimes can be interpreted as functioning by unanimity rule. As Fukuyama (2014, p. 488) comments, the American political system is "a complex system of checks and bal-

Table 6: American vetocracy vs. consensual leadership of the Chinese Communist Party

	American vetocracy	CCP leadership, late 1970s–2012
Political regime	"Excessive" checks and balances/consensus requirement, i.e., unanimity rule	
Legeslative agenda-setter	Congress, not President	General Secretary, i.e., chief executive
Emergency power	Quick to grant, confident of renewing constraints later	Once granted difficult to withdraw

Sources: Shirk (1993, 2018), Huang (2000), Tsebelis (2003), Agamben (2005), Vogel (2005), Fukuyama (2014), CPC (2017), Xie and Xie (2017), Chafetz and Pozen (2018), NPC of China (2018), Cai (2022), Li et al. (2022a), Shih (2022), and Wu (2022).

ances that was deliberately designed …to constrain the power of the state." Following Tsebelis (2003), Fukuyama (2014, p. 493, 499) reads these "excessive …checks and balances" as "too many …veto players," labeling the American system a "vetocracy." In Chinese communist politics, a united image of the Party has always been fundamental for the single-party authority; the disastrous outcomes of Mao's last years are still fresh in memories (e.g., Xie and Xie, 2017; Shirk, 2018). Since the late 1970s until Xi Jinping's ascent to power in 2012, important decisions required consensus within the highest leadership of the Party so that even the weakest Politburo Standing Committee member could constrain the General Secretary (e.g., Shirk, 1993, 2018; Huang, 2000; Vogel, 2005; Xie and Xie, 2017; Cai, 2022; Li et al., 2022a).

One big difference between these two examples is who has the power to set the legislative agenda. In the United States, this power is vested with Congress, which, notably, excludes the President: "in American political culture, …Congress jealously guards its right to legislate" from the Presidents' effort to shape legislation (Fukuyama, 2014, p. 496). Corollary 1 suggests that this separation of powers allows American vetocracy to be resilient when faced with regime shocks. Consistent with Corollary 2, temporary expansion of presidential powers to deal with emergencies, for example, during wars, has usually been followed by renewed constraints on the executive, once the emergency has been dealt with, and is thus less threatening to the veto regime. A prominent example can be found in Congress's passing of Amendment XXII to the United States Constitution after the presidency of Franklin D. Roosevelt (e.g., Chafetz and Pozen, 2018).

As a result, although being criticized for "sometimes making it impossible altogether" to reach collective decision on normal policy issues, Congress can still "delegate huge powers to the executive branch" during economic and security crises, "allowing it to operate rapidly and sometimes with a very low degree of accountability" (e.g., Agamben, 2005; Fukuyama, 2014, p. 493, 497–498). At the same time, Proposition 2 suggests that the American vetocracy is necessary for civil peace, especially given the political polarization within American society (e.g., Fukuyama, 2014, p. 489–490). In this sense, Congress as the legislative agenda-setter helps affirm simultaneously strong emergency capacity, checks and balances on the executive, and civil peace within the American vetocracy.

The picture is different when it comes to the highest leadership of the Chinese Communist Party. The agenda-setting power on all issues, including the constitutional issues of the Party and the state, rests in the hands of the General Secretary: Article 23 of the Party's Constitution specifies that "the General Secretary …is responsible for convening meetings of the Political Bureau and its Standing Committee," i.e., the highest governing bodies of the Party and the state, "and shall preside over the work of the Secretariat," i.e., the operational agency of the Party's leadership (CPC, 2017). It is thus impossible for the Party and its leadership to separate the agenda-setting power on the Party's constitutional issues from the General Secretary.

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) and Li et al. (2022a) about Xi Jinping'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.[20] Nevertheless, 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 (NPC of China, 2018). In October 2022, Xi was reelected as the General Secretary of the Party for a precedent-breaking third term (CCCPC, 2022). Not only that, the degree that he stacked loyalists into the Party 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 achieved "overwhelming dominance of the CCP leadership, …bring[ing] to an end the old era of factional politics among CCP elites" (Shih, 2022, p. 10; Wu, 2022, p. 9).[21]

[20]For more studies on understanding the anti-corruption campaign, see, for example, Lu and Lorentzen (2018), Xi et al. (2018), and Li et al. (2022a).

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