Constitutional Power Sharing and Policy Lock-In

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Version 1.2 — March 12, 2002

*I am grateful to seminar audiences at Harvard, Ohio State, Oxford, and Stanford for useful comments.
Abstract

This paper constructs a model of constitution writing that demonstrates the theoretical possibility that what appears to be constitutional power sharing can actually permit constitution writers to lock in their preferred policy outcomes. This model was designed to explain some features of the constitution imposed by Chile’s military government in 1980. However, the model casts some light on the deliberations of the Federal Convention of 1787 in the United States, suggesting that the “Great Compromise” between the larger and smaller states heavily favored the smaller states.
Introduction

One of the first empirical regularities that emerges when one embarks on a comparative analysis of constitutions is the wide variation in the level of detail contained in each. Some are short and vague (an extreme example being set by Great Britain, which has no written constitution), while others are written to micromanage the details of policy (the Brazilian constitution of 1988 caps interest rates). We might usefully place governments along a continuum. At one extreme we could place those that set up a few rules allocating power over political decisions, and specifying the means for choosing the decision makers, while turning over the details to future lawgivers and policymakers. At the other end of the spectrum we could place systems characterized by policy “lock in”, with detailed policy specifications and difficult to attain supermajority thresholds required for amendment. Moving along the continuum of constitutional types we find what appears to be a tradeoff between flexibility in adapting to changing circumstance and fidelity to the policy choices of a constitution’s authors.

At the same time that we observe variations in flexibility and lock-in we also observe huge differences in the inclusiveness of participation. Some constitutions restrict participation to a narrow elite, while others are much more majoritarian. It is tempting to conclude that by expanding the set of people who participate in government, for example by electing legislators or a chief executive, the authors of more inclusive constitutions are releasing control over future policy choices.

In this paper I develop a model of constitutional power sharing in which sharing power with one’s political opponents can actually help the constitution writer to lock-in her most preferred policy outcome. This argument does not depend on the greater legitimacy that inclusive political institutions enjoy, though added legitimacy is certainly an asset that makes regimes more
resilient. Instead one sets one’s political opponents to the task of constraining one’s “allies”.

After developing the model, I use it to analyze the drafting of two very different constitutions. First I use the model to analyze the power sharing features of the constitution imposed by Chile’s military government. I then apply the same analytical principles to the drafting of the US Constitution in 1787. While the process at Philadelphia was far more democratic; the authors had to draw up a constitution that would meet with public approval, the constitution nevertheless delegated power to a system of “veto players”. The model developed in this paper indicates that the controversy over representation that emerged at the Federal Convention between the large and small state delegates was resolved not by compromise, but rather, ended in an unambiguous victory for the small states.

The next section of the paper sets forth a model of preferences that integrates valence and position elements of policy. Section 2 applies this model to the intertemporal delegation problem that is inherent to constitution writing. In Section 3 I use the model to analyze the constitution imposed on Chile by its military government. Attention then turns in Section 4 to the Federal Convention of 1787 in Philadelphia, and to the resolution of the conflict over representation between the large and small state delegations. A brief final section concludes.

1 A Model of Policy Preferences

In standard versions of the spatial model policy options are represented as spatial locations. In the one dimensional version of the model these locations correspond to a familiar continuum from “left” or the “right”, with more dimensions policies take on more characteristics.1 Individuals’ preferences

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1 In some Western European political systems political parties can be placed in a two dimensional space, with one dimension corresponding to the income redistribution, while the second represents positions on the
over these options are represented by their most preferred outcomes, and by some measure of distance, with each liking policies with locations closer to her own preferred outcome better than those that are further away. 2

A classical critique of the spatial model (Stokes, 1963) divides policy questions into two categories; position issues about which people disagree and that fit more or less into the pattern set forth by the spatial model, and valence issues, about which everyone agrees. Stokes (1963) notes dedication to work, and a reputation for honesty as candidate traits that are high in valence, but one might easily add that all (or almost all) would agree on a set of other issues, such as a low crime rate, safety from foreign invasion, and economic prosperity.

While Stokes spoke of position and valence as pertaining to separate issues, many issues combine elements of both valence and position (Londregan, 2000). Consider the airport security options weighed by the US Congress in the aftermath of the September 11 attacks. While there was universal support for improved airport security, Democrats and Republicans (and their constituents) disagreed about whether the security enhancements should be provided by private security companies (the option favored by the right) or by the governments own, somewhat higher paid, agents (the option favored by the left). Even if politicians had wanted to, they could not have responded to the desire for more airport security workers without making choices about how they would be employed. Airport security policy options were inseparably fused to labor policy choices. While airport security provides a particularly clear illustration of a policy choice that has both valence and position features, most policy options in most issue areas are inextricably entwined with elements of both. Even with polarizing expenditure items partisans on both sides would agree that the eventual budget (for freeway

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1. Londregan (2000) discusses the concept of valence in context.
2. Stokes (1963) provides a seminal critique of the spatial model in political science.
construction, weapons procurement, subsidies for the poor) should be administered efficiently and without fraud. Even partisans in debates about whether certain activities should be permitted (abortion, drug consumption, euthanasia) would agree that whatever the resulting laws, they should be enforced fairly and with consideration for due process.

One set of preferences that incorporates both the valence and position aspects of policy can be represented by the following utility function:

\[ U(y, z; x, w) = -|y - x| - \alpha|z - w| \]  

(1)

Here an individual’s “type” is given by \( x \), their preferred outcome for the position dimension, while all individuals agree that the best policy choice on the valence dimension is \( w \) (this is what makes it a “valence” dimension). The policy that is implemented is represented by the pair \((y, z)\), where \( y \) is the location of policy on the position issue, while \( z \) is the setting for the valence issue. The parameter \( \alpha \) measures the relative weight individuals attach to valence relative to the position of policy.

The “acceptance set” of policy options an individual will (weakly) prefer to a status quo policy option located at \((y_{SQ}, z_{SQ})\) depends on the person’s preferred outcome \( x \), the salience weight \( \alpha \), and the consensus parameter \( w \).

We can denote this set:

\[ A(y_{SQ}, z_{SQ}|x, w, \alpha) = \{(y, w)|U(y, z|x, w, \alpha) \geq U(y_{SQ}, z_{SQ}|x, w, \alpha)\} \]  

(2)
Figure 1 The Acceptance Set.

The acceptance set for individual \( A(y_{SQ}, z_{SQ}|x_i, w, \alpha) \), corresponds to a diamond shaped region centered at the individual’s most preferred outcome, \((x_i, w)\), that includes the status quo of \((y_{SQ}, z_{SQ})\) on its border (see Figure 1).

The size and shape of the acceptance set depend on the relative positions of an individual’s most preferred outcome \((x_i, w)\) and the status quo \((y_{SQ}, z_{SQ})\). As the distance between the status quo and an individual’s most preferred outcome declines, the acceptance set shrinks. The small diamond on the left of Figure 2 depicts the acceptance set for an individual whose preferred policy outcome of \((x_i, w)\) is very close to the status quo policy at \((y_{SQ}^A, z_{SQ}^A)\). In contrast, the large diamond shaped region on the righthand side of Figure 2 depicts the acceptance set for an individual with a preferred policy outcome of \((x_r, w)\) facing a more distant hypothetical status quo at \((y_{SQ}^B, z_{SQ}^B)\).

Notice that the distance between an individual’s most preferred outcome and the status quo depends on both the valence and position dimensions of policy. If we perform the thought experiment of moving the status quo rightward while maintaining the valence, at \(z_{SQ}\), the acceptance sets for...
individuals to the left of the status quo will grow larger, but the acceptance sets for individuals to the right of the status quo will shrink. In contrast, if we imagine moving the valence of the policy outcome toward the optimum value of \( w \) all of the acceptance sets will shrink.

Figure 2 The Acceptance Set and the Status Quo.

The relative weight that an individual places on valence relative to the position dimension of policy affects the shapes of the acceptance sets. Individuals who place relatively more weight on valence (for whom \( \alpha \) is high) will tend to have relatively flat acceptance sets, such as the short, wide diamond that depicts the acceptance set of an individual with a preferred outcome of \((x_i, w)\) and \( \alpha = 2 \), shown for a status quo of \((y_S^C, z_S^C)\) on the lefthand side of Figure 3. In contrast, individuals with low values of \( \alpha \) will be relatively less willing to sacrifice the position content of policy in exchange for higher valence. Relatively low weight on the valence dimension of policy leads to tall slender acceptance sets, such as that depicted on the righthand side of Figure 3, which shows the acceptance set for an individual for whom \( \alpha = \frac{1}{2} \) with a most preferred policy outcome of \((x_\gamma, w)\) facing a status quo outcome.
of \((y_{SQ}^{P}, z_{SQ}^{P})\).

**Figure 3 The Acceptance Set and the Valence Weight.**

![](image)

**The Viable Set**

Given that policymakers’ preferences are characterized by equation (1), suppose that there are \(L\) policymakers, each with a veto over policy. Let \(\bar{x}\) denote the \(L\) dimensional column vector whose \(i^{th}\) element is \(x_i\); the preferred position outcome of policymaker \(i\). For the sake of simplifying the exposition, suppose that all policymakers share the same value for \(\alpha\). If each policymaker has a veto over departures from the *status quo* policy, located at \(y_{SQ}\), then the “viable set” consists of all of the policy choices that would meet with the simultaneous approval of all of the policymakers. Let’s denote the viable set as

\[
V(y_{SQ}, z_{SQ}|\bar{x}, w, \alpha) = \{(y, z)|(y, z)\epsilon A(y_{SQ}, z_{SQ}|x, w, \alpha)\forall i\} \tag{3}
\]

The set of policies for which the viable set coincides with the *status quo*\(^3\) consists of the line segment along which \(w = z\) and \(y\) is on the interval from

\(^3\)The viable set given here is similar to the closure of the winset in the terminology of Shepsle and
$x_L$, the leftmost preferred outcome among the policy makers with veto rights, and $x_R$, the rightmost preferred outcome.\(^4\) Let’s call this the “stable set”:

$$S(\mathcal{E}, z) = \{(y, w) | x_L \leq y \leq x_R\}$$  \hspace{1cm} (4)

When the status quo valence, $z_{SQ}$, is equal to $w$, this model corresponds to the standard one dimensional spatial model.

The viable sets have a straightforward geometry. If the status quo policy position is to the left of the gridlock interval, then the viable set consists of the diamond shaped area centered at the point $x_L$ and including $(y_{SQ}, w_{SQ})$ on its boundary. Likewise, when the status quo policy position is to the right of the gridlock interval, then the viable set is the diamond centered at $x_R$, while its boundary includes $(y_{SQ}, w_{SQ})$. For policies contained on the gridlock interval, the preferred policy outcome is the diamond shaped area centered at $y_{SQ}$, and containing $(y_{SQ}, w_{SQ})$ on its boundary. If we perform the thought experiment of moving the status quo policy, the size of the viable set diamond shrinks as the status quo policy moves toward the stable set.

While the institutional details of which policymakers control the agenda will be important, if each of our policymakers had a veto, then absent side payments, the policy outcome will lie inside the viable set. For any point outside the viable set there will be a policymaker with a veto who prefers the status quo.

2 A Model of Intertemporal Delegation

As noted in the introduction, constitution writers affect policy outcomes in the future as well as the present. To analyze this choice, I extend the model

\(^4\)Formally, let $x_L = \min\{x|x \in \{x_i\}_{i=1}^n\}$ while $x_R = \max\{x|x \in \{x_i\}_{i=1}^n\}$.\(^4\)
of preferences set forth in the preceding section. Now suppose that policy preferences are as in equation (1), save that there are now two time periods. During the first period, individuals apply a discount factor of $\beta$ to second period payoffs. While they can observe the value for $w$ in the first period, the period two setting for valence; $\tilde{w}_2$, is realized as a random draw from a probability distribution at the beginning of the second period. While all period two policy makers can observe $\tilde{w}_2$, it is unobservable during period one. Notice that once $\tilde{w}_2$ is known, everyone will prefer a policy setting on the valence issue of $z_2 = \tilde{w}_2$. This captures the fundamental information asymmetry between policy makers who write a constitution and those who will live with it.

For the sake of concreteness, suppose that $w$ obeys a random walk with drift, and that conditional on it’s first period value, $w_1$, the second period state of the world $\tilde{w}_2$ is normally distributed. Letting $\sigma^2$ denote the conditional variance of $\tilde{w}_2$ while $\mu$ is the drift parameter the distribution of $\tilde{w}_2$ conditional on $w_1$ is normal with mean $w_1 + \mu$ and variance $\sigma^2$:

$$\tilde{w}_2 \sim N(w_1 + \mu, \sigma^2)$$

These policy preferences remain fixed across both periods. During the first period, policy is set by someone with a preferred policy of $x_C$, who can also impose a constitution on future decision makers. This constitution may take on one of three possible forms:

Constitution I  Pure Lock-In
Constitution II  Winner Takes All
Constitution III  Agenda Control & Veto Players

If the constitution writer opts for Constitution I he must choose both the policy pair for the first period; $(y_1, z_1)$, and for the second; $(y_2, z_2)$ during the first period.
Under Constitution II the constitution writer chooses first period policy, 
\((y_1, z_1)\). Then there is an election, which is won by group \(i\), with a preferred 
policy position of \(x_i\) with a probability of \(p_i\). Let \(\vec{p}\) denote the \(n\) dimensional 
column vector of election probabilities\(^5\) In period two the election winner 
chooses \((y_2, z_2)\). Here the election probabilities \(\vec{p}\) represent the constitution 
writer’s uncertainty about the identity of future policy makers.

Under Constitution III the right choose first period policy; \((y_1, z_1)\), and propose a policy for the second period; \((y_2^0, z_2^0)\). Then, as under Constitution 
II, there is an election that policy maker \(i\) wins with probability \(p_i\). In period 
two the election winner proposes a policy pair \((y_2, z_2)\). However, in contrast 
with the second constitution, there is a “veto group” of policymakers who 
exercise a veto over the proposed policy. If any member of this group exercises 
her veto option, then the “reversion” outcome that is implemented is \((y_2^0, z_2^0)\) 
which was chosen by the constitution writer during the first period.\(^6\) In 
particular, the veto group may coincide with the election losers.

2.1 Lock-In

When policymaker \(C\) implement’s Constitution I the preferences of the other 
individuals become irrelevant, and the policymaking decision boils down to 
maximizing expected utility:

\[
Max EU^C = U(y_1, z_1 | x_C, w_1) + \beta E\{U(y_2, z_2 | x_C, \tilde{w}_2)\}
\]

Straightforward calculations reveal that this maximum occurs at:

\[
(y_1, z_1, y_2, z_2) = (x_R, w_1, x_R, w_1 + \mu)
\]

This results in an expected payoff for the constitution writer of:

\[
Max EU^C = -\sqrt{\frac{2}{\pi}} \beta \alpha \sigma
\]

\(^5\)This means that \(p_i > 0\forall i\) and \(\sum_{i=1}^{n} p_i = 1\).

\(^6\)This subsumes the case in which the constitution writer sets a “reversion” equal to the status quo policy 
bequeathed by the first period: \((y_2^0, z_2^0) = (y_1, z_1)\), as is done with budgets in the Chilean Constitution.
The expected payoff for the policymaker $i$ is:

$$Max \; EU^i = -(1 + \beta)|x_i - x_C| - \sqrt{\frac{2}{\pi}}\beta \alpha \sigma$$

This constitution is overshadowed by the inability of the author to perfectly predict the second period state of the world. While he can make an educated guess about optimal future policies, the constitution requires him to lock in his policy choice today. At least some slippage is all but inevitable: by the second period policy will be out of phase with a changing world. The advantage of this Constitution for the right (and an additional and very unwelcome disadvantage for those whose policy preferences do not coincide with those of $C$) is that it fixes the policy position at $x_C$ for both periods; the author gets his preferred issue position, and everyone else gets the author’s preferred position as well!

### 2.2 Winner-Takes-All

Under the winner takes all arrangements of Constitution II there is some probability that someone besides the author of the constitution will set second period policy. If policy maker $i$ prevails in the election he will choose period two policy to solve:

$$Max \; EU^i_2 = U(y_2, z_2|x_i, \tilde{w}_2)$$

This leads policymaker $i$ to choose a policy of $(y_2, z_2) = (x_i, \tilde{w}_2)$. Similarly, if the author wins the election, policy will be: $(y_2, z_2) = (x_C, \tilde{w}_2)$. Anticipating this behavior in the second period, the author will choose $(y_1, z_1) = (x_C, w_1)$, maximizing his first period utility.

Let $\tilde{x}$ denote the preferred policy position of election winner. The expected distance between this policy and the preferred position of policymaker $i$ is:

$$E\{|\tilde{x} - x_i|\} = \Sigma_{i=1}^n p_i |x_i - x_C|$$
The resulting expected utility for the constitution writer under Constitution II is

\[
Max EU^C = -\beta E\{|\tilde{x} - x_C|\} 
\]

while for policymaker \(i\) it is:

\[
Max EU^L = -|x_i - x_C| - \beta E\{|\tilde{x} - x_i|\} 
\]

In contrast with lock-in, the winner takes all constitution reaches the Pareto frontier, guaranteeing that the optimal second period policy on the valence dimension is implemented. This optimality comes at some cost to the constitution’s author, who is unable to guarantee himself continued control over policy.

The author will prefer the winner takes all arrangement to lock-in if and only if:

\[
\frac{E\{|\tilde{x} - x_C|\}}{\alpha \sigma} < \sqrt{\frac{2}{\pi}} 
\]

The greater the uncertainty about the second period optimal valence, measured by \(\sigma^2\), and the higher the weight placed on the valence element of policy, \(\alpha\), the more inclined toward the winner takes all arrangement the constitution writer will be.\(^7\) Conversely, the greater the expected difference between the constitution’s author and the second period election winner, the less attractive the constitution writer will find the winner takes all arrangement. The worst case emerges when the constitution writer is extreme relative to the policymakers that are likely to be elected in the second period.

In contrast, there is a much wider set of circumstances in which the groups, who are excluded from the constitution writing process will favor of the

\(^7\)The \(\sqrt{\frac{2}{\pi}}\) term is peculiar to the choice of the normal distribution for the error term, the qualitative findings are not.
“winner takes all” arrangement. Both constitutions leave them with the same outcome in the first period. However, in the second period, lock-in keeps policy off the Pareto frontier, while at the same time it guarantees the constitution writer’s preferred policy position will be implemented, whereas winner takes all leads to outcomes on the Pareto frontier, while the policy outcome of the constitution writer is replaced with the policy implemented by the winner of the electoral lottery\textsuperscript{8}. Policymaker $i$ will prefer the winner takes all outcome as long as:

$$\frac{E\{|\bar{x} - x_i| - |x_C - x_i|\}}{\alpha \sigma} < \sqrt{\frac{2}{\pi}}$$

(6)

If the expected policy position of the election winner is closer to the preferred outcome of policymaker $i$, then condition (6) is guaranteed to hold, and policymaker $i$ will prefer winner takes all no matter how small the uncertainty about the optimal second period valence, and regardless of how little weight she places on the valence component of policy relative to its position.

### 2.3 Introducing Veto Players

Now let’s consider how Constitution III, which includes veto players in the decision process, compares with the extremes of full lock-in and winner takes all. Because people anticipate the actions they are likely to take in period two when they make their period one choices, it is useful to begin with an analysis of the second period and then work backwards in time.

Working backwards requires us to make a guess about what reversion policy the constitution writer will bequeath to the second period. The constitution writer can do at least as well as she would with her lock-in strategy of setting the reversion point for the second period at $(x_C, w_1 + \mu)$, so let’s start by analyzing this case.

\textsuperscript{8}The second period election winner is by definition preferred by the pivotal elector, depending on the details of the electoral system this may or may not be desirable on ethical grounds.
As with a winner takes all constitution, the winner of the second period election is able to observe $\tilde{\omega}$. Unlike the winner takes all arrangement, the second period victor is restricted to selecting policy combinations from the viable set; $(y, w_2) \in V(y_{SQ}, z_{SQ} | \tilde{x}, w, \alpha)$. She will choose the element of the viable set that maximizes her second period utility.

The first result for this situation is that, over a wide range of alternatives, the viable set coincides with the set of policies that would be preferred by a policymaker with a preferred outcome at the policy reversion point $y_2^0$. This will occur if the policy reversion, $y_2^0$, is located between $x_L$ and $x_R$. If the status quo is located beyond the extremes of the range of veto players, then the viable set will coincide with the set of outcomes preferred to the status quo by the veto player closest to the status quo;

**Claim 1:** (a) if $y_2^0 < x_L$ then

$$V(y_2^0, w_2^0 | \tilde{x}, w, \alpha) = A(y_2^0, w_2^0 | x_L, \alpha)$$

(b) if $x_L \leq y_2^0 \leq x_R$ then

$$V(y_2^0, w_2^0 | \tilde{x}, w, \alpha) = A(y_2^0, w_2^0 | y_2^0, \alpha)$$

(c) if $x_R < y_2^0$ then

$$V(y_2^0, w_2^0 | \tilde{x}, w, \alpha) = A(y_2^0, w_2^0 | x_R, \alpha)$$

**Proof:** See appendix.

When the constitution writer can select $y_2^0 = x_C$, making his own most preferred policy position the reversion, he can essentially harness the veto players to his left and his right to protect his preferred outcome. Policy proposals that deviate "too far" to the left, from the standpoint of the constitution writer, will be blocked by veto players to the right such as $x_R$. Similarly, proposals to move policy "too far" to the right will be blocked by
veto players to the left of $x_C$. It is as if the constitution writer has con-
structed a virtual veto player who shares the author’s most preferred policy
position. For extremists this process only works partially; there are only veto
players to harness on one side of the constitution’s author. In this case, it
is as if the constitution writer delegated to the nearest veto player to do his
vetoing for him.

The sharp edge of this result, in which the viable set coincides perfectly
with the set of outcomes preferred by a single individual with the appropriate
preferred outcome stems from all veto players applying the same relative
weight, represented by $\alpha$, to the valence issue. However, even if there was
some heterogeneity in the values for $\alpha$ the veto players could still serve to
defend a particular status quo position.

An immediate consequence of Claim 1 is that, if the constitution writer
can select $y_2^{SQ} = x_C$, then the constitution with veto players dominates
the winner takes all arrangement, from the standpoint of the constitution’s
author. Formally we have:

Claim 2: Let $(y_2^*, \tilde{\omega})$ solve $\max_{y, w} U(y, w|x_i, \tilde{\omega}, \alpha)$
subject to $(y, w) \in V(x_C, w_2^0, \tilde{x}, w, \alpha)$.

$$U(y_2^*, \tilde{\omega}|x_C, \tilde{\omega}, \alpha) \geq U(x_i, \tilde{\omega}|x_C, \tilde{\omega}, \alpha)$$

Proof: See appendix.

The key to Claim 2 is that when the veto constraint does not bind the
outcome is the same that would occur with a winner takes all arrangement,
However, when the constraint is binding it stops the election winner from
moving policy as far as she would like from the author’s most favored policy
position, thereby improving the outcome from the standpoint of the author.
Once one has established one’s preferred policy position as the status quo it
always pays to include at least one veto player!
How does the veto player constitution compare with lock-in? If the status quo policy is set at \( x_C \), the author’s preferred position, and the author is not “too” extreme, in the sense that \( x_L \leq x_C \leq x_R \), then the veto player constitution will also dominate lock-in, and it will do so for every veto player and not just the constitution’s author:

**Claim 3:** Let \( (y_2^*, \tilde{\omega}) \) solve \( \max_{y, w} U(y, w|x_i, \tilde{\omega}, \alpha) \)
subject to \( (y, w) \in V(x_C, w_0^0|x, \tilde{\omega}, w, \alpha) \). If \( x_L \leq x_C \leq x_R \) then:

\[
U(y_2^*, \tilde{\omega}|z, \tilde{\omega}, \alpha) \geq U(x_C, w_0^0|z, \tilde{\omega}, \alpha)
\]

for any \( z \in \mathbb{R} \).

**Proof:** See appendix.

Here we see that both lock-in and the veto player arrangement will lead to a policy position at \( x_C \), while the veto player constitution allows the valence element of policy to adjust to the Pareto improving level of \( \tilde{\omega} \).

Only when \( x_C \) is not an element of \( [x_L, x_R] \) is it possible that lock-in will dominate the veto player arrangement.

If we were to relax the assumptions about the equal relative weight applied by decisionmakers to valence the stark conclusion that including veto players would have to be modified somewhat. But as long as the veto players placed some weight on valence considerations, the equilibrium outcome would retain many of the features set forth here. The effect of heterogeneity would be for the acceptance region to shrink somewhat, so that it’s boundaries coincided with the willingness to compromise policy position for valence of the veto players on both sides of the status quo who place the least weight on valence. The net effect would actually make the veto player arrangement even more attractive to a constitution writer who could impose his most preferred policy position at the outset.

The formal model developed in this section produces the powerful result that, given a unidimensional issue space, a constitution author who can set
the reversion policy position for the future, and veto player’s who place the same relative weight on the valence element of policy, a constitution with veto players always dominates a winner takes all arrangement, and dominates lock in unless the constitution’s author is “extreme” relative to the veto players.

This analytical model abstracts from many of the details of the constitution writing process, and it focuses on preferences about policy outcomes, rather than direct preferences for procedural fairness, If we were to attempt to apply the model literally the simplifications inherent in constructing an analytical model would constitute a fatal flaw. In the following two sections of this paper I do not do this. Instead I look to the model for guidance in explaining the motives of constitution writers and the for the structures they leave in place. As for the focus on policy outcomes, I will present evidence that policy preferences were very much on the minds of the authors of the two constitutions examined in the following pages.

3 Pinochet without Pinochet

In 1980, as Chile’s military government consolidated power, it dictated a new constitution (the Constitution of 1980) to replace the one that had been in place from 1925 until the military seized power in 1973. While various means were used to try to legitimize this constitution, including a fraudulent plebiscite (Spooner, 1994), it was ultimately the work of a small cadre of people close to the dictator, Augusto Pinochet, who actually wrote the document9.

Notable among the document’s provisions was a slow timetable for exit by the military regime, with a transition to an elected president, and a par-

9A draft of the Constitution was prepared by a group of politicians and lawyers from the political right, called the Ortúzar Committee. This committee deliberated over the course of two years, and held numerous public hearings (political exiles and other regime opponents were not invited to provide feedback on these occasions). However, the document prepared by the Ortúzar Committee was then subject to a hurried and secretive round of amendments by Pinochet’s closest advisers, including Sergio Fernández and Mónica Madariagada at which time it underwent some substantial modifications.
tially elected legislature. After eight more years of direct military rule the constitution called for a plebiscite on whether the military government’s nominee would serve for an eight year term as president. Only if the regime’s nominee lost was there to be a presidential election. Whatever the result of the plebiscite the Constitution called for the election of legislators after the eight year waiting period. Even if the military’s candidate prevailed in the plebiscite, regular presidential elections were to commence after an additional eight years, Thus, the military government, which had at that time held onto power for seven years, set up a sixteen year timetable for a return to civilian rule.

When the time came for the plebiscite, in October 1988, the regime’s nominee, Augusto Pinochet, lost. Pinochet seems to have been surprised by his defeat in the plebiscite (he garnered only 44% of the vote), and reputedly sought to have it overturned. However, other members of the military government, notably Air Force General Matthei, were ready to concede defeat; an angry and disappointed Pinochet acquiesced (Sigmund., 1993). While Pinochet had overestimated his popularity, he was not without support. A substantial minority of the Chilean electorate regularly vote for the parties of the right, and evaluate the record of the Pinochet dictatorship sympathetically. Of course, the majority of the voters do not share this view!

After losing the plebiscite the military government quickly imposed a series of “organic constitutional laws” which require high veto thresholds to amend, these measures included the details of the electoral system, the management of the central bank, as well as a flurry of additional legislation. Elections followed in December 1989, and Pinochet passed the presidential sash to his elected successor, Patricio Aylwin, in March 1990, in keeping with the constitutional timetable set in place by Pinochet himself.10

10For a more detailed description of the institutions put in place by the departing Pinochet government, see Londregan (2000).
Pinochet’s policy agenda was a mixture of free market ideology, social conservatism, and a prohibition against any accountability for the military government’s dismal human rights record. A dozen years since the end of military rule many of these policies remain largely in place. Far from despairing the loss of the plebiscite Sergio Diez, one of the participants in the Ortúzar Committee expressed satisfaction with the course taken by events, noting that the constitution was “not neutral”, but was designed to block “the construction of a socialist state” (Londregan, 2000) page 51. While on the left many glumly characterize the situation as “Pinochet without Pinochet”.

The model developed in the preceding section suggests why the military government may have been so willing to abide by the constitution it put in place, and why, after a dozen years, there is so little regret on the right about the policies that have resulted. I argue elsewhere (Londregan, 2000) that the constitution made it all but certain that for some time after the transition control of Chile’s bicameral legislature would be divided between the political right (with control of the Senate\(^{11}\)) and the more popular parties of the center-left coalition called the “Concertación” (controlling the Chamber of Deputies). The Constitution of 1980 and the Chile’s Organic Law of Congress give the president something close to a \textit{de facto} proposal monopoly:

There are measures to help the President speed legislation he favors: article 71 of the Constitution, and articles 26 through 29 of the organic law of Congress allow the President to impose time limits within which legislation must be passed or rejected, while article 53 of the Constitution sets the cloture threshold for both the Senate and the Chamber of Deputies at simple majority thereby preventing filibusters. Articles 65, 67, and 68 of the constitution

\(^{11}\text{The apportionment of Senate seats in a way favorable to the parties of the right, an electoral system favorable to the second place finisher, and the appointment of “Institutional Senators”, help to sustain the right’s control over the Senate.}\)
permit the president to pass legislation despite opposition by a major
ty in one chamber provided he meets with the support of a supermajority in the other, while article 70 of the Constitution and articles 32 through 36 of the organic law of Congress contain powerful veto provisions that allow the president to have the last word in the legislative debate by introducing amendments along with his veto, amendments which must be voted up or down without further change by the Congress. As if these presidential powers were insufficient, articles 62 and 64 of the Constitution permit the president to propose and amend legislation, while the same articles, plus article 24 of the organic law of Congress limit the ability of members of Congress to do so. Moreover, as with most Latin American legislatures, the Chilean Congress is starved for staff and infrastructure, and so lacks the administrative and research capability needed to formulate high valence proposals independently. Londregan (2000) page 66

Another important feature of the constitution is its germaneness requirement (set forth in Article 66 (Londregan, 2000) page 48), coupled with various methods for appeal that allow decision makers on both the left and the right to exercise a negative against bills deemed to bundle material across multiple issue dimensions. Policy positions tend to be voted one issue dimension at a time.

While the level of unity on the right and the left varies by issue area\textsuperscript{12}, we may think of the right and the left as having a reciprocal veto over policy choices, with the president acting as the agenda setter.

Applying the terminology of the model developed in section 2 there are two veto players, the median in the Chamber of Deputies, with preferred policy

\textsuperscript{12}The left are divided on issues of personal morality such as divorce, while divisions on the right emerge on labor policy, both groups are internally cohesive on the polarizing issue of the human rights record of the military government.
outcome at $x_L$, and the Senate median at $x_R$. Given the various insistence and veto provisions in the constitution, there are other pivotal legislators as well, but as a practical matter, a bill that will meet with their approval will already count with the support of the two chamber medians. Then there is an agenda setter, the president, whose most preferred policy near $x_L$. The status quo inherited from the Pinochet government is probably a bit to the right of the Senate median, so from Claim 1 above we can expect that any policy that is adopted will be preferred by the Senate median, at $x_R$, to the status quo. In this setting, Claim 3 tells us to expect that in such a setting nothing happens without the accession of the Senate, where the political right exercise a policy veto. While each of Chile’s three presidents since the period of military rule has been a member of the left of center Concertación coalition, all three have been constrained by the policy veto of the Senate. Of course, the current president, in 2002, has a substantial advantage over the military government that left power in March 1990; he can adapt to the changed circumstances of the past dozen years that the military government could only guess at. In the language of the model, the government is able to observe $\hat{\omega}$, and so to formulate proposals that are a better match on the valence dimension that those left behind by the military government (with a valence represented by $w_0^0$). This advantage has enabled the government to pass various labor and education reforms, but none has gone as far as the government would have liked, all have been interdicted by the right’s majority in the Senate. This is particularly true on the subject of human rights, where even a relatively “soft” solution, similar to the South African Truth Commission, has been kept in check by the need for approval from the right. Of course, without the proposal power of the president, and facing the prospect of a veto in the Chamber of Deputies, the parties of the right are also held in check when they seek reform, as when they sought to expand the program of educational vouchers developed during the Pinochet regime.
While the Pinochet government successfully engaged in “damage control”, keeping many of their policies in place long after their electoral defeat, they have nevertheless been somewhat constrained by public opinion. In particular, without veto players at or to the right of the Pinochet government they are unable to guarantee that the policies put in place since the democratic transition are superior to the status quo from their point of view.

Why did the Pinochet government establish a timetable for leaving power? There are several considerations from “outside” the model that doubtless mattered. By promising a timetable for exit the government provided an excuse for its friends to remain supportive. Many on the right draw a distinction between the Pinochet government and Junta in “tropical republics”. The fact that Pinochet was promising to turn over power helped to legitimize his rule in the eyes of his friends, though certainly not in the minds of his enemies! For his enemies the timetable presented a different temptation—while one might be willing to engage in desperate armed resistance against the odds to oppose permanent of authoritarian repression in one’s country, what if instead there is the chance that if one waits, the regime will depart on its own? Then there is the “cover” that the constitution provided to international supporters who could argue that there were worse regimes on earth than one seemingly committed to a timetable for a democratic transition. As with the domestic environment, the constitution didn’t help much with regime opponents, but it did provide supporters with an excuse.

In the context of the model, the Constitution of 1980 might be justified purely for its policy consequences if, in 1980, Pinochet and the people around him believed that by 1988 he would enjoy the support of 54% of the electorate, rather than merely 44%. Given the low inflation and high consumption that accompanied Chile’s overvalued exchange rate as the constitution we being promulgated on the eve of the debt crisis, Pinochet and those around him may have believed this. If they had been able to rally majority electoral support,
the constitution would result in veto players clustered around the status quo position prefered by Pinochet’s advisers. These advisers cared about policy, and not merely for the perpetuation of Pinochet’s rule. Sergio Diez who helped to draft the Constitution of 1980 commented that the constitution of 1980 was “intended to apply in two situations, whether Pinochet were to continue or no.” (Londregan, 2000).

In the formal model developed in the previous section, we see from Claim 1 that the set of feasible alternatives coincides with the acceptance set of a veto player whose preferred policy position coincides with the status quo provided there is at least one veto player on either side of the status quo. The exact locations of these veto players are not important. If there was some uncertainty about the preferences of each veto player, then delegation to a constitution, even one that included a hostile veto player, might actually help to preserve the status quo. If power continued to be delegated to Pinochet there was always the chance that he, or his successor, would “drift” rightward or leftward, adjusting the policy position to match his changing preferences. If instead policy was subject to the reciprocal veto of people on either side of the status quo the risks would be reduced. As long as at least one policy maker remained on either side of the status quo the existing policy position would be protected, impervious to minor variation in the locations of the veto players. Moreover, as we have seen, this setup would dominate lock-in, as subsequent policy makers would be able to propose Pareto improving adaptations on the valence dimension.

Pinochet’s disappointed surprise on losing the plebiscite certainly confirms the notion that he was optimistic. The reaction of his government after the loss further supports this view. After the plebiscite Pinochet and those around him faced a situation in which the agenda would be set by a president on the left, and subject to reciprocal vetoes by a Senate media on the right, though perhaps not as far to the right as they would like on every
issue, and a Chamber of Deputies median on the left. There response was to pass a series of detailed Organic constitutional laws. By shrinking the minority required to block changes to these laws the government changed the identities of the relevant veto players, in particular, the most conservative three sevenths of the Senate can block proposed changes to the organic constitutional laws. This restored the Pinochet government’s “virtual veto player” with a preferred policy outcome equal to the status quo, or at least, for those elements of the status quo perserved in the amber of an organic constitutional law.

For the last dozen year’s Pinochet’s strategy for preserving the status quo has been largely effective, as the reactions of politicians on the left and the right confirm. However, like all institutions, those left behind by Pinochet have their vulnerability. As time passes, the status quo policy falls out of sync with the current state of events. Monetary policies that have not adjusted to the Asian financial crisis of the late 1990’s, law enforcement methods that do not make use of recent advances in DNA analysis, and anti-drug policies that do not adapt to the changing nature of narcotrafficking, all leave room for improvement. While these improvements must meet with the approval of the median senator, (or in some cases with the crucial voter needed to block an amendment to an organic constitutional law) they can nevertheless be bundled with changes in position that shift policy leftwards. For example, judicial reforms needed to make Chilean law more compatible with international trade can be coupled with the creation of new courts, staffed with appointees of the current government rather than by the Pinochet holdovers who continue to dominate the existing judiciary.

Of course, valence is less important in some issue areas than in others. The valence element of policy related to the human rights record of the military regime changes very slowly, and this issue has continued to polarize Chileans. Yet even in this ambit, valence matters. When Pinochet was
detained in England, and held for possible extradition to Spain, Chileans on
the right suddenly found that the status quo of backing Pinochet on human
rights might mean a trade war with Spain and/or the UK, at the same time
the lurking threat of possible military intervention made many on the left
reluctantly willing to support a return of Pinochet to Chile, While Pinochet
remained under arrest in England, human rights was not a zero sum game
between the left and the right. In the longer run Pinochet really will grow
ill and die\textsuperscript{13}, as will the others involved in the human rights violations of
the military regime. At that point the human rights record of the military
government will lose much of its immediacy, and become a symbolic issue.

Over time the institutional legacy of the Pinochet government will not
confine policy to the status quo left behind by the military government.
Eventually the steady pressure of successive presidents exploiting changes
in the valence element of policy will drag policy leftwards, toward the politi-
cal center. Of course, this slowly evolving status quo will suit a new group of
policymakers, who may decide that they would rather preserve the Constitu-
tion of 1980, and ignore its pedigree, rather than institute constitutional
reform. By then the constitution will have protected the policies favored by
the military government during the political lives of its participants, while
also keeping them happily out of jail.

4 Victory at Philadelphia

While Chile’s Pinochet was able to set the status quo where he wanted to,
participants at the Federal convention of 1787 in Philadelphia were not in a
position to simply impose their will. Instead they would have to persuade
people outside the convention to accept what they had done. They met
with a charter to propose reforms to the Articles of Confederation. But

\textsuperscript{13}Pinochet eventually escaped extradition to Spain and was returned to Chile when British Home
Secretary Jack Straw determined that he was too ill to put on trial.
the Articles required unanimity for reform, and this had thwarted several previous efforts at improvement. Under the Articles each state’s delegation to Congress cast one vote, and so unanimity meant that the delegation of a single state could block reform. The constitutional convention eventually evaded this requirement by offering a new constitution, rather than a set of amendments, establishing its own framework for ratification. Nevertheless, the convention was heavily constrained by the need to produce a document that could be ratified in a process perceived as legitimate. Eventually they agreed that the constitution they proposed would have to be approved by specially elected state conventions in two thirds (9) of the states to go into effect.

Not only were the delegates at the federal convention constrained, they were also not defenders of the status quo policy. To the contrary, they have been characterized as a “reform caucus” determined to change policy (Roche, 1961). They faced an unfavorable status quo under the Articles of Confederation. The Articles required a two-thirds majority for many basic activities, including the passage of revenue bills. In addition, there were no adequate mechanisms in place for compelling the state governments to comply with federal laws. Finally amendments to the articles required unanimity, with Rhode Island notoriously willing to block changes. The federal government under the Articles of Confederation had low efficacy, and encountered serious problems in the conduct of foreign and commercial policy. Foreign fleets preyed on US merchant ships at sea, foreign powers were loath to grant favorable terms of trade, and even the treaties that had been negotiated were hard to implement. The Treaty of Paris called for Britain to withdraw her troops from US soil, while the US promised to honor debts owed to British subjects. The state courts, responding to popular pressure and to influential debtors eager to escape their obligations, mostly refused to fulfill this obligation, and British troops remained in western New York and Detroit. Finally
the state governments were levying tariffs against one another's' products, and ignoring the Articles' prohibition on their resolving disputes directly between themselves rather than working through the intermediary of the federal government.

Although the convention delegates could mostly agree that the status quo was flawed, they were far from consensus about the nature of the changes that should be implemented. During late May, while a quorum assembled in Philadelphia, the Virginia delegation put together an ambitious set of proposals (collectively known as "Randolph’s Resolutions", or the "Virginia Plan") for a truly national government, with direct authority over individuals, and able to nullify state level laws. That same month the Delaware delegation arrived in Philadelphia with direct instructions from the Delaware legislature to withdraw from the convention rather than to approve any measure that would dilute the rule according each state an equal representation in the Congress (this giving the 59 thousand citizens of Delaware, one of the least populous states, the same voting weight as the 747 thousand citizens of Virginia, the most populous).

Although other differences, over the passage of “navigation acts”, about limitations on the spread of slavery, about the required length of residency to become a citizen, or to hold elective office, also occupied its attention, the first seven weeks of the convention were consumed in resolving the issue of representation. The fundamental question was were representation in the legislature should accord each state an equal vote, as under the Articles of Confederation, or whether representation should be proportional to population or property. As in the Congress, so at the federal convention each state delegation cast one vote on the side of an issue preferred by the majority of its delegates. In the debate over representation a coalition among the

\[\text{footnote}{The state delegations sometimes cast “divided” votes when the delegates were evenly split. A question carried if a majority of the aye's and nay's were in favor.}\]
largest states, Massachusetts, Pennsylvania, and Virginia, and including the southern states: North and South Carolina, and Georgia, favored some form of proportional representation, and a national government that was supreme over the states. A coalition of the smaller states, Connecticut, New Jersey, Delaware, Maryland, and joined by New York favored retention of the representation rule of the Articles.

James Madison of Virginia was one of the most outspoken advocates of a truly national government, acting directly on the citizens, and largely sweeping the state governments to the side. He contended that the fears of the smaller states about their fate under representation proportional to population were ill founded, and challenged small state delegates to identify the substantive policy issue on which the large states, Virginia, Massachusetts and Pennsylvania, were united against the small states. He went on to note that the sectional interests, such as slavery and commerce, typically divided both the large and the small states. However, Rakove (1987) points out the flaw in Madison’s argument, noting that while size \textit{per se} was not a significant policy issue, the method of aggregating votes nevertheless had policy consequences. On most policy issues the fraction of legislators chosen by proportional representation who favored a given position would be different than the fraction of state delegations on the same side of the issue.

The eventual resolution to the debate between the small and large state delegations has become known as the “Great Compromise”. Culminating in a narrowly divided vote on July 16, in which the North Carolina delegation defected to join the small states, and the Massachusetts delegation divided, with Elbridge Gerry and Caleb Strong voting in favor. It resulted in a bicameral legislature, with the House of Representatives chosen proportionately to population, while the Senate accords equal representation to each state. All legislation that passes Congress must meet with the simultaneous approval of both houses. Reportedly at the insistence of Benjamin Franklin
the compromise also required that all revenue bills originate in the House of Representatives, but since there is no restriction on Senate amendments to revenue bills, this is an empty guarantee.

One delegate uncharitably but accurately captured the mood of the small state delegations noting that once their equal representation was secured they would be happy enough to strengthen the central government. And so it transpired. After the Great Compromise the convention continued with far less acrimony to put together the practical details of the US Constitution.

In addition to the creation of the Senate, the Constitution contained several other features favorable to the small states. The procedure for ratifying treaties bypassed the House, with ratification requiring a two thirds vote in the Senate! This was essentially a continuation of the status quo under the Articles that required a two thirds vote of the state delegations to Congress. Marks (1971) argues that it was not merely inertia that led the convention to adopt this rule. Instead various regional interests wanted to retain a veto over departures from status quo policy. Southern interests were determined that no treaty compromise free access the Mississippi, something John Jay had revealed he was willing to use as a bargaining chip to gain favorable access to Spanish markets. At the same time, New England was concerned that no agreement be made that would compromise their access to fishing rights in the Grand Banks, an issue that had much less salience with the rest of the country.

Of course, under the Articles treaties were negotiated by special commissioners and ambassadors sent out by Congress. The new constitution left this duty to the President of the United States. However, the procedures for choosing the president are somewhat arcane. The federal convention repeatedly rejected suggestions that the president be directly elected. Instead they adopted a two tiered procedure. In the first tier voters in the various states cast ballots for electors, who then assemble in the state capitols, and vote for
the president. These votes are sent to Congress, where they are counted. If this count fails to produce a majority for one candidate, the process passes immediately to a second stage in which the House of Representatives immediately begins voting among the contending candidates. At this stage the House delegations adopt the representational rule of the Articles of Confederation, with each state’s delegation casting a single vote! At the convention George Mason opined that, after the inevitable election of George Washington, the first stage of the presidential election would be unlikely to produce a winner as often as once time in twenty. No one present expressed a contrary opinion, and the delegates devoted considerable discussion to the second stage, finally settling on the device of election by the House via unit rule as a means of not leaving too many powers in the hands of the “imperial” Senate, while at the same time protecting the interests in the small states in the selection of the chief executive. The delegates expected that the president would usually be chosen by a majority of the states! While we can see that George Mason got the probabilities almost exactly backwards, it does not appear that at the time anyone understood this.

Of those present at the end of the convention, only three refused to sign the proposed document, all of them (Elbridge Gerry of Massachusetts, Edmund Randolph and George Mason of Virginia) from the large states that had supported a strong central government with representation proportional to population, including notably Edmund Randolph whose name had been so closely associated with the Virginia Plan! At the state ratifying conventions the constitution met with easy approval in most of the small states, while the two toughest ratification debates took place in Virginia and Massachusetts (Riker, 1996).

15At the Virginia ratifying convention, letting his Bayesian priors be carried off in the passion of the moment, he claimed it would not happen as often as “one time in fifty”.

30
The arrangements set forth in Philadelphia are often described as involving considerable “give and take” in a spirit of compromise, yet the disappointed reactions to the Great Compromise by delegates such as James Madison, and the subsequent difficulties in gaining ratification in Virginia and Massachusetts suggest instead that there were winners and losers that long ago summer at Philadelphia.

The model developed in section 2.3 helps to shed some additional light on the “Great Compromise”. For the delegates assembled at Philadelphia, the efficacy of the central government was a valence issue, and the Constitution did substantially improve the efficacy of the US government. In the language of the model, the constitution allowed the government to bring \( w_0 \) into line with \( \tilde{w} \). Under the new constitution the government could levy direct taxes, and it could make credible promises to follow through on its treaty obligations. Federal courts began enforcing law suits by British subjects, and British troops withdrew from western New York. The US Navy was able to respond to interdiction of American shipping by the French in the 1790’s. Various revenue schemes were put in place, including an internal excise on whiskey (Barber, 1968). Resistance to the whiskey excise was met by a direct response from the national government: George Washington successfully led US troops to put down the “Whiskey Rebellion” in Western Pennsylvania.

What about the position elements of policy? On foreign affairs, the status quo decision rule was preserved, while, as has already been noted, the ability of the government to perform the activities needed to support a successful foreign policy was enhanced. Foreign affairs was an even more significant element of policy then than it is now. While the first party system was characterized by divisions on a host of issues, there were even Federalist and Republican positions on the causes and cure for yellow fever (Pernick, 1972), the central division between them was foreign policy. Moreover, as noted above, the delegates believed that the president would tend to be chosen by
a majority of the state delegations to the House, making him much more like an ambassador chosen by the Congress under the Articles of Confederation than like the winner of a popular election filtered through the prism of the electoral college. Moreover, the sequential arrival of treaties made building foreign policy compromises more difficult, and tended to keep treaty votes unideminsional.

Parameter Estimates

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\[ \ln(Lik) = -558.917. \]

Taking on other issue dimensions that had been regulated under the Articles of Confederation, there would have been two veto points. Sorting the states from “left” to “right” on a given issue, the two pivotal states would be the fifth from the left, whose approbation would be needed to pass any movement to the right, and and the fifth from the right, needed to pass leftward policy shifts. We might expect that the Senate would tend to be somewhere
between the two pivotal voters under the Articles of Confederation while the House median might lie beyond those bounds. Depending on whether the House and Senate medians were on opposite sides of the status quo creating, in a one dimensional issue space, a “virtual veto player” as discussed in section 2.3, or on the same side, so that the viable set would coincide with the acceptance set of the Senate, this arrangement tended to favor either the Senate median or the status quo policy position inherited from the Articles of Confederation.

The model suggests, and the reactions of disillusioned large state delegates such as Randolph and Gerry, victorious small state delegates, such as Sherman and Ellsworth, and the voters at the state level conventions, all tend to confirm, that the US Constitution was, mostly correctly, perceived to as a victory for the small state delegations. Rather than being a great compromise, the reading of the evidence suggested by the model of section 2.3 is that the bargain struck over representation at Philadelphia kept the large states just above the level of indifference, while the small states got most of the “surplus” policy benefits.

Conclusions

The theoretical model developed in the first two sections of this paper integrates the valence and position elements of policy in the same model. This framework helps to make sense of why constitutions’ authors do not simply “lock in” their most preferred policy positions. Instead they build in some flexibility so that future policy makers can adapt to a changing environment. At the same time, the desire to control future policy outcomes creates a tension for constitution writers. The theoretical model produced the surprising conclusion that, for constitution authors who are able to implement their preferred policy position, a constitution including veto players who bracket
the authors dominates both lock-in, and a winner takes all arrangement that leaves future policymakers unconstrained.

Of course, not all constitutions are created equal. In some cases, when a constitution is imposed by a dictator, the author can readily choose the policy status quo, but there are complications when it comes time to delegate. In particular, for dictators whose policy preferences are extreme relative to the electorate, the status quo left behind by the leader is often outside the range bracketed by the most extreme veto players generated by the constitution. This entails some loss of control. However, the discussion of the constitution left behind by the Chilean dictator Augusto Pinochet shows that the use of supermajority thresholds can nevertheless hold the status quo policy position in check for years after the dictator has departed from power.

In other cases the authors of a constitution must first produce a document that can be ratified in a democratic process, and moreover, the authors themselves may have different policy goals. This was the case for the delegates to the Federal Convention of 1787. The model developed here emphasizes the degree to which the results of the Federal Convention of 1787 produced, not so much compromise, as victory for one faction at Philadelphia, namely the small state delegates, with consequences that continue to reverberate to this day, especially in the ambit of foreign policy.

The model fashioned here was helpful in clarifying the political calculations that went into two very different constitutions. While the model could be usefully extended to incorporate a more elaborate rendition of the dynamics of delegation, with multiple future time periods, and to allow for a multidimensional issue space, it provides some guidance about the central delegation problem posed by constitution writing.
Appendix

The following lemma is useful in proving Claim 1.

**Lemma A:** \( A(x_0, w_0|x, \tilde{w}, \alpha) \subset A(x_0, w_0|x', \tilde{w}, \alpha) \) for \( x' \neq x \), and \( (x - x') \times (x - x_0) \leq 0 \).

**Proof of Lemma A:** We need to show (a) that if \( (y, w) \in A(x_0, w_0|x, \tilde{w}, \alpha) \) then \( (y, w) \in A(x_0, w_0|x', \tilde{w}, \alpha) \) and that (b) there exists a \( (y^*, w^*) \) such that \( (y^*, w^*) \in A(x_0, w_0|x', \tilde{w}, \alpha) \) but \( (y^*, w^*) \) is not an element of \( A(x_0, w_0|x, \tilde{w}, \alpha) \).

Turning first to (a), if \( (y, w) \in A(x_0, w_0|x, \tilde{w}, \alpha) \) then

\[
-|x - y| - \alpha|w - \tilde{w}| \geq -|x - x_0| - \alpha|w_0 - \tilde{w}|
\]

However, we know that for any \( x, x' \) and \( y \):

\[
|x' - x| + |x - y| \geq |x' - y|
\]

Moreover, for \( x, x' \) and \( x_0 \) such that \( x' \neq x \), and \( (x - x') \times (x - x_0) \leq 0 \):

\[
|x' - x_0| = |x' - x| + |x - x_0|
\]

Subtracting \( |x' - x| \) from both sides of equation (7) and applying inequality (8) we have:

\[
-|x' - y| - \alpha|w - \tilde{w}| \geq -|x' - x| - |x - x_0| - \alpha|w_0 - \tilde{w}|
\]

Applying the equality (9) this simplifies to:

\[
-|x' - y| - \alpha|w - \tilde{w}| \geq -|x' - x_0| - \alpha|w_0 - \tilde{w}|
\]

But condition (11) guarantees that \( (y, w) \in A(x_0, w_0|x', \tilde{w}, \alpha) \), which gives us (a).

Turning to (b), define \( \delta(x', x) = 1 \) if \( x' > x \), while \( \delta(x', x) = -1 \) if \( x' < x \), and \( \delta(x', x) = 0 \) otherwise. Let \( w^* = \tilde{w} \), while \( y^* \) is:
\[ y^* = 2x' - x + \delta(x', x)\{ |x - x_0| + \alpha|w_0 - \tilde{w}| \} \]

It is straightforward to verify that \((y^*, w^*) \in A(x, w|x', \tilde{w}, \alpha)\) but not contained in \(A(x, w|x, \tilde{w}, \alpha)\). Q.E.D.

**Proof of Claim 1:**
(a) \(y_2^0 < x_L\) implies that \((y_2^0 - x_L) \times (x_i - x_L) \leq 0\) for any veto player \(i\) such that \(x_i \geq x_L\). So, Lemma A tells us that \(A(y_2^0, w^0_2|x_L, \alpha) \subset A(y_2^0, w^0_2|x_i, \alpha)\). Thus, the viable set, which is the intersection of all the \(A(y_2^0, w^0_2|x_j, \alpha)\) for \(j \in \{1, 2, ..., L\}\) coincides with \(A(y_2^0, w^0_2|x_L, \alpha)\). Q.E.D.

(b) \(x_L < y_2^0 < x_R\) implies that \((y_2^0 - y_2^0) \times (x_i - y_2^0) = 0\) for any veto player \(i\) such that \(x_i \neq y_2^0\). So, Lemma A tells us that \(A(y_2^0, w^0_2|y_2^0, \alpha) \subset A(y_2^0, w^0_2|x_i, \alpha)\). Thus, the viable set, which is the intersection of all the \(A(y_2^0, w^0_2|x_j, \alpha)\) for \(j \in \{1, 2, ..., L\}\) coincides with \(A(y_2^0, w^0_2|y_2^0, \alpha)\). Q.E.D.

(c) The argument is similar to the proof of (a): \(y_2^0 > x_R\) implies that \((y_2^0 - x_R) \times (x_i - x_R) \leq 0\) for any veto player \(i\) such that \(x_i \leq x_R\). So, Lemma A tells us that \(A(y_2^0, w^0_2|x_L, \alpha) \subset A(y_2^0, w^0_2|x_i, \alpha)\). Thus, the viable set, which is the intersection of all the \(A(x_C, w^0_2|x_j, \alpha)\) for \(j \in \{1, 2, ..., L\}\) coincides with \(A(x_C, w^0_2|x_R, \alpha)\). Q.E.D.

**Proof of Claim 2:** If \(x_L \leq x_C \leq x_R\) then from Claim 1 we know that \((y_2^*, \tilde{w}) \in A(x_C, w^0_2|x_C, \alpha)\). If \((x_i, \tilde{w}) \in A(x_C, w^0_2|x_C, \alpha)\) then \((y_2^*, \tilde{w}) = (x_i, \tilde{w})\) and

\[ U(y_2^*, \tilde{w}|x_C, \tilde{w}, \alpha) = U(x_i, \tilde{w}|x_C, \tilde{w}, \alpha) \]

If \((x_i, \tilde{w})\) is not an element of \(A(y_2^0, w^0_2|x_C, \alpha)\) then by the definition of \(A(y_2^0, w^0_2|x_C, \alpha)\)

\[ U(y_2^*, \tilde{w}|x_C, \tilde{w}, \alpha) > U(x_i, \tilde{w}|x_C, \tilde{w}, \alpha) \]

If \(x_C < x_L\) and \((x_i, \tilde{w}) \in A(x_C, w^0_2|x_L, \alpha)\) then \((y_2^*, \tilde{w}) = (x_i, \tilde{w})\) and

\[ U(y_2^*, \tilde{w}|x_C, \tilde{w}, \alpha) = U(x_i, \tilde{w}|x_C, \tilde{w}, \alpha) \]
If $x_C < x_L$ and $(x_i, \tilde{\omega})$ is not contained in $A(x_C, w_2^0|x_L, \alpha)$ then by Lemma A and the definition of $x_L$ $(x_i, \tilde{\omega})$ is not contained in $A(x_C, w_2^0|x_C, \alpha)$, and

$$U(y_2^*, \tilde{\omega}|x_C, \tilde{\omega}, \alpha) > U(x_i, \tilde{\omega}|x_C, \tilde{\omega}, \alpha)$$

If $x_C > x_R$ and $(x_i, \tilde{\omega}) \in A(x_C, w_2^0|x_R, \alpha)$ then $(y_2^*, \tilde{\omega}) = (x_i, \tilde{\omega})$ and

$$U(y_2^*, \tilde{\omega}|x_C, \tilde{\omega}, \alpha) = U(x_i, \tilde{\omega}|x_C, \tilde{\omega}, \alpha)$$

If $x_C > x_R$ and $(x_i, \tilde{\omega})$ is not contained in $A(x_C, w_2^0|x_R, \alpha)$ then by Lemma A and the definition of $x_R$ $(x_i, \tilde{\omega})$ is not contained in $A(x_C, w_2^0|x_C, \alpha)$, and

$$U(y_2^*, \tilde{\omega}|x_C, \tilde{\omega}, \alpha) > U(x_i, \tilde{\omega}|x_C, \tilde{\omega}, \alpha)$$

Q.E.D.

**Proof of Claim 3:** From Claim 1 we know that

$$(y_2^*, \tilde{\omega}) \in A(y_{SQ}, w_2^0|x_C, \alpha) \quad (12)$$

While from (12) and Lemma A if follows that:

$$(y_2^*, \tilde{\omega}) \in A(y_{SQ}, w_2^0|z, \alpha) \quad (13)$$

for any $z \in \mathbb{R}$. Applying the definition of $A(y_{SQ}, w_2^0|z, \alpha)$ we have:

$$U(y_2^*, \tilde{\omega}|z, \tilde{\omega}, \alpha) > U(y_2^0, w_2^0|z, \tilde{\omega}, \alpha) \quad \forall z \in \mathbb{R}$$

Q.E.D.
References


