Modeling Coherence, Stability, and Risk Aversion in Legislative Delegation Decisions

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MODELING COHERENCE, STABILITY, AND RISK AVersion IN LEGISLATIVE DELEGATION DECISIONS

Daniel A. Farber


In his recent article on legislative delegation, Professor Matthew Stephenson proposes an elegant and provocative model of legislative delegation. The model displays its creator's considerable mathematical skill and ingenuity. Professor Stephenson also works out in admirable detail the possible implications of the model. And unlike many a scholar, he carefully refrains from making inflated claims for his approach. Despite these merits, the model may be in need of some basic revisions. As we shall see, some of its key predictions seem implausible enough to suggest the need to revisit core premises.

Essentially, Stephenson's model predicts whether a legislator would prefer to delegate the power to enforce and interpret a statute to a court or to an administrative agency. At the root of the model is the reasonable assumption that courts differ from agencies in two regards. First, courts are more reluctant to depart from previous decisions. Second, agencies are more likely to be consistent in their decisions at any given time because those decisions are likely to reflect the ideological leanings of the current administrators. In working through the implications of these insights, Stephenson takes multiple variables into account; one of the strengths of the model is its ability to provide a neat package for so many possible influences on delegation decisions. Readers who have trouble following the presentation of the model, as well as readers of the present critique, may find it useful to have a table identifying all of those variables:

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1 Sho Sato Professor of Law and Director, Environmental Law Program, Boalt Hall School of Law, University of California at Berkeley.
3 The feasibility of actually performing the required empirical tests is less clear. See Adrian Vermeule, The Delegation Lottery: A Response to Stephenson, 119 Harv. L. Rev. F. 105 (2006).
4 See, e.g., Stephenson, supra note 1, at 1070 (noting that his model is only a tentative step in a larger program).
5 Id. at 1047.
6 Id.

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<table>
<thead>
<tr>
<th>Variable</th>
<th>Meaning</th>
<th>Interpretation</th>
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<tbody>
<tr>
<td>$\delta^t$</td>
<td>Discount factor</td>
<td>Length of the legislator's time horizon. A higher $\delta$ means a longer horizon.</td>
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<tr>
<td>$\alpha$</td>
<td>Issue weighting</td>
<td>Reflects the number of salient issues.</td>
</tr>
<tr>
<td>$\lambda^t$</td>
<td>Temporal inconsistency costs</td>
<td>Measures the cost of policy instability.</td>
</tr>
<tr>
<td>$\lambda^i$</td>
<td>Interissue inconsistency costs</td>
<td>Measures the cost of policy incoherence across issues at any given time.</td>
</tr>
<tr>
<td>$\rho^t$</td>
<td>Intertemporal correlation coefficient</td>
<td>Measures the degree of consistency over time. In the basic model, this is set at 1 for courts (assuming perfect stare decisis) and 0 for agencies (assuming complete political responsiveness).</td>
</tr>
<tr>
<td>$\rho^i$</td>
<td>Interissue correlation coefficient</td>
<td>Measures the degree of consistency across issues. This is set at 0 for courts in the basic model (assuming no coherent policy stance) and 1 for agencies (assuming agencies have completely consistent policy goals at any one time).</td>
</tr>
<tr>
<td>$\sigma_j^2$</td>
<td>Variance</td>
<td>Measures the degree of general uncertainty about policy outcomes given a delegation to decisionmaker $J$ (court or agency). This is important because legislators are assumed to be risk averse and to prefer low variance.</td>
</tr>
<tr>
<td>$\mu_c$, $\mu_a$</td>
<td>Mean value of outcomes from court ($\mu_c$) or agency ($\mu_a$)</td>
<td>Average value of the predicted policy outcomes to the legislator. This measures how unfavorable the decisions are on average, but not the degree of variance in decisions.</td>
</tr>
</tbody>
</table>

6 Id. at 1051–1052.  
7 Id. at 1053. Note that outcomes are measured in terms of their unfavorableness to the legislator: a zero outcome is ideal, while a high outcome is undesirable. See id. at 1051.
It is also useful to assemble some of the model’s key predictions and tease out their implications:\(^8\)

1. **Legislators with long time horizons (high \(\delta^t\)) find delegation to agencies more attractive, even though agencies are worse at providing policy stability.**\(^9\) Thus, long time horizons make delegation to agencies more appealing even though agency policies cause undesirable instability. Consider the problem of defining the intellectual property rights to a new technology, and assume that stable property rights (however allocated) are important to encourage long-term investment in the technology. By assumption, courts are more likely than agencies to provide such stable rights. According to the model, short-sighted legislators will vote for stable IP rights (defined by courts), while far-sighted legislators are more likely to vote for unstable IP rights (defined by agencies). Thus, according to the model, the short-sighted legislators favor a regime that encourages long-term investment, while far-sighted legislators disfavor such investment.

2. **Legislators who are interested in multiple issues (high \(a\)) find agencies less attractive, even though agencies are better than courts at assuring policy coherence.**\(^10\) Thus, the more issues a legislator cares about, the more the legislator prefers to delegate to courts, even though costly policy inconsistencies are more likely. As an example, consider a complex tax bill with many interrelated provisions. One legislator cares about only a couple of provisions. Another cares about all of the provisions in the bill. The model predicts that the legislator with narrow interests will find it more important to ensure policy consistency by delegating to the Internal Revenue Service; in contrast, the legislator with broad interests will opt for the policy inconsistency that re-

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\(^8\) In addition to those explored here, the model produces two other, similar predictions:

(a) If courts reduce their commitment to following precedent, legislators will be most likely to take away the courts’ authority when the legislators care about stability, have short time-horizons, and expect unfavorable decisions.

(b) If agencies become less capable of producing coherent policy, legislators will respond by giving them more power when the legislators are uninterested in coherence, care about a lot of issues, and expect favorable rulings.

\(Id.\) at 1054–1057. In general terms, the predictions seem plausible because the effects of legislative preference about outcome consistency and favorability of decisions seem reasonable. But the details of the predictions are odd. For example, according to prediction (a), when legislators care about stability and have unfavorable expectations about judicial decisions, they are more likely to flee from the risk of future overrulings by courts when they do not attach much weight to the future than when they do. But why would future overrulings trouble someone who does not care about the future to begin with?

\(^9\) “Increasing the relative importance of future decisions (by increasing \(\delta\)) makes agency delegation relatively more desirable . . . .” \(Id.\) at 1055.

\(^10\) “Heavy discounting of less important issues (a low) makes delegation to courts less appealing . . . .” \(Id.\) Correspondingly, it must make delegation to agencies more appealing.
results from a delegation to the courts. Thus, paradoxically, a legislator who cares only about a few provisions will be more influenced by whether the other provisions are interpreted coherently than a legislator who actually cares about those other provisions. Or in other words, legislators with tunnel vision are more likely to steer away from inconsistency than legislators with more comprehensive visions.

(3) Increases in agency inertia make agencies more attractive if a legislator cares about policy stability, is pessimistic about agency outcomes (high $\mu_i$), and has a short time horizon. Note the implication that, given the posited values of the other variables, pessimism about agency outcomes (high $\mu_i$) increases delegation to agencies. Again, the prediction seems implausible. The model suggests that legislators are more likely to delegate to an agency if they are pessimistic about the agency’s decisions than if they are optimistic. Consider a very conservative, short-sighted legislator who prefers stable outcomes. (Recall that in the model, short-sightedness and concern for stability are unrelated.) Suppose the agency were to adopt rules that made policy reversals unlikely. According to the model, such agency rules would be more likely to increase the legislator’s willingness to delegate to the agency if he expected the agency to be repulsively liberal than if he expected it to be appealingly conservative. Under these circumstances, by signaling the intent to adopt (and lock in) stances the legislator does not like, the agency could make it more likely he will vote to increase its power.

(4) Increases in the ideological consistency of judicial decisions make agencies more attractive if a legislator expects favorable judicial decisions (low $\mu_c$), does not care about policy coherence, and has a long time horizon. Note the implication that, given the posited values of the other variables, optimism about judicial outcomes (low $\mu_c$) leads to more delegations to agencies and fewer delegations to courts. Thus, as courts become more ideological, a far-sighted legislator with the same ideological leanings will be increasingly disinclined to delegate power

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11 "Increases in agency inertia make agency delegation more attractive if and only if a certain inequality holds, which is “more likely to be satisfied if the legislator places a high value on intertemporal consistency ($\alpha$ high), if expected agency policy is bad for the legislator ($\mu_i$ high), and if future time periods are heavily discounted ($\delta$ low)." Id. at 1056. A look at the inequality confirms that the sign of $\mu_i$ is positive, so that increasingly undesirable outcomes produce increasing degrees of delegation to agencies.

12 "Similarly, increases in the ideological consistency of judicial decisions across issues ... make agency delegation more attractive if and only if a certain inequality holds, [which] is more likely to be satisfied when the legislator cares relatively little about consistency across issues ($\alpha$ low), expects generally favorable judicial rulings ($\mu_c$ low), and does not heavily discount less important issues ($\delta$ high)." Id. A look at the inequality in question confirms that the sign of $\mu_c$ is negative, so that an increasing $\mu_c$ (less favorable judicial rulings) makes delegation to the agency less likely.
to them, preferring instead to delegate to agencies with less congenial policy preferences. Consider a very liberal, far-sighted legislator who does not care about policy coherence. The prediction here is that as the courts become more consistently liberal, the liberal legislator will be increasingly disinclined to give them authority. Perversely, the courts could increase Congress’s willingness to give them power under these circumstances by ruling more frequently against prevailing congressional policies.

Something seems to be awry here. Under the model, short-sightedness can produce a tendency to favor stability, while far-sightedness favors unstable legal outcomes. Similarly, under some circumstances, legislators become more willing to delegate to an entity the less they like the entity’s ideological position. This seems unlikely. Not surprisingly, the empirical evidence does not support the model. Where does the model go wrong? The first two erroneous predictions are easy to account for, but the other two are more difficult to understand. It seems fairly clear that predictions 1 and 2 are artifacts of the way that coherence and stability are modeled. As Stephenson points out, the reason for these predictions is that the “model assumes that the legislator’s interest in consistency (both intertemporal and interissue) is independent of the legislator’s interest in the substantive outcome of a particular issue in a future period.”

The oddity of this assumption can be seen most easily in terms of intertemporal inconsistency. Why would a legislator care about avoiding unstable policy outcomes? The most obvious reason is that if the outcome switches between time period T and period T+1, some kind of cost is incurred. How significant this cost is to a legislator depends on the legislator’s time horizon; someone with a short time horizon would not care as much about future instability as someone with a long time horizon. So the legislator’s time horizon and her aversion to policy instability should be closely related.

Similarly, a legislator is likely to care about avoiding policy incoherence because inconsistent resolution of multiple issues is costly. The

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13 See David Epstein & Sharyn O’Halloran, Delegating Powers: A Transaction Cost Politics Approach to Policy Making Under Separate Powers 147, 158 (1999) (arguing that Congress is less likely to delegate at all during periods of divided government, and, when it does delegate, it more often delegates to independent agencies than agencies under presidential control); John D. Huber, Charles R. Shiman, & Madeleine Pfahler, Legislatures and Statutory Control of Bureaucracy, 45 AM. J. POL. SCI. 330, 344 (2001) (finding that at the state level there is less delegation during divided government). The same pattern is predicted in Craig Volden, A Formal Model of the Politics of Delegation in a Separation of Powers System, 46 AM. J. POL. SCI. 111, 126 (2002) (“Executive agencies with preferences closely aligned with the president or governor tend to be granted a greater level of discretion under unified government.”).

14 Stephenson, supra note 1, at 1055.
more issues that a legislator cares about, the more opportunity there is for the inconsistency to make itself felt. For example, suppose that there are nine issues. One legislator cares equally about all nine; another cares only about two of them. Presumably, the legislator who cares only about two issues will care the most about possible inconsistencies between those two policies, whereas the other legislator is faced with far more possible inconsistencies between policies she cares about. The implausibility here may not be as great as in the case of temporal discounting, but it seems unlikely that the cost of policy coherence is unrelated to the number of issues that the legislator cares about.

Stephenson concedes that one might "reasonably critique" the assumption that inconsistency costs are unrelated to discount rates.\(^{15}\) He conjectures that without the assumption, "there would be a tradeoff between consistency and risk diversification, and therefore, the ultimate effect of a greater weight on future decisionmaking would depend on which interest is more important to the legislator."\(^{16}\) This helps only modestly with the implausibility of the predictions; instead of predicting that long time horizons always make instability less important to legislators, the prediction is now that long time horizons only sometimes make instability less important. Perhaps it is possible to imagine some situation in which the assumptions of the model are satisfied, as Stephenson attempts to do.\(^{17}\) But such circumstances seem exceptional, leaving in question the general applicability of the model.

Predictions 1 and 2 could probably be corrected by modeling the costs of inconsistency more directly and then using \(\delta^I\) to determine present value. Predictions 3 and 4 are more problematic. Their implausibility lies in the conclusion that, under some circumstances, the more the legislator likes some entity's predicted decisions (relative to those of the alternative entity), the less likely the legislator is to delegate to the preferred entity. Essentially, \(\mu\) (the legislator's average sat-

\(^{15}\) Id.

\(^{16}\) Id. at 1055.

\(^{17}\) Stephenson presents the example of a Senator who cares only about the welfare of his home state but cares about national uniformity because his state will be harmed if its policy is out of line with that of other states. Id. at 1055. But suppose that the Senator is also worried about a neighboring state's welfare. According to the model, his concern about lack of uniformity remains at the same level. But the odds are higher that at least one of two states will be out of line with the national approach than that only one specific state will be out of line. Thus, the risk is greater that nonuniformity will have an impact that the Senator cares about. In the model, this higher risk may ultimately be countered by a risk aversion factor: the odds are also greater that at least one of the states will be in tune with the national average, so the Senator obtains some risk diversification. But this still does not explain why lack of uniformity does not count as a greater cost when it is twice as likely to cause a problem that the legislator cares about.
isfaction with the decisions) pops up with the wrong sign in the critical inequalities.\footnote{See supra notes 11, 12.}

It is not hard to imagine scenarios in which legislators might sometimes prefer for strategic reasons to delegate to an entity that has policy preferences different from their own. For example, they might value the opportunities for constituent service that arise when the agency’s policies are a little too burdensome. What makes Stephenson’s model so implausible is that the relationship is monotonic: the greater the distance between agency and legislative preferences, the more eager the legislature is to delegate. Indeed, note that the values of $\mu_e$ and $\mu_l$ are unbounded — there is no limit to how dissatisfied a legislator can be with outcomes. Hence, if the other variables are held constant, increasing the average level of legislative dissatisfaction will eventually dominate all other considerations and lead the legislature to delegate. On this theory, one might well suppose that Congress would give maximum authority to the Department of Homeland Security if the agency were run by Osama bin Laden.

The steps by which the model leads to this dubious conclusion are easy to explain, although the root of the problem is less clear. To construct the inequalities, Stephenson begins with an equation for the legislator’s utility,\footnote{Stephenson, supra note 1, at 1052 (equation 1).} then takes the difference between the utility given an agency delegation and utility given a judicial delegation,\footnote{Id. at 1053 (equation 4).} and finally takes a partial derivative of the difference.\footnote{Id. at 1056 (inequalities 5 and 6).} The latter two steps are entirely routine calculations, so the problem has to stem from the definition of legislative utility. Something is clearly wrong with a definition of utility in which a legislator’s utility increases as he becomes more dissatisfied with the average outcomes. Unfortunately, this utility definition lies at the heart of the model, so it is not easy to see how to fix the problem. The problem may well lie in the specific way that risk aversion is modeled, or perhaps in the basic risk aversion assumption itself.\footnote{The existence of legislative risk aversion could have significant implications for methods of statutory interpretation. See Daniel A. Farber, Legislative Deals and Statutory Bequests, 75 MINN. L. REV. 667, 683, 685–86 (1991) (discussing situations in which legislative risk aversion might be relevant and their implications for statutory interpretation; in particular, arguing that in the absence of risk aversion, legislators are relatively indifferent to errors in the interpretation of legislative compromises).}

As it stands, then, the proposed model of delegation seems to need some revision at the level of its fundamental assumptions. Pinpointing and correcting the flaws would make the model more powerful and increase its significance. For example, it is possible that predictions 3
and 4 might be fixed when 1 and 2 are fixed. On the other hand, the
problem may be with the assumption of risk aversion or the way risk
aversion is modeled. Either conclusion would be enlightening. In the
meantime, however, the model must be taken with a grain of salt.
Fortunately, by Stephenson’s account, the model is only a first step in
a much larger project. Its already an improvement on previous
models in the same vein, providing grounds to be hopeful about the
project.

TECHNICAL CORRECTION

Correspondence with Professor Stephenson has persuaded me that
portions of the foregoing Reply are in need of correction. In deriving
predictions 3 and 4 from the model, the Reply relied on language in his
Article to the effect that certain values of the variables “make agency
delegation more attractive.” However, a careful reading of the Article
confirms that those assertions relate only to how the values of one set of
variables determine the marginal effect of a second set of variables on
delegation. This involves an indirect effect of the first set of variables
on the delegation decision via the second set of variables. However, the
direct effect of the first set of values on delegation can swamp this indi-
rect effect.

Consequently, under a proper interpretation, the model does not
produce the counterintuitive predictions 3 and 4 suggested in the Reply.
This can be confirmed by partially differentiating equation (4) by \( \mu C \)
and \( \mu A \); the resulting derivatives have the correct signs (contrary to the
conclusion suggested by the Reply).

The root of the confusion was the inference that equations (5)
through (8) of the Article describe the legislator’s choice between agency
and legislative delegation. In reality, only equation (4) describes the leg-
islator’s choice. Equation (4), in turn, is merely a comparison of two
different values for the expression defined in equation (1).

Although this error was obviously unfortunate, working through the
problem does shed additional light on the model by highlighting the
central importance of equations (1) and (4) and thereby clarifying the
role of risk in the model. In equation (1), risk (lower predictability of
outcomes) decreases the legislator’s utility in two ways. First, increased
risk means wider dispersion of realized outcomes, which increases the $\sigma$ values within the brackets. Then, taking expected value of the square of the bracketed quantity builds in an additional level of responsiveness to risk (which is why the quadratic form is used to capture risk aversion). In effect, greater "randomness" increases dispersion, which the risk-averse legislator wishes to avoid, and also decreases consistency, which the legislator regards as a cost. In turn, this double responsiveness to risk levels in equation (1) directly affects equation (4). Thus, the model’s exceptional sensitivity to risk, as reflected in predictions 1 and 2 in the Reply, is not surprising.