ABSTRACT

Putnam's theory "two-level games" has spawned numerous studies examining the interaction between international and domestic politics, many focusing on politics in the European Union. While noting that ratification may be formal or informal, much of this literature treats each important domestic actor as if it has *de facto* formal ratification power. This means that the literature overlooks the very real distinction between formal and informal ratification. Informal ratification may be thought of as a case in which the government pays "audience costs" for unpopular international agreements. In this case, a government must respond continuously to public opinion. This presents constraints very different from those faced by governments who must obtain the formal approval of a legislature (or other actor). For example, divided government has no effect on the likelihood of informal ratification but does affect the distribution of gains, while it often affects the likelihood of formal ratification but has no effect on the distribution of the gains in many cases. Because these kinds of ratification differ significantly, Putnam's ratification metaphor is not always the most appropriate conceptualization of two-level politics in the European Union.
Through its many stops and starts, the process of European integration has clearly depended on the relationships between different institutions and groups within the European polity. The European Commission, and to a lesser extent the national governments, serves as the motor force for European integration. National publics, and to a lesser extent the legislatures, serve as the brakes. In short, certain elites negotiate proposals for further integration subject to constraints placed on them by other actors.

Our theoretical understanding of this process is unnecessarily limited. The dominant approach is heavily influenced by Robert Putnam’s (1988) metaphor of “two-level games.” Putnam conceptualized international cooperation as carried out by a country’s executives, who played one “game” with their foreign counterparts and a second game with domestic political actors at home. His framework highlighted the interaction between domestic and international politics within a theoretically-manageable framework, and it sparked a very fruitful research agenda studying both the United States and the European Union.

Subsequent research has tended to bifurcate into a formal literature limited to the problem of domestic ratification of treaties (without amendment) and a nonformal literature in which all processes other than formal ratification is labeled “informal ratification” and then treated as conceptually similar to the formal variant. Each literature has made progress on its piece of the problem. Yet clearly there is room for formalization of other types of domestic political settings, both to expand the formal literature and to add rigor to the nonformal analysis of some recurring types of political interactions.

This paper develops a way to characterize some informal ratification games formally, especially those in which domestic public opinion provides the major constraint on the executive’s
actions. I begin with the well-understood formal ratification problem and then show how informal ratification differs from the standard formal ratification game. The analysis leaves out some other types of domestic political constraints, such as no-confidence votes, elections, and imperfect implementation, but still suffices to capture a wide range of two-level problems.

With formal ratification, the executive’s task centers on making the ratifier prefer an agreement to the status quo. The ratifier’s choice is dichotomous, to ratify or not. This dichotomous choice produces an environment in which the ratifier’s preferences have dichotomous effects: sometimes they constrain and sometimes they do not. Once the ratifier is satisfied, the executive does not need to make further concessions to it.

In contrast, informal ratification provides a continuous constraint on the executive. While the executive can pursue her own preferences, she must always “tack” in the direction of public opinion. Depending on how much she values public opinion, this informal ratification may cause a larger or smaller change in the agreements that an executive negotiates. However, the public is never completely satisfied and can never simply be ignored as some formal ratifiers can be.

The importance of these different domestic processes is especially evident in the European Union. Large package deals, such as the Maastricht, Amsterdam or Nice treaties, only become law after obtaining the formal approval of one or more actors at the national political level. The relevant actor may one or both houses of the legislature, a public referendum, or even all of the above, depending on country (see Hug and König 2002). Many other decisions do not require domestic ratification, from annual price setting in the Common Agricultural Policy to major policy coordination or joint decisions in the Common Foreign and Security Policy. The major constraint in these latter cases is the potential wrath of domestic public opinion, an informal ratification process.
In short, the implications of domestic opposition to any EU policy will depend, systematically and predictably, on whether ratification is formal or informal. Understanding the role of democratic governance in the European Union, as well as evaluating any democratic deficit, requires examining both formal and informal processes.

**Two-level games and the European Union**

To analyze the problem of how domestic ratification affects policy making, I will join many others in using a spatial model of two-level games. Robert Putnam (1988) developed his theory of two-level games at a time when many scholars were dissatisfied with the sterile distinction between the international and domestic levels of analysis (for contemporaneous efforts, see Ikenberry et al. 1988; Mastanduno et al. 1989; Haggard 1990; for a review, see Moravcsik 1991). Putnam’s metaphor proved the most popular for a variety of reasons, and soon sparked a large literature studying many countries, mostly but not entirely in the developed world (Barnett 1990; Avery, ed. 1993; Evans et al., eds. 1993; Friman 1993; Hammond and Prins 1998; Li 1994; Lohmann 1992; Iida 1993a, 1993b; Lehman and McCoy 1992; Mayer 1993; McGinnis and Williams 1993; Meunier 1995; Milner 1997; Milner and Rosendorff 1996, 1997; Mo 1994a, 1994b, 1995; Morrow 1991, 1997; Putnam and Bayne 1987; Putnam and Henning 1986; Rapkin and George 1993; Smith 1998; Schoppa 1993; Solingen 1993). The fact that Putnam had used a simple version of spatial theory in explicating his framework also proved influential, and has shaped much of the subsequent research in both the formal and non-formal literatures.

Putnam argued that we should think of policy-makers as playing two games, a “Level I” international game with one another and a “Level II” ratification game with domestic constituencies. Both the likelihood of cooperation, and the distribution of gains when cooperation
occurs, depends on each executive’s success in playing these two games simultaneously.

Putnam’s point of reference was clearly the United States, in which an elected President negotiates treaties subject to approval by a two-thirds majority of an independently-elected Senate. Extending it to parliamentary systems in which the parliament chooses the executive raises significant challenges, not always recognized (see Pahre 1997). Organized interest groups, which also play a role in the United States different than their role in many other democracies, have provided an important focus for many studies of “informal” ratification as well as studies of how interest groups influence legislative ratification (i.e., Crombez 2002; Milner 1997).

The European Union has proved to be a fruitful subject for this kind of two-level analysis (Hug and König 1999; König and Hug 1997, 2000; König and Pöter 2001; Milner 1997: Chapter 8; Moyer 1993; Pahre 1997, 2001; Schneider 1993, 2000; Schneider and Cederman 1994). Timing probably explains part of this success, since the European Union’s straddling of international and domestic politics fits traditional academic boundaries rather poorly. The complexity of the multilevel process in the European Union also called out for an analytical framework capable of handling interactions between distinct political realms (cf. König et al., eds. 1996).

Two-level studies tend to focus either on the interstate negotiation phase (Level I) or the domestic approval phase (Level II), though studies of either type naturally exploit the interactive and synergistic strengths inherent in the two-level framework. Aside from the contributors to the Double-Edged Diplomacy project (Evans et al. eds. 1993), which mostly emphasized the Level I game, the Level II game has attracted the most attention in European Union studies. Scholars have applied the Level II ratification game to the European Union in two ways. One group, best exemplified by a series of papers by Simon Hug, Thomas König, and others (Hug and König
1999; König and Hug 1997, 2000; König and Pöter 2001), represent efforts to determine exactly who veto players are, under exactly what rules, in particular countries at particular times.

A second group uses the Level II ratification game more loosely to examine domestic constraints on political action. For example, Helen Milner (1997: Chapter 8) uses a ratification model to look at ratification of the Maastricht treaty in Britain, France, and Germany, though ratification was not formally required in any of the three. In this her study resembles many others, examining a range of countries, that treat domestic groups as exercising informal influence over the preferences of negotiators. Examples include agricultural interests in Japan, financial interests in Brazil, the military in Argentina and Brazil (Lehman and McCoy 1992; Rapkin and George 1993; Solingen 1993).

Current theory treats all these forms of domestic approval as essentially similar, in which domestic actors “ratify” decisions negotiated by foreign policy makers (Putnam 1988). Virtually all of these treat the domestic political game as a ratification problem in which the government must receive some actor’s formal approval before an international agreement takes effect. The literature notes a distinction in principle between formal ratification and more informal forms of approval, but treats them as analytically similar.

This paper presents two related models that make a clear analytic distinction between formal and informal ratification. Formal ratification presents some decision-makers with a dichotomous strategy space, giving them the choice of either accepting or rejecting a treaty. This results in discontinuities in the choices of other actors. Specifically, an executive need only make concessions to a legislature or other ratifier if an agreement’s passage would otherwise be in doubt.

Informal ratification produces a continuous strategy space. Public opinion, interest groups,
and other “ratifiers” may make slight changes in their support of the executive in response to small changes in the agreement. As a result, executives will make concessions to informal ratifiers throughout the entire range of political support, and not just when an agreement is in danger of rejection.

This institutional difference plays a critical role: with the same actors and identical preferences, agreement may be possible under informal ratification but impossible under formal ratification. The institutional difference also has behavioral implications for how a negotiator will view her domestic political problem, and how she will change agreements in response.

Though I emphasize the differences between formal and informal ratification, certainly many executives face both problems. A legislature may have formal ratification authority over a treaty, while an executive may also worry about public opinion’s informal reactions in advance of parliamentary elections. The analysis here allows a straightforward synthesis of the two problems.

As the forgoing discussion suggests, this paper is purely analytical and theoretical, without a systematic effort to test the theory. The goal is to provide propositions about formal and informal ratification games in a format that could be tested empirically, either quantitatively or in case studies. I also emphasize those propositions that distinguish the two games from each other.

**Framework for formal analysis**

To model institutional differences, it is helpful to have a very simple, flexible model of two-level games. For this, I assume that governments jointly choose a point ("policy") in n-dimensional policy space. As in other spatial models, each actor has an ideal point, which represents that actor's most-preferred point in policy space. Governments may have preferences
over policy that differ from society's preferences. Each actor evaluates policies by their distance from her ideal. The models here use a quadratic loss function in which utility goes down with the square of the distance between an actor’s ideal point and the point being evaluate.

The solution concept is the win-set, the set of points that are possible outcomes of the bargaining game between the governments when they take ratification needs into account. At times I will also analyze the "intergovernmental win-set," the set of points that the governments might choose if no ratification were required. Because Putnam did not clearly distinguish executive and ratifier preferences, both definitions differ slightly from his, though my definitions are broadly consistent with the rest of the formal literature. Within the win-sets, I do not solve the obvious bargaining problem, but assume that any point within that set may be the result of negotiations (see Hammond and Prins 1999 for a similar approach).

This paper is limited to games of complete information in order to highlight institutional differences. Complete information is also more tractable, and models of complete information provide an essential prelude to the study of incomplete information. We can only argue that incomplete information uniquely explains ratification failures, for instance, if we know whether ratification failures occur under complete information (for information in two-level games, see Iida 1993a; Milner 1997; Milner and Rosendorff 1996, 1997; for a similar type of problem in the EU, see Crombez 2002). Extending the model here to problems of incomplete information would provide a reasonable direction for a research agenda into informal ratification.

**The formal ratification game**

The two-level game that attracted most of Putnam's attention was a game in which two governments negotiate an international agreement, subject to ratification by one or more domestic
actors. In the canonical case, an agreement will be ratified if it satisfies the median voter in the legislature. As Putnam forcefully argued, anticipation of the ratification stage has important effects on the intergovernmental negotiation.

This game has several applications to the European Union. At the Union level, the assent procedure, which gives the European Parliament the power to accept or reject legislation (without amendment) fits this game well. At the national level, legislatures’ ratification of major treaties, such as Maastricht or Nice, or the accession of new members is also well described by this game. Rather than explore particular applications of these procedures, this section will examine the general case in the abstract.

As this suggests, the exact identity of the “government” and “ratifier” may vary considerably in the EU. Most commonly, the Commission will be the “government” who negotiates an agreement with outsiders, though the Council formally negotiates with outsiders in accession and negotiates internally in the case of the Common Foreign and Security Policy (CFSP). The ratifier may be the Council in some cases, is the European Parliament in many other cases, and often includes national parliaments. Excluding amendment powers does not do too much violence to these procedures. For example, the European Parliament has only restricted amendment powers in the cooperation procedure (Tsebelis 1994), and (more controversially) may have no amendment powers at all in the codecision procedure (Pollack 1999; Tsebelis and Garrett 2000 but Crombez 2002).1 As these illustrations show, the model applies when there is no single agenda-setter such as the European Commission, but two or more negotiators who jointly set the

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1In addition, institutional designers sometimes make rules that preclude amendment, such as the "fast track" provisions of the US Trade Act of 1974. Pahre (1997) has shown that when the executive and the legislature jointly choose the institution, it is generically true that they will not choose ratification rules that allow amendment.
Policy is a point \( x \in \mathbb{R}^n \), with status quo \( Q \) at \( x_Q \).

A\c\nts are Governments A, B, and Ratifier R, with ideal points in \( n \)-dimensional space \( x_A, x_B, x_R \).

Ideal points are distinct from each other and from the status quo, so that \( x_i \neq x_j, i \neq j, i, j \in \{A, B, R\} \) and \( x_i \neq x_{SQ}, i \in \{A, B, R\} \).

Outcome at end of game is \( x_E \), which will be either \( Q \) at \( x_Q \) or a negotiated and ratified agreement \( N \) at \( x_N \). Label the set of all negotiable and ratifiable \( x_N \) the "win-set," \( w \). I allow only "meaningful" agreements, i.e., \( x_N \neq x_{SQ} \).

Utility is a quadratic loss function from ideal point, i.e., 
\[
U_i(x_E) = \sum_{i} [d(x_i - x_E)]^2, \quad i \in \{A, B, R\},
\]
\( x_E \in \{x_Q, w\} \). Actor \( i \)'s acceptance set \( c_i = \{x : d(x_i - x_E) \geq d(x_i - x_Q)\} \).

Stages and outcomes:
I. Negotiation along contract curve (Putnam's Level I). A and B jointly choose a point \( x_N \). If either prefers \( x_Q \) to \( x_N \), then \( x_Q \) results and the game ends.

II. Ratification by R (Putnam's Level II). R ratifies \( x_N \) iff it prefers \( x_N \) to \( x_Q \). If it ratifies, outcome is \( x_N \); else \( x_Q \) results. There is no amendment at the ratification stage.

Structure of the game is complete information, and all of the above is common knowledge.

Solution:
\[
\begin{align*}
(1) & \quad \text{if } c_A \neq c_B \neq c_R = i, \text{ then } w = i; \\
(2) & \quad \text{else if } c_A = c_B = c_R = c_A = c_B, \text{ then } w = c_A = c_B \neq s_{AB}; \\
(3) & \quad \text{else if } c_A = c_R = c_B = w_Q \neq i, \text{ then } w \neq w_G; \\
(4) & \quad \text{else, then } w \neq i \text{ and } w = w_G = i.
\end{align*}
\]

The adjacent box describes such a game. After the governments agree, some domestic group decides whether to ratify the agreement. If the governments cannot agree, or if ratification fails, the status quo ante remains.
Figure 1 shows the outcome of this game if there were no ratifier. This intergovernmental win-set consists of those points that are both negotiable and efficient. Those points that both governments would accept as alternatives to the status quo, because they are closer to their ideal point than is the status quo, are negotiable. The contract curve between the two governments’ ideal point is efficient, for there is always some point on the contract curve that both governments prefer to any given point off the curve. The figure shows the two ways that an intergovernmental win-set may be bound, either by an actor’s acceptance set (as B bounds the left end) or by a government’s ideal point. With different locations of Q, the win-set could be bound on both sides by the two acceptance sets or by the two ideal points.

Much of the case study literature on two-level games acts as if ratifiers are always constraining. However, adding a ratifier may or may not produce a result that differs from the intergovernmental win-set:

**Hypothesis 1.** There are four possible outcomes to the formal ratification game:
1a. formal ratification may make any international agreement impossible;
1b. formal ratification may be irrelevant because the ratifier will accept anything the executives might negotiate;
1c. a formal ratifier may constrain the win-set, accepting some points the governments would negotiate but rejecting others (which the governments will therefore no longer negotiate);
1d. a formal ratifier may shift the win-set to points off the intergovernmental win-set. (See Proposition 1 in the Appendix for proof.)

The first case, in which ratification prevents agreement, occurs when the governments can agree on some policy but the ratifier prefers the status quo to any such agreement. At the other extreme, formal ratification may be irrelevant because the ratifier will accept anything that the governments negotiate. Third, the ratifier may constrain the win-set because it is willing to ratify only part of the contract curve between the two governments. Finally, the ratifier may change the win-set: it will ratify nothing on the governments' contract curve, but it will ratify some other points that both governments prefer to the status quo.

Figure 2 shows the four possibilities. When the ratifier is at R1, there is no point acceptable to all three actors. As a result, the win-set $W_1$ is the status quo $Q$, and policy remains unchanged.

If we move R southwestward, the ratifier is now willing to accept some change in the same direction that the two governments desire. The governments will
I have made no assumption about which points the governments will propose. This particular state of affairs has sparked a debate between Mansfield, Milner and Rosendorff (2000, 2002) and Dai (2002) over the likely outcome in a take-it-or-leave-it bargaining model.

propose points as far as possible from the status quo, yielding the arc labeled as $W_2$. This arc is bounded by the lines connecting A and Q (AQ) and B and Q (BQ). Continued movement of $R_2$ moves the arc toward the intergovernmental win-set, and the growing arc will suddenly shrink to a point when it touches the AB line.

Further movement will increase the number of points on the intergovernmental win-set that the ratifier will accept. The win-set $W_3$ shows this case, with the right-hand bound of the win-set the same distance from $R_3$ as is the status quo Q. Finally, as the ratifier moves still further it will accept all of the points in the intergovernmental win-set.

Finally, at $R_4$, the win-set $W_4$ is the same as the intergovernmental win-set. When this occurs, the ratifier is effectively irrelevant.

These are four, qualitatively-different outcomes, as the pictures of the win-sets suggest. At least under conditions of complete information, there are also sharp boundaries between these outcomes as a point becomes an arc, then a point and then grows into a line segment. I have drawn the four illustrative ratifiers on a line to make visible how linear and continuous changes in the ratifier’s preferences may have “discontinuous” and “nonlinear” qualitative changes in the win-set.

Especially when we consider the case labeled as $W_4$ in the figure, Hypothesis 1 also reminds us of the important point that not all actors' preferences will be constraining. This has been noticed in some of the case study literature (i.e., Snyder 1993) but many others attribute outcomes to the "ratification" requirements of many domestic groups on a single issue, regardless

\[I\] have made no assumption about which points the governments will propose. This particular state of affairs has sparked a debate between Mansfield, Milner and Rosendorff (2000, 2002) and Dai (2002) over the likely outcome in a take-it-or-leave-it bargaining model.
of the formal institutional requirements or precise distribution of preferences (i.e., Lehman and McCoy 1992; Milner 1997: Chapters 7-8; Rapkin and George 1993).

There are various conditions under which the ratifier will be irrelevant. The simplest condition is that if A’s and B’s ideal points are both in the ratifier’s acceptance set, then the ratifier will ratify everything on the contract curve and will therefore be irrelevant (see 81 in appendix). This has important behavioral implications in that the negotiator will likely ignore domestic audiences, who can (rightly) complain about a lack of influence over the details of an agreement.

The analysis here also has implications for the kind of ratification behavior we should observe. In the R2 case, the governments propose an agreement that is barely acceptable to the ratifier. This should mean that the agreement will be ratified by the narrowest possible margin. Narrowly satisfying the voters in Denmark’s second vote on the Maastricht Treaty on European Union would probably be an example of this. In the other cases with successful ratification (R3 and R4), margins will be larger than needed. This was the case for the other Maastricht ratifications, except perhaps for France.

In addition to ratification margins, the most easily observed behavior in this model is whether the governments successfully negotiate any agreement at all. No agreement is possible when the status quo Q lies inside the triangle defined by A, B, and R (see 82 in appendix). Inside this triangle, moving Q in any direction will make at least one actor better off while making at least one actor worse off. The actor harmed will refuse to negotiate or ratify an agreement on that point. As we will see, the “gridlock” conditions are very different in the informal ratification game.

In summary, the relative positions of the executives, ratifiers, and status quo are critical for
the outcome of the formal ratification game. All of these conditions depend on the relative position of the status quo and the three actors in multi-dimensional space. What matters in the formal ratification games is the same thing that matters in real estate: location, location, and location. The results of the game are often discontinuous and vary significantly on either side of a threshold. Behavioral implications appear in the ratification margins as well as whether (and how) a negotiator responds to the ratifier’s concerns.

**Informal ratification: the role of audience costs**

Formal ratification often is not required for international agreements to take effect. When domestic actors do not have ratification authority, they may try to stop undesirable agreements by inflicting costs on any government that signs them. For instance, the farm lobbies in France, the US, and Japan—none of which have a formal veto over policy—all tried to stop the GATT Uruguay Round through lobbying, street demonstrations, or campaign contributions (Avery, ed. 1993). Other groups throughout Europe mobilized over the Maastricht, Amsterdam, or Nice treaties. In one way or another, these activities impose some electoral costs on the government.³

Groups may inflict costs on negotiators directly. The public also inflicts costs indirectly, as when a policy lowers public support for the government. This might occur because the public can anticipate the likely benefits or costs of a given policy for them (i.e., Gabel 1998) or because the negotiators have chosen an open process than encourages public participation, as in the Amsterdam intergovernmental council (Sverdrup 1998) or the European constitutional convention.

These are "audience costs," to use a term from the study of the effects of domestic politics

³Notice that I am ignoring the role of information transmission by groups, a process analyzed by Crombez (2002).
on crisis decision-making and sanctions (Martin 1992; Fearon 1994). The domestic audience costs increase as the agreement gets farther away from the domestic actor’s ideal point. These costs may be relatively important to the government or relatively unimportant, a factor that we may capture with a weighting parameter. These costs are, then, a (linear) function of the distance between the agreement and the ideal point of each relevant citizen or group.

Governments also have their own preferences over policy, so the distance between the agreement and the government's ideal point is also important. Governments will only accept an international agreement in their "acceptance set," the set of points that they prefer to the status quo when they consider both their own policy preferences and the domestic costs of a policy.

In effect, then, a government in the informal ratification game has a “transformed” utility function in which it considers both its own preferences over policy and a weighting of domestic groups’ preferences over policy. For simplicity, I will analyze the case with a single group, though obviously a country has many groups interested in a given decision. The government weights its own policy preferences "", and the group’s preferences (1 ""), with " 0 [0, 1].
**Policy** is a point $x \in \mathbb{E}^m$, with status quo at $x_Q$.

**Actors** are Governments A and B with ideal points $x_A, x_B$, and domestic actor G in A with ideal point $x_G$.

**Utility.** Government A’s utility depends on its own preferences and on the distance between outcome and the ideal points of that government's public. I will use a quadratic loss function for the utility function. Specifically, for an end of the game outcome $E$ at point $x_E \in \{w, x_Q\}$, A's utility is

$$
!"[d(x_E, x_A)]^2 + (1 - ")[d(x_E, x_G)]^2,
$$

where $" \in [0, 1]$.

B’s utility is simply $[d(x_E, x_B)]^2$.

**Acceptance sets.** The acceptance set for A, $c_A$, is the set of points that A strictly prefers to $x_{SQ}$: $c_A = \{x_E: [d(x_E, x_A)]^2 + (1 - ")[d(x_E, x_G)]^2 < [d(x_Q, x_A)]^2 + (1 - ")[d(x_Q, x_G)]^2\}$.

B’s acceptance set $c_B = \{x_E: [d(x_E, x_B)]^2 < [d(x_Q, x_B)]^2\}$.

**Stages and Outcomes.** A and B choose a point $x_N$ from the win-set $w / c_A \cap c_B$. I do not model how they choose this point. If $w = 1$, $x_E = x_Q$.

The game is **complete information** and all of the above is common knowledge.

**Solution** is described in Proposition 3 in the Appendix.

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**GAME 2: INFORMAL RATIFICATION**

The adjacent box describes this game. Defining the win-set in this game requires first that we define the “core,” the set of points that cannot be changed if they are the status quo. We may describe the boundaries of the core by finding two lines, the alpha-line and the beta-line. The beta-line is simply the projection of B’s ideal point onto the line connecting A’s ideal point with G’s ideal point. As drawn in Figure 3, this projection lies inside the ABG triangle, but it could also lie outside the triangle.

The alpha-line is defined by the fraction $"$. The line is perpendicular to the AG line, and intersects the AG line at a point that is the fraction $"$ from A on the way to G. This point is also the point that maximizes A’s transformed utility function. The points on the alpha line maximize A’s utility for each imaginary line parallel to the AG line.
With these definitions in mind, we can now define the core:

**Proposition 2.** The core in the informal ratification game is a subset of the triangle $x_Ax_Gx_B$ defined by the alpha-line and beta-line.

Specifically, the core is the shaded area in the adjacent figure between these two lines.

The logic of this result rests on the fact that $A$ and $G$ are no longer distinct actors who can veto an agreement that they do not like. This veto power is what prevents change inside the ABG triangle in the formal ratification game. Instead, only $A$ and $B$ are actors, though $G$’s preferences shape $A$’s evaluation of any agreement. If we consider a point in the $AB$ triangle, both $A$ and $B$ would be better off moving this agreement due left onto the beta-line. Such a movement is closer to $B$’s ideal point and also closer to the alpha-line that captures (in a loose sense) $A$’s payoff when it consider’s $G$’s preferences as well. Similarly, any point in the left-hand unshaded triangle region could be shifted to the right onto the alpha-line and make both $A$ and $B$ better off.

Between the alpha-line and the beta-line, any rightward movement making $B$ better off makes $A$ worse off by moving away from the alpha-line. Any leftward movement clearly makes...
B worse off. The points in this trapezoid are therefore Pareto-efficient. If the status quo lies in this region it cannot be changed.

We may think of this core as analogous to the contract curve in the formal ratification game. As in the formal ratification game, the governments may not prefer all points in the core to the status quo. This means that

**Proposition 3.** The win-set of the informal ratification game is the intersection of the core, $c_A$, and $c_B$.

The adjacent figure shows one such win-set, in which B’s acceptance set is constraining. The result is shaped like a wedge in this case, though other more unusual shapes are also possible. I should note here that A’s transformed win-set is not circular and is, in fact, difficult to characterize visually across the full range of possible ideal points.

This simple example shows the importance of distinguishing formal and informal ratification. Under formal ratification, change is impossible if the status quo lies inside the triangle defined by A, B, and R (82, Appendix). Under informal ratification, slices of that triangle are now open to negotiation. As a result, there are many situations in which no agreement will
occur under formal ratification and agreement is possible under informal ratification rules. Phrased differently, stalemates are more common under formal ratification than informal ratification.4

When the status quo Q is close to both A and B, the win-set is highly constrained in both games. Neither A nor B will accept much movement in policy, so little movement occurs. When the status quo becomes more distant, many point agreements are possible. As the set of possible agreements opens up, the procedure matters much more. When the status quo is so distance that the governments’ and ratifier’s acceptance sets do not constrain, for example, the win-set is the entire AB line in the formal ratification game, but a slice of the ABG triangle in the informal ratification game. These two win-sets will not normally intersect at all, so that agreements possible under informal ratification are not equilibria under formal ratification, and vice versa.

Behaviorally, informal ratification games will be characterized by the negotiator “tacking” in the direction of domestic preferences. In Figures 3-4 above, for example, government A does not negotiate along the AB contract curve that we saw in the intergovernmental win-set (Figure 1). Instead, A negotiates with B over a set of points that goes part way to satisfying its own domestic constituencies.

These concessions to domestic interests are continuous, and are a continuous function of the weighting parameter ("\" and the distance between the actors. In the formal ratification game, once the ratifier will vote for an agreement the negotiators can ignore its preferences. In contrast, the informal ratification process continues to impose costs on negotiators if the ratifier’s

4The analysis generalizes to n actors; the more ratifiers, the less likely agreement will be. This conclusion has been applied to decision-making in the European Union, both formally and informally; see Moyer 1993; Tsebelis 1994.
preferences are not considered. The informal ratification game also lacks the qualitative change between types of win-sets found in the formal ratification game.

Finally, the informal ratification game also lets us examine the many cases in which both informal and formal ratification is found. For example, a legislature may ratify a treaty that the prime minister negotiates while backbenchers also inflict some political cost on the prime minister for agreements away from their own ideal point. For simplicity, assume that the same group has both formal and informal ratification powers. Though I will not modify it formally here, clearly this synthetic game simply adds the ratifier’s constraint—its acceptance set—to the core as defined in this section. Figure 5 illustrates this case, with G acting as both formal ratifier and inflicting audience costs in the informal ratification game. The win-set is where the circles centered on B and G intersect with each other and with the shaded region (A’s acceptance set is not constraining in this case).

**Divided government under formal and informal ratification**

The continuous nature of change under informal ratification, as opposed to the
discontinuous and qualitative changes found under formal ratification, shape how these games work when applied to particular kinds of research problems. I will illustrate this briefly by examining the question of “divided government,” which has gained increasing attention within formal models of two-level theory. Divided government is the extent to which the executive’s preferences diverge from the legislature’s preferences in a given country, or in our terms, the distance between the negotiator’s and ratifier’s ideal points.

The literature has explored two distinct effects of divided government on international cooperation. First, increasing divided government can make cooperation more difficult or impossible because the ratifier will reject treaties that the negotiator favors (i.e., Iida 1993; Milner 1997; Milner and Rosendorff 1997, 1998; Mo 1994, 1995; Schneider and Cedermann 1994; but Karol 2000). Trying to satisfy an unpredictable legislature under uncertainty may also force an executive to maintain a hardline stance abroad, preventing cooperation with foreigners (Milner 1997). In parliamentary systems, anticipated votes of no-confidence may play an analogous role to treaty ratification (Smith and Hayes 1997).

The second effect of divided government concerns the distribution of the gains of cooperation, and goes by the name of the “Schelling Conjecture.” In *Strategy and Conflict*, Thomas Schelling (1961: 19-23) conjectured that an executive whose hands were tied would be able to negotiate more favorable outcomes than an unconstrained executive. For example, the president may successfully make demands of Japan in trade negotiations, reminding his interlocutors that he must satisfy a hardline Congress if any bargain will stick. A substantial

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5 The argument parallels the analysis of veto players in domestic politics, especially in federal, presidential, and/or bicameral polities where several actors must approve any legislation (Bräuninger and König 1999; Krehbiel 1996; Tsebelis 1995, 1999; Tsebelis and Money 1997).
formal literature has grown up around this claim (Iida 1993, 1996; Milner and Rosendorff 1997; Mo 1994, 1995; Pahre 1997; Schneider and Cedermann 1994). Sophie Meunier (2000) has argued that the European Union has also received distributive gains from having veto players in some issue areas.

Whereas the veto player hypothesis addresses the probability of cooperation, the Schelling Conjecture concerns the distribution of the gains from cooperation. It therefore has only conditional validity in the formal ratification game, since it requires that cooperation has in fact occurred.

We can analyze the role of divided government within the games of formal and informal ratification modeled here. It is now appreciated in the formal ratification game that analysts must clarify that the effects of divided government depend on the direction of the divisions. In Figure 2, for example, moving R4 further to the southwest would increase divided government but have no effect on the game, while moving R3 or R2 to the northeast will increase divided government and have significant effects on the win-set. However, in either direction divided government has no effect beyond some threshold—either the ratifier rejects everything or accepts everything as its preferences become sufficiently different.

Once again, the informal ratification game is different because the ratifier exhibits continual pressure on the negotiator. In any direction, increasing divided government moves the alpha-line farther away from A’s ideal point and therefore expands the win-set. Divided government has unconditional validity in the informal ratification game, unlike the conditional validity found in the Schelling case. The government will have to make greater concessions to satisfy an increasingly distant informal ratifier.

In short, divided government does not affect the probability of cooperation under informal
ratification, though it often does under formal ratification. Beyond some threshold, divided
government does not affect the distribution of gains under formal ratification, but will always affect
the distribution of gains under informal ratification. The two forms of ratification differ
dramatically and cannot be lumped together as a single process.

Conclusions

Institutions vary dramatically across nations, across issue areas, and over time. The
complexity of institutional rules is especially obvious in the European Union. Rather than
examine this institutional variety, which has been explored elsewhere (i.e., Tsebelis and Garrett
2000), this paper has added the study of uninstitutionalized informal ratification to the two-level
negotiation problem.

Informal ratification is particularly important for the European Union because the public’s
control over policy is particularly indirect if it exists at all, exercised through delegates of
delegates and their delegates. The Commission, for example, is chosen by the national
governments acting in the European Council, while those national governments are chosen by
national legislatures that are themselves chosen by the electorate. Neither public nor legislature
has an effective veto over many decisions, and this is one of the features of the EU’s alleged
democratic deficit. However, legislatures and electorates do have the ability to make their
displeasure known and to impose costs on governments that act contrary to their wishes.

Audience costs may well be the most important—or indeed the only—democratic
constraint available in issue areas such as the Common Foreign and Security Policy. CFSP
positions and decisions are negotiated by the Council without being subject to formal ratification
by other institutions. However, foreign policy decisions from Kosovo to Iraq have entailed
substantial audience costs, and even more narrow joint positions such as voting in the Organization for Security Cooperation in Europe (OSCE) may have costs among a smaller audience. These issues have traditionally not played an important role in theorizing about the EU, especially in contrast to highly-institutionalized procedures such as cooperation or codecision. However, the academic debate over intergovernmentalism (Hosli 1993, 1995, 1996; Moravcsik 1996; Moser 1996; Tsebelis 1994, 1996) has hinged on the question of formal rules and not informal processes. Bringing informal domestic political processes into the theory enriches intergovernmentalism while also expanding the theoretical reach of institutionalism. This agenda may produce some hypotheses that help us evaluate the relative contributions of intergovernmentalism and institutionalism for our understanding of the European Union.
APPENDIX: FORMAL PROPOSITIONS AND PROOFS

FORMAL RATIFICATION. See Game 1 for structure of the game.

Additional notation. Define Distinguish the intergovernmental win-set \( w_G \) (the win-set if there were no ratifier) and the win-set \( w \). Note that \( w_G = c_A 1 c_B 1 x_A x_B \); while a necessary condition for any \( x_N \) to be a member of \( w \) is that \( x_N 0 \{ c_A 1 c_B 1 c_R \} \) (\( w \) will be the set of points that are Pareto-efficient for A and B within this set).

**Proposition 1.** The solution of the formal ratification game may be described as follows:
(a) if \( c_A 1 c_B 1 c_R = i \), then \( w = i \);
(b) else if \( c_A 1 c_B 1 c_R = c_A 1 c_B \), then \( w = c_A 1 c_B 1 x_A x_B \);
(c) else if \( c_A 1 c_B 1 c_R \neq i \), then \( w \in w_G \); d \( w_G \);
(d) else, then \( w \neq i \) and \( w \in w_G = i \).

**Proof.** Each \( i \in \{ A, B, R \} \) must prefer \( N \) to \( SQ \), and (1) defines the conditions under which there is no such \( N \). If \( R \) will ratify all points in \( w_G \), as described in (2), then ratification is irrelevant and \( w = w_G \). If \( R \) will ratify some but not all points in \( w_G \), as described in (3), then \( A \) and \( B \) will choose some point in \( w_G 1 c_R \); clearly \( w = w_G 1 c_R \) d \( w_G \). Note that if \( A \) and \( B \) were to choose some \( x_N \in w_G \), then the projection of \( x_N \) onto \( x_A x_B \) is Pareto-superior to \( x_N \). When \( c_A 1 c_B 1 c_R \neq i \) and \( w_G 1 c_R = i \), then there are ratifiable points that \( A \) and \( B \) prefer to \( x_{SQ} \) but no such point lies on \( x_A x_B \). Thus, \( A \) and \( B \) choose some \( x_N : x_N \in c_R \) and \( x_N \in w_G \).

**81.** If \( x_A, x_B \in c_R \), then ratification is irrelevant.

**Proof.** Because \( R \) has convex preferences, when \( x_A \) and \( x_B \) are in its acceptance set the convex combination of \( x_A \) and \( x_B \) (that is, \( x_A x_B \)) also lies entirely within its acceptance set and will be ratified.

**82.** If \( x_{SQ} \) is in the triangle \( x_A x_B x_R \) and on the plane defined by \( x_A x_B x_R \), then no ratifiable agreement is possible (\( w = i \)).

**Proof.** This triangle defines the simplex of Pareto-efficient points for \( A \), \( B \) and \( R \), such that any agreement increasing the utility of both \( A \) and \( B \) must by definition reduce \( R \)'s utility.

INFORMAL RATIFICATION.

Notation. I will treat any point \( x_i \) as a vector in \( n \)-dimensional space \( [x_{i1}, x_{i2}, x_{i3}, \ldots, x_{in}] \), or for simplicity \( [x_i] \).

**83.** \( A \)'s utility is at a maximum at \( [x_M] = [x_A] + (1 - ") \) \( [x_G] \).

**Proof.** Define a line \( L \) with origin at \( x_A \) through \( x_G \) and scaled such that \( x_G = 1 \). The point \( [x_M] \) must lie on \( L \) in the interval \( [0,1] \) because for any other point \( x^* \) there is a projection of \( x^* \) onto \( L \) that reduces both \( d(x^*, x_A) \) and \( d(x^*, x_G) \) and therefore increases \( U_A \); if that projection \( x_p \) lies outside \([0,1] \), then either \( x_A \) or \( x_G \) will reduce both \( x_A \) and \( x_G \), again increasing \( U_A \). \( A \)'s utility for any point \( x \) on \( L \) in \([0,1] \) is \( U_A = 1 " x^2 ! (1 ! ")(1 ! x)^2 \). This function is at a maximum at \((1 ! ") \), which we may also describe as \([x_A] + (1 - ") \) \([x_G] \).
84. The points inside the triangle $x_A x_G x_B$ are Pareto-efficient.

*Proof.* For any point $x$ outside $x_A x_G x_B$ there is a projection $x_p$ of $x$ onto one of the three line segments bounding $x_A x_G x_B$ such that $d(x_p, x_i) < d(x, x_i)$ for $i \notin \{A, G, B\}$; therefore $U_A(x_p) > U_A(x)$ and $U_B(x_p) > U_B(x)$.~

85. On the $x_A x_G x_B$ plane, the set of points off the line $x_A x_G$ that maximize $U_A$ is described by the line perpendicular to $x_A x_G$ through $(1 - \eta) = \frac{[x_A]}{[x_A]} + (1 - \eta) \frac{[x_G]}{[x_G]}$. (Define this as the alpha-line.)

*Proof.* Define a line $Y$ parallel to $L$ at distance $y$. Let $x_Y$ be the point on $Y$ that maximizes $U_A$, and let $z$ be the projection of $x_Y$ onto $L$. Define $z = d(x_z, x_A)$ and therefore $(1 - z) = d(x_z, x_G)$. This means that $d(x_Y, x_A) = \sqrt{z^2 + y^2}$ and $d(x_Y, x_G) = \sqrt{(1 - z)^2 + y^2}$, so that $U_A = (z^2 + y^2) + (1 - z)^2 + y^2$. The function $U_A$ is at a maximum when $z = (1 - \eta)$.~

Definition. The beta-line is the line connecting $x_B$ with $x_B^*$, the projection of $x_B$ onto the line $x_A x_G$.~

86. Any point outside the space defined by alpha-line and beta-line and inside the triangle $x_A x_G x_B$ is not Pareto-efficient.

*Proof.* Any point $x^*$ inside the triangle $x_A x_G x_B$ defines a line $Y^*$. Points on $Y^*$ between the alpha-line and beta-line are Pareto-efficient because movement toward the alpha-line implies movement away from the beta-line, which necessarily increases the distance to $x_B$, while movement on $Y^*$ toward the beta-line implies movement away from the alpha-line and therefore reduces A’s utility. If $x^*$ is outside these lines, movement toward both lines raises A’s and B’s utility simultaneously.~

Definition. The core is the set of points that cannot be changed if they are the status quo.

**Proposition 2.** The core in the informal ratification game is a subset of the triangle $x_A x_G x_B$ defined by the alpha-line and beta-line.

*Proof* follows from the above lemmas.~

**Proposition 3.** The win-set of the informal ratification game is the intersection of the core, $c_A$, and $c_B$.

*Proof* follows from Proposition 2 and the definition of acceptance sets.~
REFERENCES


