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The Parade of Sovereignties: Testing Theories of Secession in the Soviet Setting

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This article asks why some ethnically distinct regions fight fiercely to secede while others struggle to save the same multinational state. It tests competing explanations using a new dataset containing forty-five cases, significantly more than any previous study in the Soviet setting. The empirical results confirm arguments that the most separatist regions tend to be those possessing the most wealth, containing the least assimilated ethnic groups and already enjoying the greatest levels of autonomy. Demonstration effects are also found to be powerful. No support is found for prominent theories pointing to group upward mobility and 'skill sets' as being decisive. Group histories of grievous exploitation or national independence are found not to explain patterns of secessionism.

Why do some ethnic regions fight fiercely to secede while others are quite content to remain part of the very same country? This question penetrates some of this century's most earth-shaking events. Indeed, secessionist republics tore one global superpower apart and plunged Tito's Yugoslavia into homicidal chaos. The separatist threat has not passed from the historical scene, however; many important states like China, Canada and India contain ethnically defined regions that at least potentially imperil national unity. Yet in almost every case where a state has imploded along ethnic lines, one finds examples of nationally distinct regions that sought to *preserve* a union. While Lithuania spearheaded the charge to leave the Soviet Union in 1990, neighbouring Belarus remained loyal to the idea of integration. While Slovenia and Croatia seized a chance to bolt the Yugoslav Federation, Montenegro stuck with the Serbs.

Over the past fifteen years, social scientists have developed a variety of theories to explain national separatism.¹ Some point to regional histories of ethnic victimization or a 'golden age' of prior independence. Others examine

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¹ Specifically, I am interested in the *propensity* of an ethnic region to secede, not whether it actually succeeds.

relative levels of wealth and development. Still more focus on the prospects for group upward mobility. And finally, certain theorists look at the process of bargaining that usually goes on between centre and periphery. If any of these arguments hold true, their predictions should show up as clear patterns when one considers the large number of cases in the former Soviet Union.² Indeed, at least one proponent of almost every major theory explicitly declares that his or her argument should account for variation in the propensity of the Soviet Union's many ethnic regions to secede. This article, therefore, tests competing theories of secession by applying advanced statistical techniques to a new dataset on the former Soviet Union that allows for important advances over previous tests. It examines significantly more cases of ethnic regions (forty-five) than any previous regression analysis of secession, making for much more precise and reliable results.

The results, in fact, are strong. First, the evidence supports arguments that it is the richest, rather than the poorest, ethnic regions which are the most eager to secede since they have the most to lose should they be exploited by other groups that control the state. Results also show that regions already enjoying the most autonomy tend to use this power in order to bargain for still more autonomy, suggesting that appeasing restive regions by decentralization is unlikely to succeed. Both of these results are surprising, since much of the comparative literature argues essentially the opposite, that it is the most *disadvantaged* ethnic groups and regions that are most likely to try to secede. In addition, the study shows that regions tend to be the most separatist when their native ethnic groups are the least assimilated into surrounding cultures. It also confirms that 'demonstration effects' can play a significant role in promoting secession; that is, one key region's separatist actions tend to encourage other regions to behave similarly.

It is also surprising to note the theories that do not find support in this analysis. Perhaps most unexpectedly, it does not appear to matter whether a region's native group has either suffered egregious forms of ethnic victimization at the hands of the central government in the past, nor does it matter if this region has previously existed as an independent state in the twentieth century. In addition, no evidence is found for theories that group upward mobility matters; the regions

² To avoid misinterpretation, it is important to note at the outset that this study specifically focuses on whether the official leaderships of ethnically defined *regions* are inclined to attempt to secede. Secessionist social *movements*, therefore, only come into view here in so far as they affect official regional government policy (including the possibility that they might win election and *become* the official regional policy makers). Not all of the authors I test clearly state whether their theories primarily apply to separatism as 'regional policy', separatism as 'group preference' or separatism as 'formation of a separatist social movement'. Thus theories discounted by my tests here may in fact still have some explanatory power regarding group preferences or social movements, and this study should aid in developing theory as to why and how group behaviour and regional behaviour may differ. Nevertheless, one may reasonably expect that a theory explaining group preferences, for example, may also help us explain why these groups' regional leaders pursue the policies they do. For this reason, I here test all of the major theories of secession of which I am aware as explanations of official regional separatist behaviour. containing David Laitin's 'most favoured lords' appear to be just as separatist as the rest.³ Finally, the study finds that the regions of highly educated groups are just as likely to try to secede as those of groups without the accompanying 'advanced skills'.

I begin by summarizing the most important theoretical arguments purporting to explain the propensity to secede, and proceed to demonstrate that the Soviet Union is an excellent 'natural laboratory' in which to test them. In the following section, I describe the advanced statistical technique (a hazard model) I employ to make use of this data, and then discuss the results of the study.

THEORIES OF THE PROPENSITY TO SECEDE

While existing comparative theories of secessionism tend to reflect the true complexity of the matter, the most prominent ones essentially boil down to seven key factors, which I label regional wealth, regional autonomy, ethnic distinctiveness, group skill sets, elite upward mobility, historical symbolic resources and demonstration effects. Since the critical contribution of this project is to test, not to dissect, these theories, I restate them here only briefly with reference to the key works in which they are elaborated.

Regional Wealth. Michael Hechter's work on secessionism is complex, but one of his key arguments essentially boils down to a claim that the poorest, least developed ethnically distinct regions of a state are the most disposed to secede. Since the most industrialized regions tend to depend the most on interregional trade within a union state, these regions will be the *least* separatist since they have more to lose from the rupture of economic ties.⁴ My own recent theoretical work, drawing on the logic of Robert Bates, suggests virtually the opposite: the richest regions, not the poorest ones, will be the most separatist.⁵ While theorists

³ David D. Laitin, 'The National Uprisings in the Soviet Union', World Politics, 44 (1991), 139–77.

⁴ Michael Hechter, Internal Colonialism: The Celtic Fringe in British National Development, 1536–1966 (Berkeley: University of California Press, 1975); 'The Dynamics of Secession', Acta Sociologica, 35 (1992), 267–83, p. 275.

⁵ Henry E. Hale, 'Statehood at Stake: Democratization, Secession and the Collapse of the USSR' (doctoral dissertation, Harvard University, 1998); Robert H. Bates, 'Ethnic Competition and Modernization in Contemporary Africa', *Comparative Political Studies*, 6 (1974), 457–84; Bates, 'Modernization, Ethnic Competition, and the Rationality of Politics in Contemporary Africa', in Donald Rothchild and Victor A. Olorunsola, eds, *State Versus Ethnic Claims: African Policy Dilemmas* (Boulder, Colo.: Westview, 1983), pp. 152–71. Other than these works, the 'rich seceders' hypothesis has not been well developed theoretically, although several scholars have noted that rich regions or ethnic groups seem to be the most secessionist. Immanual Wallerstein makes a passing assertion that this is true in his *Africa: The Politics of Independence: An Interpretation of Modern African History* (New York: Vintage Books, 1961), p. 88. Timothy M. Frye finds support for Wallerstein's claims in his focused comparison of ethnic groups in Spain, the Soviet Union, Yugoslavia and Czechoslovakia, although he does not develop Wallerstein's argument (which itself was not elaborated theoretically). Frye's study also does not use quantitative methods to analyse the cases he considers (see his 'Ethnicity, Sovereignty and Transitions from Non-Democratic Rule',

from David Ricardo to Ernst Haas teach that all regions could theoretically benefit from free trade within a union state under optimum circumstances, all ethnic regions *also* face the possibility of exploitation at the hands of other nationality groups should the latter gain control of the massive power of the central state, a fear accentuated during a process of democratization.⁶ Rich regions have the most to lose in case of exploitation, while, conversely, poor regions only risk cutting themselves off from technology transfer, access to high value-added goods, the creation of higher-wage jobs and development subsidies.

Regional Autonomy. Some authors, including Michael Hechter and Paul Brass, argue that regions already enjoying greater levels of autonomy tend to make more moderate separatist claims, since elites in such regions are effectively appeased. They benefit from both worlds, able to exploit both their relative autonomy and their access to union sources of power and wealth. They thus have incentive to protect this power against more radical separatists.⁷ Daniel Treisman, by contrast, examines local autonomy in the context of bargaining, arguing that regions tend to use the institutional resources they have available to bargain for still more power and resources from the centre by making separatist demands. Thus regions which find themselves in possession of greater powers will make more radical claims since they can press them more credibly.⁸ Recent work by Gorenburg concurs, stressing the role of institutional resources in facilitating ethnic mobilization around *real* demands for autonomy more than Treisman's bargaining process.⁹

Ethnic Distinctiveness. Most theorists concur that a region is more likely to make a separatist claim the more its native group considers itself ethnically

⁽F'note continued)

Journal of International Affairs, 45 (1992), 599–623). Milica Zarkovic Bookman notes that rich regions often are, in fact, separatist but does not go so far as to claim that relative wealth is more associated with separatism than relative poverty (see Bookman, *The Political Economy of Discontinuous Development: Regional Disparities and Inter-regional Conflict* (New York: Praeger, 1991).

⁶ David Ricardo, *Principles of Political Economy and Taxation*, ed. Peiro Sraffa (Cambridge: Cambridge University Press, 1953 [1817]); Ernst Haas, 'Technocracy, Pluralism and the New Europe', in Stephan R. Groubard, ed., *A New Europe*? (Boston, Mass.: Houghton Mifflin, 1963), pp. 66–88; Haas, 'Turbulent Fields and the Theory of Regional Integration', *International Organization*, 30 (1976), 173–212; and Haas, *The Uniting of Europe: Political, Social and Economic Forces 1950–1957* (Palo Alto, Calif.: Stanford University Press, 1958).

⁷ Hechter, *Internal Colonialism*, p. 276; Paul R. Brass, 'Language and National Identity in the Soviet Union and India', in Alexander J. Motyl, ed., *Thinking Theoretically About Soviet Nationalities: History and Comparison in the Study of the USSR* (New York: Columbia University Press, 1992), pp. 99–128.

⁸ Daniel S. Treisman, 'Russia's 'Ethnic Revival': The Separatist Activism of Regional Leaders in a Postcommunist Order', *World Politics*, 41 (1997), 212–49.

⁹ Dmitry Gorenburg, 'Nationalism for the Masses: Minority Ethnic Mobilization in the Russian Federation' (doctoral dissertation, Harvard University, expected 1999).

distinct from the rest of the country.¹⁰ Treisman questions this consensus, however, contending that separatist activism is more about bargaining over resources than about ethnicity.¹¹

Group Skill Sets. The most prominent theory of national separatism (that of Donald Horowitz and echoed by Subrata Mitra) holds that the regions controlled by the most 'backward'¹² ethnic groups tend to be the most eager seceders in a multinational state. These groups, it is said, do not possess the kinds of skills necessary to be competitive in union political and economic markets; hence they can basically reap a protectionist advantage by seceding.¹³ Ronald Rogowski takes essentially the opposite view, arguing that ethnic groups acting rationally would not try to form their own state unless they possessed the skill sets necessary to run a state successfully. By this logic, therefore, it is the regions with the most 'advanced' groups that are expected to have the greatest propensity to secede.¹⁴

Elite Upward Mobility. Many theorists contend that ethnic groups are more likely to secede the more they are collectively denied upward mobility in the political centre. The greater the level of discrimination, the greater the propensity to secede.¹⁵ Laitin, on the contrary, argues counterintuitively that the leaders of the regions containing the *most* upwardly mobile groups (his 'most favoured lords') will tend to assume the *most* separatist stances during the period

¹⁰ Hudson Meadwell, 'Breaking the Mould? Quebec Independence and Secession in the Developed West', in Sukumar Periwal, ed., *Notions of Nationalism* (Budapest: Central European University Press, 1995), pp. 129–61; Meadwell, 'Nationalism in Quebec', *World Politics*, 45 (1993), 203–41; Meadwell and Pierre Martin, 'Economic Integration and the Politics of Independence', *Nations and Nationalism*, 2 (1996), 1–21; Ralph Premdas, 'Secessionist Movements in Comparative Perspective', in Ralph R. Premdas, S. W. R. de A. Samarasinghe and Alan B. Anderson, eds, *Secessionist Movements in Comparative Perspective* (London: Pinter Publishers, 1990), pp. 12–29; Anthony Smith, 'Ethnic Identity and Territorial Nationalism in Comparative Perspective', in Motyl, ed., *Thinking Theoretically About Soviet Nationalities*, pp. 45–65; and Anthony Smith, ed., *Nationalist Movements* (London: Macmillan, 1976).

¹¹ Treisman, 'Russia's "Ethnic Revival"', p. 243.

¹² The terms 'advanced' and 'backward' groups are from Horowitz, *Ethnic Groups in Conflict*, and are used here only to represent his theory clearly. No normative connotations are intended.

¹³ Donald Horowitz, 'Patterns of Ethnic Separatism', *Comparative Studies in Society and History*, 23 (1981), 165–95; Horowitz, *Ethnic Groups in Conflict* (Los Angeles: University of California Press, 1985), pp. 229–88; Horowitz, 'How to Begin Thinking Comparatively About Soviet Ethnic Problems', in Motyl, ed., *Thinking Theoretically About Soviet Nationalities*; Subrata K. Mitra, 'The Rational Politics of Cultural Nationalism: Subnational Movements of South Asia in Comparative Perspective', *British Journal of Political Science*, 25 (1995), 57–78.

¹⁴ Ronald Rogowski, 'Causes and Varieties of Nationalism: A Rationalist Account', in Edward Tiryakian and Ronald Rogowski, eds, *New Nationalisms of the Developed West: Toward Explanation* (Boston, Mass.: Allen & Unwin, 1985), pp. 87–108.

¹⁵ Mitra, 'The Rational Politics of Cultural Nationalism'; Horowitz, *Ethnic Groups in Conflict*; Rogowski, 'Causes and Varieties of Nationalism'; and Premdas, 'Secessionist Movements in Comparative Perspective'.

immediately after a political liberalization.¹⁶ They do this so as to compete effectively against the younger generation of native elites, who can be expected to try to leap-frog their elders by invoking separatist claims, thereby undercutting the latter's base of support (the union).

Historical Symbolic Resources. This category encompasses two hypotheses, both contending that some regions can draw on symbolic resources grounded in particular historical experiences that facilitate separatist claims. First, Ted Robert Gurr and others argue that ethnic groups that can look back to a modern history of national independence are the most likely to opt for secession as a means of solving group problems.¹⁷ Secondly, it is frequently postulated that a region is more likely to try to secede if its native group has suffered a grievous national injustice at the hands of the union state. Such crimes might include mass deportation or widespread ethnic cleansing.

Demonstration Effects. Gurr has noted the prevalence of demonstration effects in the mobilization of ethnic grievances.¹⁸ This simply means that a region is more likely to try to secede if neighbouring regions have seceded in the past or have previously taken important steps on the road to secession. These prior acts not only reduce the perceived risk involved, but also provide both inspiration and practical examples, making future such acts more likely.

AN EXCELLENT NATURAL LABORATORY FOR THEORY-TESTING

While an ideal test of general theories would include all cases worldwide, the immense task of proper data collection required for this must be left for a future study. Analysing the cases of the Soviet Union, however, is an excellent strategy for testing these theories, and in important ways it even allows us to avoid some of the difficulties of cross-national comparison. At the time of its demise in 1991, the Soviet Union contained fifty-three ethnically defined administrative regions, all within one multinational state. Some of these regions did indeed raise separatist claims, while some did not, and the Soviet government collected and made available a great deal of information about these regions and their demands. Measures are readily available to test the theories in which we are interested. Critically, the number of cases and the vast wealth of information about them are more than enough to obtain significant and precise statistical results, as can be seen below.

In fact, studying so many ethnic regions within a single state actually makes our results stronger and our theory-testing more reliable than would cross-

¹⁶ Laitin, 'The National Uprisings in the Soviet Union', p. 157.

¹⁷ Ted Robert Gurr, *Minorities at Risk* (Washington, DC: United States Institute of Peace Press, 1993).

¹⁸ Gurr, Minorities at Risk.

national studies in some critical ways. Indeed, one objection to focusing on a single area of the world is that such projects are vulnerable to the charge that the results will apply only in that one area because some relevant factor differentiating it from other areas (but constant within each area) has been overlooked. While this certainly must be kept in mind by readers, the possibility that such 'contextual variables' matter for national separatism remains a topic on which virtually no theory has been developed. Since we have no theoretical basis on which to control for otherwise 'hidden' contextual variables, it would be risky to test the *existing* theories in which we are interested in an environment that is not controlled for contextual variables until such time as theory has been developed to guide us in averting omitted variable bias.

It is even more important to note that virtually all of the existing theories that I test do, in fact, claim to be *general* in nature and place no geographical restrictions on their applicability. If the theories I outlined above are valid, therefore, they should be valid in the ethnically distinct regions of the Soviet Union. The best support for this claim comes from theorists themselves, many of whom explicitly apply their theories to account for Soviet patterns of events.¹⁹ The onus, then, is on the theorists themselves to lay out the conditions in which their theories apply and do not apply. Not having been given restrictive conditions by the theorists who interest us, and given our ignorance about whether and how any such conditions are at work, it makes sense to do as this study does and effectively control for possible contextual variables about which little is known and which could distort results in cross-national studies. This will make our results as reliable as possible given the constraints we face. This is not to say that cross-national studies should not be done, of course; but it is to say that our focus on the Soviet Union can have important methodological advantages over a cross-national study at the present stage of theory development. In fact, by testing theories in the Soviet environment, the present study promises to accelerate the process whereby we discover and theorize about any contextual variables which might affect the 'portability' of key comparative theories.

In this study, I use data on forty-five ethnically designated administrative regions of the Soviet Union and the 'titular' ethnic groups for which they are named. I thus exclude only eight of the Soviet Union's total of fifty-three cases, for the following reasons. First, I leave out Estonia since, for reasons described below concerning demonstration effects, I use it as a baseline measure of separatism against which the other regions are judged. Secondly, I exclude the Ajar and Nakhichevan Autonomous Republics and the Gorno-Badakhshan Autonomous Region because they were not ethnically designated according to Soviet census criteria. Thirdly, I have had to leave out three more cases since measures of key economic variables could not be found for the appropriate

¹⁹ Hale, 'Statehood at Stake'; Horowitz, 'How to Begin Thinking Comparatively About Ethnic Problems'; Laitin, 'The National Uprisings in the Soviet Union'; Brass, 'Language and National Identity in the Soviet Union and India'; and Treisman, 'Russia's "Ethnic Revival".

years. These are Abkhazia, South Ossetia and Nagorno-Karabakh. Finally, I omit the remote Aga Buryat Autonomous District since I have not been able to obtain the right measure of its degree of separatism. Overall, the remaining forty-five cases represent far more cases than any other statistical study of Soviet separatism has employed, marking a significant step forward in terms of precision and confidence in theory-testing.²⁰

QUANTIFYING THE PROPENSITY TO SECEDE

The Soviet ethnic regions range widely in the amount of autonomy they sought in the late Gorbachev era, ranging from the passionate nationalism of the Baltic states to the placid unionism of Khakassia. While the broad patterns are fairly clear to observers, this statistical study would have been much easier had secessionism come in measurable, countable units. In their path-breaking article, Kisangani Emizet and Vicki Hesli propose looking at the date that each Soviet republic declared sovereignty.²¹ The assumption is that the most eager secessionists declared sovereignty the earliest. This makes good sense, since in the Soviet case nationalists generally pushed for immediate declarations of sovereignty, sometimes even withdrawal from the union, so as to seize the moment offered by Gorbachev's political liberalization. Importantly, by declaring sovereignty, a republic did not necessarily mean that it preferred secession to all other options; it was a declaration that it would remain in the union only on its own terms, if at all, Yet this was practically always the first step taken on the road to independence by those that did want full separation. Thus the most ardent secessionists tended to declare sovereignty the earliest,

²⁰ A brief comparison with the other two studies of this area is in order here. In their pioneering work, Kisangani N. Emizet and Vicki L. Hesli ('The Disposition to Secede: An Analysis of the Soviet Case', Comparative Political Studies, 27 (1995), 492-536) consider only the fifteen regions highest in the Soviet hierarchy, the union republics. Including the other ethnic regions of the former Soviet Union not only gives us a great deal more information to use in evaluating our theories, but thereby makes possible more precise estimates. Treisman ('Russia's "Ethnic Revival'") also limits the range of cases he studies to those regions inside the Russian Federation, but does so because he is more interested in the behaviour of these regions after the collapse of the Soviet Union. By focusing on post-collapse behaviour, he is forced to exclude cases which do not have the Russian Federation as a point of reference, but thereby can use data which are only available for the post-collapse period. These variables include subventions and export capacity. Data adequate for testing the comparative theories of secession, in which we are interested, are available for the Soviet period, however, lessening the impact of this sacrifice for our purposes. In addition, by focusing on this smaller pool of cases, Treisman nevertheless loses information and sacrifices precision in his results. In particular, he loses some range on certain independent variables, such as wealth, by excluding the richest Soviet regions like Latvia and Lithuania as well as the poorest in Central Asia. This could be important since there may be too few cases to 'pick up' variation among republics that tend to be fairly similar, on the whole, on certain variables. Thus, by including the Soviet cases, the present analysis represents a significant improvement on previous studies, although it does involve some tradeoffs with Treisman's approach.

²¹ Emizet and Hesli, 'The Disposition to Secede'.

while the more unionist republics did so only after they became convinced that this would only mean the establishment of a bargaining position in negotiations to reconstruct the union. Since nearly all republics and autonomous districts eventually declared sovereignty in some form or other, the dates they did so give us a measure which applies to nearly every case. Critically, since it involves timing, this measure also allows us to test for demonstration effects, whereby one region's declaration of sovereignty encourages other regions to follow suit. Many observers, such as Gurr, have noted the importance of these effects (as discussed above), and by taking them into account, this measure of separatism presents an important advantage over more static measures.²²

This indicator is not ideal, of course. For example, one can imagine a case where two pro-independence factions dominate a republic's leadership, but are divided on the particular form independence should take. Such a fight over the content of the sovereignty declaration could delay the declaration itself. Timing, therefore, might reflect procedural constraints or other secondary issues having nothing to do with the degree of secessionism. This does not pose insurmountable obstacles, however. Critically, such circumstances can be treated as one variety of undoubtedly many 'random' events which make all statistical studies uncertain;²³ our study looks merely for broad *tendencies*, which the pattern of dates of sovereignty declarations should still reflect. Secondly, delays over secondary or procedural issues simply do not seem to have occurred often when separatist sentiment was strong. Nationalists of all stripes tended to unite around the initial sovereignty declaration, although they would frequently fight amongst themselves afterwards as they had to decide the shape this sovereignty was to take. In addition, the broad pattern of sovereignty declarations does correspond well with observers' general impressions about which republics were the most separatist: the Baltic states led the way, followed by Russia and then a mass of other republics and regions in the middle, with clearly unionist republics like Kazakhstan and Kyrgyzstan declaring sovereignty quite late.²⁴

Not all republics adopted something explicitly worded a 'declaration of sovereignty'. In several cases, 'laws on sovereignty' or packages of laws were adopted before 'declarations of sovereignty'. The essence of a declaration of sovereignty is the claim that one region's own laws take precedence over union

²² Gurr, Minorities at Risk.

 23 Assuming they are not systematically correlated with both the independent and dependent variables; otherwise bias would result.

²⁴ At first glance, Chechnya appears to be an exception, but this mainly points up the fact that this study does not consider *changes* in republic policy. Indeed, during the period in which we are interested, Chechnya did in fact pursue a relatively unionist course under Doku Zavgaev. In the wake of the failed Soviet coup of August 1991, clearly a pivotal event in Soviet history, Soviet General Djokhar Dudaev seized power in Chechnya and rapidly mobilized popular support for a radically separatist policy, aided by a number of peculiar circumstances. In any case, even if one argues that the timing of the declaration of sovereignty seriously mismeasures the Chechen case, this does not significantly alter the conclusions of the study. When I recode Chechnya as being equivalent in separatism to Lithuania (the most separatist region next to Estonia), the statistical results do not change significantly.

laws on its own territory, and that this power can only be ceded voluntarily. With this in mind, I follow Emizet and Hesli in considering the first official act that formally asserts sovereignty. Here I do not count attempts made by regions to raise their own status from that of Autonomous Region to Autonomous Republic as declarations of sovereignty unless these acts were actually called declarations of sovereignty.²⁵

I measure the timing of sovereignty declarations in weeks, scoring the first region to declare (Estonia) a zero for reasons described below.²⁶ My dependent variable, therefore, is the number of weeks after Estonia that a given region declared sovereignty. My observation period ends with the Soviet Union's August 1991 coup attempt in week 144, by which time only six ethnic regions had not asserted sovereignty.²⁷ This study takes into account the information that these six did not declare sovereignty by week 144.²⁸

Since I use this 'parade of sovereignties' as an indicator, I include a variable (consumer goods production per capita in 1989) in the regression to control for an effect peculiar to these events that was identified by Donna Bahry.²⁹ She argues that Gorbachev's policy of rendering local leaders accountable for consumer goods production in their own regions while simultaneously denying them the power to administer it effectively drove republics with the highest shares of consumer goods production to declare sovereignty the earliest.

STATISTICAL METHODOLOGY

Choosing an Appropriate Statistical Model

Most statistical studies assume that causal relationships are linear and that deviations from this line will be concentrated around it normally. *My dependent variable, as described above, is the amount of time that passed after Estonia declared sovereignty before a given region declared sovereignty, that is, a 'duration'*. This means that the central casual relationships in which we are interested cannot properly be modelled as linear ones. As Gary King and others have argued, using linear methods (Ordinary Least Squares, OLS) can cause

²⁵ The coding of these cases does matter for our results, however. If I count 'status upgrades' as declarations of sovereignty, in these four cases, our confidence that wealth and separatism are correlated drops to the 93 per cent level, slightly below the 95 per cent level usually taken to be the threshold of 'statistical significance'. The assimilation variable similarly drops to the 91 per cent significance level. The four cases involved are the Ust-Ordinsky Buryat Autonomous District, the Jewish Autonomous Region, Khakassia and Mordvinia.

²⁶ I do, however, also run a regression including the Estonian case which takes the 19th Party Conference in the summer of 1988 as the starting point of serious Soviet liberalization, counting the number of weeks after this event before a given republic declares sovereignty as my dependent variable. There is no major change in results.

²⁷ These are the Ust-Ordinsky Buryat Autonomous District, the Jewish Autonomous Region, Khakassia, Mordvinia, Evenkia and Khanty-Mansiisk.

²⁸ That is, these values are treated as censored.

²⁹ Donna Bahry, 'The Union Republics and Contradictions in Gorbachev's Economic Reform', Soviet Economy, 7 (1991), 215–55. serious problems when one is studying duration since by definition duration *starts* at a value of zero and thus must *always be positive* in value.³⁰ A linear relationship, by contrast, can predict negative values, which are nonsensical for durations. Taken to the extreme to make the point, it is possible (although highly unlikely) for a linear model to predict that a region would declare sovereignty before it was even created. By implication, applying linear methods to durations is inefficient since it does not use all of the available information, the underlying distribution of the disturbances and the correct functional form.³¹

To address this problem, present in the analysis of Emizet and Hesli, I employ a 'duration model'.³² This is a statistical technique specifically tailored to study the time it takes for an event, like a sovereignty declaration, to happen. Also called 'hazard models', these methods have become increasingly popular in political science.³³ While there are many kinds of duration models, I use a Weibull distribution. Since the theory has been developed extensively elsewhere, I state it only briefly here.³⁴

Given that its theory is already well developed, the most important strength of the Weibull model as opposed to other kinds of duration models for our purposes is that the former estimates a time-dependence parameter. That is, this model allows us to assess the degree to which the passage of time itself made a sovereignty declaration more likely in the late Soviet Union. The reason why a time-dependence parameter is important in this study will become clear in the discussion of results below. In the equations that follow, the time-dependence parameter is given as p. When p < 1, there is negative time-dependence, meaning that events (like a sovereignty declaration) become less likely to occur

³⁰ Gary King, 'Statistical Models for Political Science Event Counts: Bias in Conventional Procedures and Evidence for the Exponential Poisson Regression Model', *American Journal of Political Science*, 32 (1988), 838–63, p. 851; Gary King, James E. Alt, Nancy Elizabeth Burns and Michael Laver, 'A Unified Model of Cabinet Dissolution in Parliamentary Democracies', *American Journal of Political Science*, 34 (1990), 846–71, pp. 845–6.

³¹ King, 'Statistical Models for Political Science Event Counts', p. 846.

³² Emizet and Hesli, 'The Disposition to Secede'.

³³ One of the most recent and methodologically rigorous studies is D. Scott Bennett and Allan C. Stam III, 'The Duration of Interstate Wars, 1816–1985', *American Political Science Review*, 90 (1996), 239–57. Other political science applications include Joel S. Heliman, 'Competitive Advantage: Political Competition and Economic Reform in Postcommunist Transitions' (paper presented at the Annual Meeting of the American Political Science Association, San Francisco, 1996), and several studies of how long leaders or governments remain in power: King *et al.*, 'A Unified Model of Cabinet Dissolution in Parliamentary Democracies'; Henry Bienen and Nicholas van de Walle, 'A Proportional Hazard Model of Leadership Duration', *Journal of Politics*, 54 (1992), 685–717; and Paul Warwick, 'Economic Trends and Governmental Survival in West European Parliamentary Democracies', 86 (1992), 875–87.

³⁴ For a discussion of duration models, see articles in the previous footnote as well as Janet M. Box-Steffensmeier and Bradford S. Jones, 'Time Is of the Essence: Event History Models in Political Science', *American Journal of Political Science*, 41 (1997), 1414–61; J. D. Kalbfleisch and R. L. Prentice, *The Statistical Analysis of Failure Time Data* (New York: Wiley, 1980), pp. 23–4, 30–2, 54–5; and William H. Greene, *Econometric Analysis*, 2nd edn (New York: Macmillan, 1993), pp. 717–18, 721–2.

as time passes. When p > 1, time-dependence is positive, meaning that events become more likely to occur (that is, durations are expected to shorten) as time passes.³⁵

Duration models generally can be expressed in three ways: as a *hazard* function ($\lambda(t)$: the probability of an event occurring at a given time t); as a survival function (F(t): the probability the event does not occur before a given point in time); and as a probability density function (f(t): the distribution of event occurrence times, sometimes morbidly called a death density function).³⁶ We follow Greene and Kalbfleisch and Prentice³⁷ in assuming that independent variables x_i are related to the expected duration λ exponentially through coefficients β :

$$\lambda_i = e^{-\beta' x_i}$$

This function, not coincidentally, is always positive, as befits a model of duration. The Weibull conditional hazard function is then given by:

$$\lambda(t; \mathbf{x}_i) = \lambda(p)(\lambda t)^{(p-1)} e^{-\beta' \mathbf{x}_i}$$

and the Weibull conditional probability density function can be expressed as:

$$f(t; \mathbf{x}_i) = \lambda(p)(\lambda t)^{(p-1)} e^{-\beta' \mathbf{x}_i} \exp\left[-(\lambda t)^p e^{-\beta' \mathbf{x}_i}\right]$$

This Weibull conditional probability density function is a special case of a 'proportional hazard model', where the multiplicative effects of the independent variables x_i on the dependent variable depend on a 'baseline' hazard function $\lambda_0(t)$, where λ_0 is defined as:

$$\lambda_0(t) = \lambda(p)(\lambda t)^{(p-1)}.$$

While the baseline hazard is arbitrary and unspecified, it might be thought of in this case as the probability that a sovereignty declaration will occur in a region once it has been stripped of all of its distinguishing features. That is, for the period in which we are interested, there is a probability (or hazard) that any ethnic region might declare sovereignty for essentially random reasons (the whim of a leader, for example), while the independent variables in which we are interested (x_i) make a sovereignty declaration more or less likely in the way

³⁵ The dataset used in this article contains a 'duration' reading for each of the forty-five ethnic regions studied, denominated in weeks. Independent variables are measured for 1988, when the measured durations all begin, or for the closest possible year to this point. With one exception described below, I do not incorporate any changes in the values of the independent variables that may have taken place during the 'durations' studied; such changes were generally insignificant or non-existent.

³⁶ This paragraph draws primarily on Kalbfleisch and Prentice, *The Statistical Analysis of Failure Time Data*, pp. 23–4, 30–2, 54–5); Greene, *Econometric Analysis*, pp. 717–18, 721–2; and Bennett and Stam, 'The Duration of Interstate Wars', pp. 244–5.

³⁷ Greene, *Econometric Analysis*; Kalbfleisch and Prentice, *The Statistical Analysis of Failure Time Data*.

described in the above functions. Fitted values are then given by this expression:³⁸

$$e^{-\beta' x_i^*} \Gamma(1/p+1)$$

How Best to Interpret Weibull Results

Weibull results allow us fairly easily to tell whether, say, high levels of wealth are correlated with quick declarations of sovereignty. The model generates a coefficient for each independent variable. If this coefficient has a positive value, we know that greater values on this independent variable are associated with longer periods of time before sovereignty is declared (that is, they are correlated with *lower* levels of separatism). As with standard OLS regression, we can also easily calculate the probability that such a relationship is not random.

Just to say that wealth has an effect, however, does not tell us how *large* this effect is. Determining the magnitude of an effect is, unfortunately, not straightforward with a Weibull model. This is because the effect of factor x_i on the time it takes a region to declare sovereignty is not linear, as noted earlier. There is no simple number we can look at to see how large the effects of factor x_i are. Instead, the relationship between the two variables is exponential and modified by the time-dependence parameter, as expressed in the above formulae. The impact of one independent variable can be different at different times and at different values of other independent variables.

The best way to gauge the effect of a given factor, therefore, is essentially to engage in a series of mock social experiments. When we first process all of our information in the statistical analysis, the analysis not only tells us whether different explanatory factors are correlated with sovereignty-declaration timing, but it also generates a model which best predicts sovereignty-declaration timing based on the information given. We can then feed new information into this model, and it will generate a new set of predictions based on the new information. This allows us to engage in a series of counterfactual exercises. For example, to test how large the effects of wealth are, we can take one of the richest ethnic regions and make it poor, leaving all other factors the same as they were. The change this produces in the length of time our model predicts this region will take to declare sovereignty gives us a concrete idea of how important wealth is as a factor. By changing the values of key variables in real regions in a systematic way,³⁹ we get a good idea of these factors' real-world effects.

RESULTS

The results strongly support several of the tested theories while suggesting that others are more limited in their explanatory power. As can be seen in

³⁸ This expression differs from that found in some texts, such as Greene, *Econometric Analysis*; but it is agreed to be the correct one, even by Greene himself (see Bennett and Stam, 'The Duration of Interstate Wars').

³⁹ This study raises or lowers the values on particular variables in gradations and does so for at least two regions starting with a different set of values on independent variables.

Factors tested	Coefficients	Interpretation
Regional wealth	- 0.430084**	Increases separatism
Regional autonomy		•
ĂO	0.4875974**	Increases separatism
ASSR	0.2528836*	•
Ethnic group distinctiveness	-0.006855*	Increases separatism
Group education	-0.0016567	Not significant
Elite group mobility	-0.0172058	Not significant
History of independence	-0.2320993	Not significant
Past grievous victimization by	- 0.0799936	Not significant
Soviet regime		
Demonstration effects: Russia's	- 0.445922*	Increases separatism
declaration of sovereignty		
Demonstration effects as captured by level of	p = 4.478406	Declaration more likely as time passes
time-dependence	0 2006607*	In an an a second second
Consumer goods production	- 0.2086687*	Increases separatism
Constant	6.058973	

TABLE 1Main Results of the Statistical Analysis

Note: The dependent variable is the number of weeks after Estonia adopted its sovereignty declaration in November 1988 that an ethnic region in the Soviet Union took before declaring its own sovereignty. A negative sign on the coefficient means that an increase in the variable in question reduces the number of weeks a region takes to declare sovereignty, which I interpret to reflect an increase in national separatism (N = 45).

*Passes 95 per cent statistical significance test. **Passes 99 per cent significance test.

Tables 1 and 2, the most separatist ethnic regions tended to be the wealthiest, to contain the least assimilated nationality groups and to possess the most autonomy already. In addition, the results provide evidence that strong demonstration effects were at work. Surprisingly, the analysis found no support for arguments that the propensity to secede hinges on the upward mobility of ethnic groups in the political centre (most-favoured-lord status). The results also call into question notions that ethnic groups make rational calculations about secession based on the 'skill sets' they possess. Unexpectedly, this statistical analysis also concludes that historical experiences of national independence and cruel victimization at the hands of a central regime do not help us explain why some republics were more separatist than others. In the pages that follow, I discuss what the statistical results suggest about each tested theory, and then return to the bigger picture in the concluding section.

Wealth of Regions

The statistical analysis reveals a strong correlation between high levels of wealth and strong secessionism, results consistent with my earlier argument that wealthy ethnic regions have more to fear and less to gain from remaining in a union state than do poor regions. To quantify wealth in the peculiar late Soviet context, I rely on retail commodity turnover per capita as measured in 1988.⁴⁰ In an exhaustive statistical study, Dmitrieva argues that most indicators commonly used to represent wealth in other countries are seriously distorted in the Soviet command-economy context.⁴¹ She singles out retail commodity turnover as the most accurate and most sensitive indicator of standards of living, since it reflects levels of production and demand for consumer goods.⁴² Looking at the results, we can say with confidence that this indicator of wealth and the timing of sovereignty declarations are related. There is less than a 4 per cent chance that this result is not random, far surpassing the 95 per cent 'confidence level' usually demanded by statisticians. Equally importantly, we see in Table 1 that the sign attached to the coefficient is negative, which means that wealthy regions tend to declare sovereignty the earliest, supporting Hale rather than Hechter. These results hold even if we substitute other indicators of regional wealth (volume of services per capita, number of doctors per capita) for retail commodity turnover, although not all such indicators proved to be significantly associated with the timing of a declaration of sovereignty (urbanization, hospitals per capita). Most important, however, is that the variable (retail commodity turnover) that best reflects the theoretical logic, as argued above, is in fact significantly correlated with the timing of a declaration of sovereignty. Overall, therefore, the results lend support to the hypothesis that poverty tends to restrain ethnic regions from seceding from multinational states.⁴³

⁴⁰ I do not adopt Emizet and Hesli's ('The Disposition to Secede') measures for independent variables for several reasons. Most importantly, many of their measures are available only for the fifteen union republics, not the other thirty cases in which I am interested. Secondly, the logic behind their categorizations and their choice of indices is unclear and not as directly linked to the theories I am interested in testing. Thirdly, they do not make a very sharp distinction between 'nationality group' and 'republic' in their study. For instance, their measure of social development, which they take as a measure of whether a group is 'advanced' or 'backward', refers to the share of the whole republic population (not just the titular group) that lives in urban areas. Finally, they sometimes mix variables and rates of change in these variables together in the same indices; these may well not vary together, however, and may reflect different things. I also choose to avoid indices in general, of which they use many, since they greatly complicate interpretation. I do use many of the same measures as Treisman ('Russia's "Ethnic Revival''), although some of his measures are not available for some of the Soviet regions for the time period in which I am interested.

⁴¹ Oksana Genrikhovna Dmitrieva, *Regional'naya Ekonomicheskaya Diagnostika* (Saint Petersburg: Izdatel'stvo Sankt-Peterburgskogo Universiteta Ekonomiki i Finansov, 1992), pp. 130–2.

⁴² She also identifies the number of doctors and hospital beds per capita to be reasonable indicators of social development (which she equates with standards of living), although argues these are not very sensitive indicators. The other indicators that she writes best correlate with other indicators of development and are justified theoretically (like infant mortality rates) were not available for this study. See Dmitrieva, *Regional'naya Ekonomicheskaya Diagnostika*, pp. 116–17.

⁴³ This provides solid statistical evidence for Treisman's ('Russia's "Ethnic Revival'') suspicion that this relationship is important, even though his own statistical study did not include enough cases to generate statistically significant results. Treisman interprets the correlation between wealth and regions' 'separatist activism' to reflect the fact that rich regions have better prospects as direct participants in the world market and hence can make more credible threats to secede so as to bargain for more resources from the centre.

TABLE 2 The Substan	The Substantive Significance of Tested Variables: Some Mock Social Experiments	d Variables: Some A	Aock Social Experim	ents	
(a) Relative Wealth		To level of Latvia (1.86)	To level of Belarus (1.41)	To level of Tajikistan (0.68)	% Hi-Lo Change
If we change the level of:	Latvia (Wealthy) Belarus (Typical) Tajikistan (Poor)	38 weeks 46 51	46 56 61	63 77 84	66 55 40
(b) Regional Autonomy		To SSR	To ASSR	To AO	
If we change the rank of:	Latvian (SSR) Tajik (SSR) Tatar (ASSR) Ust-Orda Buryat (AO) Chukchi (AO)	38 weeks 84 77 62	49 108 88 80	62 136 111 125 101	63 86 33 39
(c) Ethnic Distinctiveness		To level of Georgia (98.2)	To level of Belarus (70.9)	To level of Evenkia (30.4)	
If we adjust the level of:	Georgia (High) Belarus (Low) Evenkia (Very low)	59 weeks 47 89	71 56 107	94 74 141	59 48 37

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(d) Group Skill Sets		To level of Georgia (17)	To level of Georgia To level of Tajikstan (17) (7)		
If we change the level of:	Georgia (High) Tajikistan (Low)	59.1 weeks 82.7	60.1 84		0 0
(e) Elite Upward Mobility (MFL)		To level of Georgia (1.24)	To level of Tajikistan (0.32)		
If we change the level of:	Georgia (High) Tajikistan (Low)	59.1 weeks 82.7	60 84		5 2
(f) History of Independence		Included Ir	Included Independence	No Independence	
If the history of:	Latvia Uzbekistan	38 weeks 65	48 81		26 20
(g) History of Victimization		Included V	Included Victimization	No Victimization	
If the history of:	Latvia Uzbekistan	38 weeks 75	41 81		8
<i>Note:</i> Using the model generated by our statistical analysis, this table shows the impact of changes in key explanatory factors. For example, Part (a) records the impact of changes in relative wealth. In the first row, we see what happens when we gradually impoverish Latvia. Originally, Latvia is predicted to declare sovereignty 38 weeks after time zero (the date of Estonia's declaration). If we bring its level of wealth down to that of Belarus (which is 1.41), Latvia is predicted to declare sovereignty after 46 weeks. If we bring it all the way down to Tajikistan's level of wealth (0.68), it takes 63 weeks to declare sovereignty. The last column shows that the total change that was produced in this experiment was a 66 per cent change in the time Latvia is expected to take to declare sovereignty.	tistical analysis, this ta he first row, we see wh e of Estonia's declarati bring it all the way do produced in this exper-	ble shows the impact of at happens when we gra on). If we bring its level (wm to Tajikistan's level iment was a 66 per cent of	changes in key explanator dually impoverish Latvia. (for wealth down to that of Be of wealth (0.68), it takes 63 change in the time Latvia is	y factors. For example, Part Diginally, Latvia is predicted larus (which is 1.41), Latvia i weeks to declare sovereign expected to take to declare s	(a) records d to declare is predicted ty. The last overeignty.

Not only does wealth tend to make a region more separatist, it tends to make it *much* more separatist. In Table 2, I report this study's estimates of the effects of wealth, and the results are dramatic. In putting together this table as described in the 'Statistical Methodology' section above, I essentially perform a series of mock social experiments in our quantitative world. First, I do what Stalin himself may have yearned to do, taking one of the two richest Soviet regions, Latvia, and radically impoverishing it, bringing it down to the level of Tajikistan. According to our model, 'Poor Latvia' declares sovereignty in sixty-three weeks as opposed to the thirty-eight weeks it takes 'Rich Latvia', a 66 per cent delay. I then do the reverse, showering riches on Tajikistan until it enjoys the same level of wealth as Latvia. Instead of taking eighty-four weeks to declare sovereignty, 'Rich Tajikistan' takes just fifty-one. This move brings Tajikistan from the ranks of 'late seceders' into the realm of the eager seceders. These and other model-driven tests demonstrate that wealth is a very important determinant of secessionism.⁴⁴

Autonomy

There is a strong correlation between a region's prior degree of autonomy and its propensity to make separatist claims. There were, for our purposes, essentially three different 'ranks' of national political units in the Soviet Union, with each rank reflecting a different degree of autonomy and a different set of institutional resources. 'Union republics' (SSRs) were highest in rank, subordinate only to the central Soviet government, and possessed the fullest set of institutions, including universities and academies of science. It was the union republics that became independent states when the Soviet Union collapsed in 1991. Next in rank were the 'autonomous republics' (ASSRs), each of which was a constituent part of one union republic. At the bottom of the hierarchy were the 'autonomous regions' and 'autonomous districts' (AOs). These were usually (though not always) subordinate to a 'territory', which was in turn subordinate to a union republic. Since it is not known whether these two steps down the administrative hierarchy can be expected to have equivalent impacts on separatism, I include two dummy variables, one for each step down the

⁴⁴ My statistical software, *Stata*, does not allow me to generate predictions from time varying covariate (TVC) data (see the discussion below on 'Demonstration Effects' for an explanation of this term and of why this footnote is necessary here). But since we are only interested in getting an idea of the magnitude of the effects of individual independent variables, and not in creating a model that will produce the most accurate predictions, I code the variable for whether Russia had previously declared sovereignty (described below under 'demonstration effects') 0 for all republics which a *non*-TVC model predicted would declare before Russia, and 1 for the rest. For republics declaring before Russia, therefore, there is no distortion in the fitted values (Latvia, Lithuania). For the rest, the predicted weeks-to-sovereignty are lower than a proper TVC model would predict since these regions are assumed to have been under Russia's demonstration effect from the very beginning. In any case, our assessments of the relative effects of the tested factors should not be endangered.

hierarchy, in order to test for the effects of autonomy and to estimate their coefficients individually.

As predicted by Treisman's bargaining hypothesis, the highest-ranking regions tended to make the most separatist claims. Rather than being placated with these greater levels of autonomy and institutional resources, as Brass and Hechter predict, regions tended to use this power to claim still more autonomy and institutional resources. This makes sense, argues Treisman, since the regions with the most power are the most capable of making credible separatist demands and forcing the central leadership to 'appease' them with subsidies and other resource transfers. In fact, this study provides stronger support for Treisman's argument than does his own statistical work, since the present analysis includes three levels of autonomy (union republic, autonomous republic and autonomous region) while Treisman's study includes only the latter two. These results, however, are also consistent with Gorenburg's institutionalist argument, which discounts the importance of bargaining behaviour. According to his interpretation, the highest ranking republics were the most rebellious not simply because their leaders were after resources from Moscow and had the most resources to pursue them, but because these republics had the most robust set of the sociopolitical institutions that served to cultivate ethnic identity and to facilitate mobilization along national lines during the Soviet era.

The effects of this dynamic are large indeed, as illustrated on Table 2. If we again play Stalin and reduce the union republic of Latvia to a mere autonomous region, our model shows that the Latvian Autonomous Region declares sovereignty after sixty-two weeks instead of the originally predicted thirty-eight, a delay of 63 per cent. Likewise, if we make the remote Siberian Chukchi Autonomous Region into the Chukchi Union Republic, it takes only sixty-two weeks to declare, as opposed to the originally predicted 101. Here, the change has cut the time-to-declaration by over a third.

Ethnic Distinctiveness

Ethnic distinctiveness does appear to lie at the root of Soviet separatism. Since language is generally regarded as a core element of ethnic differentiation (with a few prominent exceptions, of course), I measure assimilation with the percentage of the titular group that claimed the titular language as its native language in the 1989 Soviet census. According to the statistical results, a region is more eager to secede when its 'native' group is less assimilated into neighbouring cultures. There is greater than a 95 per cent chance that this relationship is not random. This contradicts Treisman's finding – with fewer cases – that such factors are not related to separatist activism.

Not only does the present study provide evidence that ethnic distinctiveness is important, but it also shows that its effects are quite large. To demonstrate the magnitude of these effects, I again engage in a hypothetical Stalinist social experiment. First I take Georgia, where over 98 per cent of the population claims Georgian as its native language, and make true a national nightmare, assimilating all but 30 per cent of the group's population. 'Assimilated Georgia' is now as assimilated as the Evenk Autonomous Region, where only 30 per cent of the Evenk people claim Evenk as their native language. This makes a large difference. According to values generated by the model, Georgia takes ninety-four weeks to declare sovereignty instead of just fifty-nine, a delay of thirty-five weeks, nearly 60 per cent. Bringing Evenkia up to the level of Georgian distinctiveness produces a similar, but reverse, effect, as seen in Table 2.

What is important appears to be whether a group assimilates into its surroundings *generally* rather than whether it assimilates specifically into Russian culture. The indicator used here measures the percentage of a group which claimed its own group's language as native. If we instead study the percentage of a group which claimed *Russian* as its native language, we lose statistical confidence that there is any relationship between this factor and separatism. Thus it appears that the general solidarity of ethnic groups is the most important factor involved.

When we turn from the distinctiveness of the ethnic *group* to the distinctiveness of the *region* as a whole, however, the results are very surprising: it does not appear to matter whether a region contains an extremely large ethnic Russian population. This is quite unexpected, since it would be anticipated that a large Russian population would slow down or discourage attempts to distance a region from the Russian 'motherland'. Instead, it appears that regions with large numbers of Russians tended to be just as separatist as those dominated by the titular group. While the statistical analysis gives us little confidence that the size of the Russian population matters at all, the sign on the 'Weibull coefficient' suggests that any effect would be in the predicted direction: more 'titulars' means more separatism.

Ethnic Group Skill Sets

The statistical analysis does not support theories that ethnic groups' elite skill sets matter in regional decisions on whether to try to secede. As described earlier, Horowitz argues that groups possessing elite skills tend to have strong interests in preserving a union state, while Rogowski contends that such groups will be the most separatist since only they can build viable independent states. Since groups obtain their elite skills largely through education, I quantify this variable with the share of the ethnic group's unionwide population over 15 years of age with a higher education in 1989. The results provide more support for Rogowski's theory than for Horowitz's, since the sign on the Weibull coefficient is negative, meaning that the most educated groups tended to declare sovereignty the earliest.⁴⁵ But even if one argues that more cases would show

⁴⁵ In order to test Rogowski's theory of skills-based state viability, I used not only 'group education levels' as an indicator, but also the education level of the region as a whole since state viability may depend on the set of skills in the region as a whole rather than those of just the dominant

that this relationship is not random, the effects of education levels would appear to be extremely small in substantive terms. In fact, if we take the most educated group, Georgians, and de-educate them to the level of one of the least-educated groups, Tajiks, it makes just a single week's difference in the timing of Georgia's sovereignty declaration. Nearly the same is true if we launch a massive education campaign for the Tajiks. Compared to the effects of wealth, therefore, group education is insignificant as a determinant of Soviet secessionism.

It is possible that these theories of group skills have explanatory power only where the differences between groups are extreme, however. This may be one instance, therefore, where the Soviet Union is not the best test since its Communist regime provided nearly every group with at least some degree of higher education. In even some of the most 'backward' republics, for example Tajikistan, as many as 7 per cent of the population over age 15 had a higher education in 1989, which already may be higher than many of the groups Rogowski and Horowitz have in mind. Nevertheless, this does call into question the usefulness of these theories in many parts of the world and invites further theorizing about the size of the education gaps that are necessary before the predicted effects 'kick in'.

Elite Upward Mobility

This study indicates that regional leaders do not take into account the political and economic upward mobility of their ethnic group when contemplating secession. To measure the degree to which elites of a given ethnic group are able to advance in central political and economic hierarchies, I rely primarily on the degree to which each nationality group is under- or overrepresented in the Communist Party as of 1989. Membership in the Communist Party was generally considered necessary for advancement to elite Soviet posts, and the party was indeed meant to be an institution containing the economic and political elite. No statistically significant correlation between this variable and sovereignty declaration timing was found. This tends to discredit the arguments of Horowitz and Rogowski that groups denied upward mobility outside of their own regions tend to want to leave that union. It also fails to support Laitin's 'most favoured lord' theory, whereby groups enjoying most-favoured-lord status will push for separatism before other groups as the younger generation of elites seeks to leap-frog its elders by outflanking them on the issue of independence. To the extent that there is evidence supporting any of these theories, more of it backs Laitin's argument than Horowitz's and Rogowski's, since the sign on the coefficient is negative. This means that the groups with the

⁽F'note continued)

local ethnic group. This indicator also proved to have no statistically significant relationship with sovereignty declarations, and in fact, when regional education is substituted for group education, the sign on the coefficient switches. This suggests that, if anything, *low* levels of regional education are associated with high degrees of separatism, which is the opposite of what Rogowski predicts.

highest levels of representation in the Communist Party (and hence upward mobility) actually tended to declare sovereignty the earliest, as Laitin predicts.

Even if one argues that more cases would reveal that this relationship is not random, however, the study makes clear that any effects of upward mobility on Soviet separatism are very small indeed. As shown on Table 2, if we again engage in our counterfactual social experiment and suddenly remove mostfavoured-lord status from the most upwardly mobile group, the Georgians, bringing them down to the level of the least upwardly mobile group, the Tajiks, we find that the republic of Georgia takes less than a single week longer to declare sovereignty, going from 59.1 weeks to 60.0. This is a difference of less than 2 per cent. We get roughly the same level of effect when we do the reverse to the Tajiks, granting them the upward mobility of Georgians. Especially when one compares the size of these effects to those of wealth, which was producing changes in separatism of up to two-thirds of original levels, the role of upward mobility clearly appears minimal.

To be more sure that these results were not the artefact of an unfortunate choice of empirical indicator, I tried a number of alternatives to the level of overand underrepresentation of each group in the Communist Party. Since new electoral institutions may have changed the importance of the Communist Party, I considered representation in the Congress of People's Deputies elected in 1989 as well as the Supreme Soviet (parliament) 'elected' quite undemocratically under the pre-Gorbachev Soviet regime in 1984. At the suggestion of Laitin himself, I also tried a variety of other permutations of this variable based on his more recent reflections on the topic.⁴⁶ None of these efforts produced a significant change in the results, although using the Congress of People's Deputies indicator switched the sign on the Weibull coefficient, consistent more with Horowitz and Rogowski than with Laitin. Overall, however, the results indicate that there is no major causal relationship between elite upward mobility and regional separatism.

Histories of Independence and Oppression

Surprisingly, the study finds no evidence to back up widespread conjecture that regions with the most dramatic histories of national independence or ethnic victimization tend to be the most separatist. First, I test whether it mattered if a Soviet republic had been an independent state before its territory was taken over by the Soviet Union. In the Soviet case, this category includes the Baltic states and Tuva, which was an independent state before being absorbed by the

⁴⁶ Laitin, in a personal communication and in work published after this article was written, suggests that the relationship between most-favoured-lord status and separatism may be nonlinear, with high and low levels tending to be more unionist than middle levels. I thus tested the absolute value of a measure of group under- and overrepresentation (where 0 means that a group is neither underrepresented nor overrepresented), and the results were still not significant. Since Laitin's middle ('integralist') category seems to refer just to the Baltic states, I also tried including an interaction variable for the Baltic states alone along with a most-favoured-lord indicator for the other regions. Soviet Union in the 1940s.⁴⁷ In addition, I include a looser category containing regions which had only brief but none the less significant historical experiences of independence or which joined the Soviet Union much later than other regions. This category includes the Baltic republics, Tuva, Armenia, Azerbaijan, Georgia, Moldova, Ukraine and Belarus. Secondly, I test whether regions whose dominant ethnic groups suffered wholesale national deportation (Chechen-Ingushetia, Kalmykia and Karachaevo-Cherkessia) or were forcibly invaded as independent states (the Baltic countries) tended to be more separatist than other regions. I also try two broader categories, adding regions whose dominant groups suffered mass loss of life due to Soviet-induced policies such as the Great Famine of the early 1930s.⁴⁸

Very surprisingly, there is no statistically significant relationship between any of these variables and the timing of declarations of sovereignty in the late Soviet Union. Regions suffering grievous national crimes (such as mass deportation or conquest) tended to be no more separatist, on the whole, than groups not bearing such grievances. This was true no matter whether very broad or very narrow definitions of 'independence' and 'victimization' were used. It is at least conceivable that more cases would demonstrate an important relationship between victimization and regional separatism. The signs on the coefficients are in the predicted direction (they are negative), linking past independence and victimization to quick rather than late moves to claim sovereignty. In addition, the magnitudes of these effects are also not negligible. If Latvia had not been an independent state before 1991, Table 2 predicts that it would have declared sovereignty 26 per cent later than otherwise expected. The effects of victimization, though, are smaller. Had Latvia not suffered such crimes as mass deportation at Soviet hands, it would have declared sovereignty only 8 per cent later. To reiterate, however, the statistical study gives us little confidence that these associations are anything other than random.

Demonstration Effects

There is strong evidence that demonstration effects were at work during the Soviet 'Parade of Sovereignties'. I show this in two ways. First, since Russia is widely theorized to have had the greatest demonstrative impact on other republics in declaring sovereignty by virtue of its size and centrality,⁴⁹ I include

⁴⁷ See Treisman's 'Russia's "Ethnic Revival" for a good discussion of the Tuvan case.

⁴⁸ This category includes the Baltic states, Kalmykia, Karachaevo-Cherkessia, Chechnya, Armenia, Moldova, Ukraine, Kazakhstan, Turkmenistan, Kyrgyzstan, Buryatia, Yakutia, Evenkia, Khanty-Mansiisk and Chukotka. Victimization data are from Aleksandr Nekrich, *The Punished Peoples* (New York: Norton, 1978), and Gerhard Simon, *Nationalism and Policy Toward the Nationalities in the Soviet Union: From Totalitarian Dictatorship to Post-Stalinist Society* (Boulder, Colo.: Westview Press, 1991), in particular p. 101.

⁴⁹ The argument that Russia's declaration had a huge impact has been made by Gail W. Lapidus ('From Democratization to Disintegration: The Impact of Perestroika on the National Question', in Lapidus and Victor Zaslavsky, with Philip Goldman, eds, *From Union to Commonwealth:*

a dummy variable that varies over time and is coded 1 for the period after which Russia declared sovereignty and 0 before that.⁵⁰ Importantly, by including the 'Russian precedent' as a variable, we are able to test its statistical significance directly since a coefficient for it is estimated. The results of this test reveal that Russia's declaration of sovereignty did indeed have an impact, making it far more likely that the remaining republics would declare sovereignty in the weeks ahead.⁵¹ This impact appears to have been quite large.⁵² For example, if Russia had declared sovereignty at the same time as Estonia, our model estimates that Latvia would have taken only twenty-four weeks to declare sovereignty as opposed to the thirty-eight otherwise predicted, a reduction in the timeto-sovereignty of over one-third.

The second way in which I demonstrate the presence of 'contagion' is through the 'time-dependence parameter', p, discussed above in the methodology section. Importantly, this parameter's estimated value is greater than 1. This means that as time passed, it became more and more likely that a given region would declare sovereignty. While recognizing that it is an imperfect indicator at best, there are theoretical grounds to conclude that the time-dependence parameter can reasonably be used to model the demonstration effects in which we are interested. Indeed, the risk of a Moscow crackdown decreased as time itself passed after earlier declarations – it became increasingly clear that the Soviet leadership was not mobilizing military forces and would not violently quash these movements. The increasing legitimacy of the idea of sovereignty

(F'note continued)

Nationalism and Separatism in the Soviet Republics (New York: Cambridge University Press, 1992), pp. 45–70, at p. 59); and also by Gwendolyn Stewart, who has illustrated this well in an unpublished graphic provided to the author.

⁵⁰ A dataset in which independent variables vary over time is a TVC (time-varying covariates) dataset. See Bennett and Stam, 'The Duration of Interstate Wars', for an example of the use of TVC in a Weibull regression.

⁵¹ This form of 'contagion', however, does not appear to affect significantly the confidence with which we can determine whether our variables have effects, since the variables passing a 5 per cent significance test passed it in both the TVC (including the Russian precedent variable) and the non-TVC (not including it) sets of regressions. Adding the Russian precedent variable does have a significant impact on the size of the coefficients estimated for the independent variables, however, actually increasing their magnitudes in most cases. Those from the TVC regression nearly double in magnitude as we move from the non-TVC to the TVC datasets. Importantly, this suggests that any similar contagion effects, for which this model does not control, are not likely to distort our ability to detect statistically significant relationships between the variables in which we are interested, since the effect of Russia's declaration is generally believed to have far outweighed the impact of any other single republic. In any case, significant results were found, and they are all the more remarkable the more 'noise' that should obscure them. The presence of such non-Russian contagion might, however, hinder our efforts to get an idea of the true size of the coefficients involved. Since the p parameter is much smaller in the TVC model, and since the accumulation of republic precedents occurs over time, results also suggest that the time-dependence parameter is capturing much of this contagion.

⁵² As explained in the next paragraph, the inclusion of the Russian precedent variable cuts the size of the time dependence parameter by about one half, indicating that Russia was indeed producing a large share of the demonstration effects detected in this study.

was also a function of time. The two republics expected to have the greatest disproportionate effects, thereby distorting this relationship between time and demonstration effect, are Russia (because of its size) and Estonia (because it was the first to declare and 'break the ice'). I control for Russia by including it directly in the study as described in the preceding paragraph. Thus we find that inserting the Russian precedent variable drops the estimate of the time-dependence parameter by about half, which is precisely what we would expect to find if the time-dependence was reflecting contagion and if Russia's declaration had a particularly large demonstrative effect. I control for Estonia's pathbreaking effect by using its declaration as the starting point for the durations I measure.⁵³ I therefore interpret (with caution) the time-dependence result of p > 1 as confirming that demonstration effects were important in encouraging Soviet separatism.

CONCLUSION

This statistical study provides strong evidence that high levels of wealth, low degrees of assimilation and high levels of autonomy tend to encourage ethnically defined regions to declare sovereignty more quickly in a multinational country. This works to confirm my earlier argument that rich regions tend to be the most separatist in a given union state, since they have the most to lose should another group gain control of state power and use it exploitatively, and since poor regions have the most to gain by staying in the union as they are more dependent on it for what Bates calls the 'goods of modernity'. The results also augment confidence in Treisman's argument that much separatist activity can be explained in terms of a bargaining process between centre and regions over resources. By including three rather than two levels of autonomy in the statistical analysis, in fact, the present study provides stronger evidence than Treisman's own work for his hypothesis that greater levels of prior autonomy should be correlated with higher levels of ethnic activism. This result is also consistent with Gorenburg's argument that real institutionally fostered social demands, more than centre-periphery bargaining, are behind regional separatism. The results also tend to confirm that ethnic distinctiveness and demonstration effects powerfully influenced national separatism in the late Soviet Union.

One of the most surprising findings was negative: once regional wealth, autonomy and ethnic distinctiveness are taken into consideration, histories of national independence and victimization do not help us account for variation in levels of national separatism. This suggests that ethnic groups are not necessarily trapped in a state of permanent antagonism with their neighbours by an unfortunate past, since material concerns appear capable of discouraging regional leaders from invoking divisive symbols, even in times of crisis.

⁵³ It turns out that dropping Estonia (treating it as a baseline for calculating the dependent variable) has a negligible impact on our estimate of time dependence, suggesting that any path-breaking effect was insignificant.

This study also points out the need for further theoretical work on broad contextual variables, which may determine whether a given argument 'works' in one set of countries but not in another. While the theories finding the strongest support here (Gorenburg's, my own and Treisman's) make general claims and draw on broad traditions of comparative politics, they have only rigorously been applied to (former) Soviet bloc cases. While Laitin's argument was also developed with reference to the late Soviet Union, and while others have explicitly declared that their ideas should explain Soviet cases, most of the major theories not supported here (those of Brass, Hechter, Horowitz and Rogowski) were primarily developed with African, Asian and/or West European cases in closest view. Before dismissing these theories, therefore, we must certainly think about the kinds of assumptions they make which may be affecting how well they 'travel'. For example, perhaps the transitional context of post-Soviet countries alters the expected gains calculus based on group skill sets and upward mobility that Horowitz, Rogowski and Laitin describe. Or perhaps the theories unsupported here are good at explaining the behaviour of ethnic groups, but not their regional governments, on which this study focuses. In any case, the theories finding strong support in this analysis should certainly be tested in other contexts, a process which will still further enhance our ability to understand the undoubtedly wide range of factors affecting the disposition to secede.