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Notes and Comments

Local Elites and Transition in Russia: Adaptation or Competition?

JAMES HUGHES AND PETER JOHN*

Has regime transition in Russia generated a major cleavage in its elite structure and, if so, what is its nature? The concern of political scientists and reformers is that the presence of communist era elites in the post-Soviet regime, which have retained their core values and recirculated into positions of power, may be a significant obstacle to the consolidation of democracy and a market economy. While the communist system disintegrated with surprising rapidity in the late 1980s and early 1990s, it is not clear whether the norms internalised by elites operating under the ‘command-administrative’ system have changed along with the political system or whether the values and assumptions of the old pattern of government continue to be influential.

There is broad acceptance that there is a pattern of continuity between the old Soviet *nomenklatura* and post-communist ruling elites, but wide disagreement over the scale and impact of turnover. Studies of elites in Russia generally analyse how continuity, circulation or turnover of ruling elites affects the prospects for transition by drawing a major distinction between the reproduction of *old elites*, which maintain values and may be a factor for stability, continuity and, perhaps, stagnation, and the circulation into power of *new elites*, which can be carriers of democratic and market values by diffusing these values into elite behaviour and society at large. Scholars adopt one of two main approaches. First, the *elite adaptation thesis* claims that the reproduction of the Communist Party of the Soviet Union (CPSU) elites into the new political and economic arenas amounted to the ‘privatization of the *nomenklatura*’.¹ The elite adaptation thesis suggests that power at the national level is exercised by an ‘interlocking directorate’ of the administrative and business elites who have largely been recirculated from the *nomenklatura* and reformulated as the so-called ‘party of power’.² It is surmised that

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¹ See Hellmut Wollman, ‘Change and Continuity of Political and Administrative Elites in Post-Communist Russia’, *Governance*, 6 (1993), 325–40.

² For the clearest statement of this position, see Olga Kryshchanovskaya and Stephen White, ‘From Soviet *Nomenklatura* to Russian Elite’, *Europe-Asia Studies*, 48 (1996), 711–34. Other studies in this vein include D. V. Badovsky, ‘Transformatsiya politicheskoi elity v rossii – ot “organizatsii professional’nykh revoliutsionerov” k “partii vlasti”’, *Polis*, No. 6 (1994), 42–58. It is important to note that the use of the term ‘*nomenklatura*’ to categorize the governing elites of the communist era is not without controversy, as Sovietologists in the 1960s and 1970s spent many years debating the parameters and meaning of this term. It is misleading to use the catch-all

informal networks of power from the communist era adapted during the transition by a process described by one commentator as ‘the politicisation of industrialists, and of the “industrialisation” of politicians’.³

Secondly, there is an *elite competition thesis*. One of the most systematic studies of Russia’s post-communist elites is by Lane and Ross who analyse the social configurations and value systems of the Gorbachev-era and Yeltsin-era national elites to demonstrate that the Russian transition has been marked by a fragmentation of elite values. A competitive struggle has ensued, they argue, between a ‘political class’ of senior administrators and an ascendant ‘acquisition class’ of members of the intelligentsia with the relevant skills to take best advantage of the new conditions of transition.⁴ While their analysis challenges the assumption made by Higley and Burton and transitologists that a ‘consensually unified elite’ is a precondition for a regime transition, they confirm a ‘conflict along an old–new cleavage and around the issue dimensions of democratic governance and privatization.’⁵ This monochromic entity of ‘old’ and ‘new’ elites is replicated in a plethora of descriptive and quantitative analyses of national and sub-state elites, by Russian and non-Russian authors alike.⁶ Kryshtanovskaya and White have used national elite socio-biographical data to propose that this simple dichotomy between ‘old’ and ‘new’ is better understood as a functional bifurcation between ‘old’ political-administrative elites who are in competition with ‘new’ economic elites.⁷

How appropriate is the old–new cleavage, conceptually and empirically, for understanding the role of elites in Russia’s transition? The thesis should be verifiable both at the national and sub-national elite levels to be a relevant measure of regime transition. A large-scale time-series cross-regional analysis of sub-national elites employing the socio-biographical profiles of regional assembly deputies (as representative of the political elite) in 1990–94 challenged the old versus new bifurcation thesis

(*F’note continued*)

term ‘*nomenklatura*’ in determining elite reproduction in the post-communist transition precisely because the category does not sufficiently differentiate between former elites and lower-level functionaries appointed by the party.

³ I. M. Kliamkin, ‘Politicheskaiia sotsiologiia perekhodnogo obshchestva’, *Polis*, No. 4 (1993), p. 52.

⁴ David Lane and Cameron Ross, *The Transition from Communism to Capitalism, Ruling Elites from Gorbachev to Yeltsin* (New York: St Martin’s Press, 1999). Lane has written prolifically on this subject, see for example his ‘The Gorbachev Revolution: The Role of the Political Elite in Regime Disintegration’, *Political Studies*, 44 (1996), 4–23; ‘Transition under Eltsin: The Nomenklatura and Political Elite Circulation’, *Political Studies*, 45 (1998), 855–74; with C. Ross, ‘The Russian Political Elites, 1991–5’, in J. Higley, J. Pakulski and W. Wesolowski, eds, *Postcommunist Elites and Democracy in Eastern Europe* (London: Macmillan, 1998), pp. 34–66. For similar conclusions from a focus group approach, see Judith S. Kullberg, ‘The Ideological Roots of Elite Political Conflict in Post-Soviet Russia’, *Europe-Asia Studies*, 46 (1994), 929–53.

⁵ The crucial importance of a ‘consensually unified elite’ for a regime transition was identified by J. Higley and M. Burton, ‘The Elite Variable in Democratic Transitions and Breakdowns’, *American Sociological Review*, 54 (1989), 17–32. See also the more recent J. Higley, J. Pakulski and W. Wesolowski, ‘Elite Change and Democratic Regimes in Eastern Europe’, chap. 1 of their *Postcommunist Elites and Democracy in Eastern Europe*.

⁶ For examples of the Russian literature on this subject, see M. N. Afanas’ev, ‘Ismeneniia v mekhanizme funktsionirovaniia praviashchikh regional’nykh elit’, *Polis*, 6 (1994), 59–66; A. Magomedov, ‘Politicheskie elity v rossiiskoi provintsii’, *Mirovaya ekonomika i mezhdunarodnye otnosheniya*, No. 4 (1994), 72–9; D. V. Badovsky with A. Yu. Shutroy, ‘Regional’nye elity v postsovetsoiskoi Rossii: osobennosti politicheskogo uchastiia’, *Kentavr*, 6 (1996), 3–23; V. Ya. Gel’man, ‘Konsolidatsiia regional’noi elity I mestnaya demokratiia v rossii: Sankt-Peterburg v sravnitel’noi perspektive’, in S. A. Kugel, ed., *Sotsial’nye i Politicheskie Orientatsii Sankt-Peterburgskoi Elity* (St Petersburg: Izdatel’stvo sankt-peterburgskogo gosudarstvennogo universiteta ekonomiki i finansov, 1998), pp. 74–85; A. Melville, ed., *Transformatsiia rossiiskikh regional’nykh elit v sravnitel’noi perspektive* (Moscow: Moskovskii obshchestvennyi nauchnyi fond, 1999).

⁷ For this thesis, see Kryshtanovskaya and White, ‘From Soviet *Nomenklatura*’.

by demonstrating that the political elite at the sub-national level is an amalgam of the elites recruited from two key sectors: administration and business. The old versus new elite distinction does not, therefore, appear to capture the complex nature of the 'interlocked' elite, as at the sub-national level it is overwhelmingly recruited from administrative and economic managerial elites from the communist era that colonized the democratically elected assemblies in order to preserve their grip on local power.⁸

TRANSITION AND LOCAL ELITE AUTONOMY

What can the study of elites predict for the prospects of post-communist transition in Russia? Our research re-evaluates the old–new elite cleavage and explores the factors that affect elite values through a systematic study of one Russian city. The sub-national focus is informed by a desire to break from the fixation with the national level of many studies, largely because the national picture is increasingly constituted by micro-level processes, particularly from the large urban centres. Our research seeks to correct the flawed Sovietological inheritance evident in many Western studies of Russian politics that are often framed by a focus on 'high politics' and Kremlin personalities. This approach overlooks the most significant reality of post-Soviet Russian politics – the fragmentation of power following the disintegration of the CPSU and the resulting greater spread of power resources in Russian politics. State-level regulation of elites and their recruitment patterns was previously one of the primary functions of the CPSU, performed by the Central Committee apparatus in Moscow from the foundation of the regime. To counter 'localism' (*mestnichestvo*) the party periodically rotated its leading personnel around the country. Rotation of elites ended with the collapse of the CPSU. The weakness of the post-communist central state authorities in Russia, combined with the weak development of integrative institutions, notably political parties, and the consolidation of 'independents' in political representation, meant that local elites became highly static and more autonomous during the 1990s, particularly in their recruitment. The dramatic rise in localism in Russian politics has compounded the ineffectiveness and fragility of its federal system. Localism is largely a result not only of the immobility and autonomy of local elites, but also of the pressures of democratization as elites are compelled to respond to the demands of their local constituencies. Elite self-interest and pressures from below largely explain why conflicts over budgets and other distributive issues permeate centre–regional political struggle in contemporary Russia. Certain Russian republics and regions have been fertile ground for the mobilization of local elites around political economy issues of decentralization of political and economic power that have often been cloaked in a rhetoric of competing identities. Regional mobilizations have been most evident in the Urals, Siberia and the Far East, where there are strong territorial identities grounded in the particularistic 'frontier' experience of settlement in a harsh environment, a political tradition of regionalism dating from the late nineteenth century, and a deeply ingrained historical resentment against corrupt Moscow-based elites who plunder the wealth of natural resources in these regions.⁹

⁸ See James Hughes, 'Sub-national Elites and Political Transformation in Russia: A Reply to Krystanovskaya and White', *Europe-Asia Studies*, 48 (1997), 1017–36. This study compared the results of regional elections in 1990 and 1994 in seven Russian regions.

⁹ Distributive issues concerning natural resources also underpins local elite mobilizations in key republics such as Tatarstan and Bashkortostan, though in these cases ethnicity is a significant issue dimension.

It is essential to examine elite behaviour in the urban context because it is here that international economic changes are felt most and the Westernization of values is likely to occur first. An ideal type of marketization assumes that Russian cities would develop a governing and elite structure which resembles that of Western counterparts with their balance between public bureaucratic politics and private economic power. Just as Western elites are characterized by interlocking membership between these segments and recruitment from the highest social strata, so too the trend in post-communist Russia may be to replicate this structural configuration.¹⁰ Likewise, one would expect Russian elites to exhibit a similar pattern to Western elites in sharing the same values across functional categories, with distinctions primarily by age cohort.¹¹ We recognize that the exposure of Russian cities to the global economy, and the emergence of a private sector closely involved with local administrative elites, makes for a strong likelihood that the pressures of globalization, and the coalitions of public and private elites that emerge to deal with these issues, will be important factors in understanding the behaviour of post-Soviet elites and their adaptation strategies over the longer term.

ELITES IN NOVOSIBIRSK

Our urban case study of local elites in transition investigates Novosibirsk, capital of Novosibirsk Region and the acknowledged territorial capital of Siberia. In analysing the structure and attitudes of post-communist elites we selected Novosibirsk because of its status as one of the most important regional cities of Russia, for not only is it the administrative, industrial, financial and cultural capital of Siberia, but also it is Russia's 'third' city (after Moscow and St Petersburg) in population size and political and economic importance. As Novosibirsk is an overwhelmingly Russian populated city, its selection minimizes the significance of the ethnic factor, as the divisive implication of ethnicity in some Russian cities would not neatly test the elite adaptation or competition theses. Our city case is also at the centre of one of the areas of significant post-Soviet non-ethnic regionalism. Siberia, Russia's immense resource periphery that stretches from the Urals to the Maritime provinces on the Pacific rim, has the most historically ingrained tradition of autonomist regionalism of all Russia's regions, originating with the *oblastniki* (regionalists) of the late nineteenth century.¹² This regionalist tradition resonated during the post-Soviet transition as antipathy towards 'colonial exploitation' from Moscow became part of the common currency of politics in Siberia's regions.

A structural legacy of Soviet central planning left the city with a highly specialized economic structure typical of the Soviet regional city. In the case of Novosibirsk the specialization was in once prestigious but now bankrupt and severely downsized military-industrial industries. The city is also a major communications hub linking European Russia with the Pacific. Novosibirsk, consequently, suffered the economic depression characteristic of the experience of most Russian regional cities. Unlike other regional cities, however, Novosibirsk has a major skills asset in Akademgorodok, one of the greatest concentrations of academic institutes outside of

¹⁰ Evidence for this is suggested by Hughes, 'Sub-national Elites and Political Transformation in Russia'.

¹¹ E. J. Eldersveld, L. Stromberg and W. Derksen, *Local Elites in Western Democracies* (Boulder, Colo.: Westview, 1995).

¹² For Siberian regionalism, see James Hughes, 'Regionalism in Russia: The Rise and Fall of Siberian Agreement', *Europe-Asia Studies*, 47 (1994), 1133–61; and 'Regionalisme économique en Sibirie', in Marie Mendras, ed., *Russie: le gouvernement des provinces* (Paris: FNRS/CRES, 1997), pp. 105–28.

Moscow and St Petersburg. These typical and non-typical characteristics made a detailed profile of the influential elites that govern Novosibirsk a useful means of generalizing conditionally about the trends in elites at the sub-state level during Russia's post-communist transition.

DEFINING THE POST-SOVIET ELITE

We defined the elite as those persons exercising power and influence as a result of their functional or occupational status at the top of a range of socially significant hierarchies. We selected the elite by a *positional analysis* of occupants of leading positions and by an appraisal of the *networks* within which they operate. In this way we aimed to uncover the layers of the elite stratum and then analyse it horizontally and vertically. A selection based purely on the formal institutions of power ignores the key individuals and networks that operate outside the formal decision-making process. Networks, commonly termed 'clans' in Russia, and usually interlocked with organized crime, play a significant role in politics and business. These informal elites are virtually immune to direct investigation and we did not attempt to do this, believing that such an approach would have been too disruptive of our study of elites. Instead we constructed our research in such a way that these informally influential persons would emerge indirectly.

Using positional analysis we identified four key segments of the elite: 1. *Administrative*: senior administrative officials (governor and deputy governors, mayor and deputy mayors, raion administration heads, senior federal officials based locally); 2. *Elected*: politicians and heads of political organizations (national and local); 3. *Economic*: directors and senior managers of state and privatized enterprises, important entrepreneurs, directors of banks and financial institutions; 4. *Cultural*: leading cultural figures and professional intelligentsia. We consolidated the positional membership of the elite by a reputational analysis performed with the assistance of a panel of local experts (academics and journalists) on a group of over a hundred elite members. Once this core elite was identified, we selected others and added them to the list by ascertaining from the core members during interviews who else was important. This self-identification of the elite was then verified by a continual triangulation of responses. The research is based on ninety-seven interviews (fifty-three of which were completed by British researchers and forty-four by local journalists acting as paid assistants) using a standard questionnaire and conducted over two periods of time, April and August–September 1997. In cases when core members of the elite refused to be interviewed we replaced them by someone else from the list. They were distributed into our functional categories as follows: administrative elite 24.7 per cent, political elite 10.3 per cent, economic elite 46.4 per cent and cultural-professional elite 18.6 per cent. We decided the cut-off point for the sample on the basis of the rapidly diminishing importance of elite members.

The research measured the scale of elite continuity in Novosibirsk between the Soviet and post-Soviet periods. To demarcate 'new' and 'old' elites we took the 19 August 1991 coup as an historical marker for the end of the Soviet regime. We classified anyone in an elite position prior to this date as 'old' elite. We recognize that this demarcating point is problematic, but we consider other demarcating points such as the regional elections in 1990, the USSR elections in 1989, or even the Nineteenth Party Conference in 1988, as less viable since they did not result in any significant influx of new non-communist

elites, whereas significant changes in regime-type and personnel began with Yeltsin's coming to power in August 1991.

We asked standardized questions on the respondents' age, education, career (both before and after 1991), nationality, political and associational activities to create the independent variables. For the dependent variables, we posed questions to measure attitudes to political changes. In the interviews we asked all elites to comment on changes in economic-policy decision making in the city over the last year, and since 1991. From these open-ended questions, we also noted the general comments elites made about their networks to understand how decision making operates and how it had changed during the transition.

We developed five hypotheses to test the extent to which the structure and attitudes of the Novosibirsk elite follow a particular account of the post-communist transition.

Hypothesis 1: new elites are concentrated in the private sector and old elites occupy administrative and political offices

Hypothesis 2: new elites are more positive towards change and privatisation than old elites

Hypothesis 3: age and education affect elite values: older people and the less educated are more conservative

Hypothesis 4: different types of elite are reputed to be powerful, thus confirming an open elite structure

Hypothesis 5: informal elites will be prominent, having high reputed influence, demonstrating the power of non-public elites.

BEYOND THE OLD VERSUS NEW ELITE CLEAVAGE

We tested the hypotheses by running two way tables. Following Goodman we treated snowball samples in the same manner as randomly drawn ones.¹³ Thus we tested for the significance of the associations with the chi-square statistic. Because of the small size of the some of the cells we also used Fisher's exact test, though the probabilities were not a great deal different from the chi-squares. We then further tested the hypotheses with a wider range of controls using ordered probit with attitudes to political change as the dependent variables (see Appendix). The analysis compares and contrasts new and old elites according to education, prior CPSU status, elite segment, age, and prior and current positions. Cross tabulation with the attitudinal variables reveals how the values of new and old elites differ on the processes of democratization, marketization and economic performance in addition to the standard sociological variables. In this way, we were able to determine the extent to which progressive innovator new elites act as a driving force for regime transition and the importance of the inherited old elites, embued with outdated Soviet values.

Old and New Elites: Continuity or Change?

The relative size of the segments of the elites provides some initial clues about the character of post-communist government. The political and administrative elites take

¹³ L. A. Goodman, 'Snowball Sampling', *Annals of Mathematical Statistics*, 32 (1961), 148-70.

TABLE 1 *Current Occupational Segment by Prior Role*

Current elite	Administrative (%)	Political (%)	Economic (%)	Cultural/Prof. (%)	Total (%)
Administrative	66.7	20.0	17.9	10.0	24.7
Political	11.1	40.0	2.6	10.0	10.3
Economic	22.2	30.0	76.9	26.7	46.4
Cultural/Prof	0	10.0	2.6	53.3	18.6
Total	100	100	100	100	100
(n)	(18)	(10)	(39)	(30)	(97)

up 35 per cent of the total, and indicate the importance that bureaucrats and political leaders have in the pattern of governance. Their prominence is both a legacy of the communist system with its overlarge bureaucracy and a normal feature of urban governance as these elites tend to be prominent in any governing system. More interesting is the size of the economic segment at 46.4 per cent, by far the largest group, which indicates the extent to which the new private sector elite has been incorporated into the governing elite. These proportions need to be interpreted with some caution. Traditionally, economic managerial elites were a key element of the old Soviet elite. Although some of this new private elite are drawn from the newly privatized industries and are former bureaucrats, most of these new private sector actors are new entrants into the elite. Table 1 shows current and prior employment types of the elite and reveals that, of the forty-five economic elite members, only 8.9 per cent and 6.7 per cent were respectively politicians or bureaucrats in their previous employment, whereas 76.9 per cent had economic jobs in their previous role, a much higher stability in employment type than the other sectors. More strikingly, only two members of the economic elite were members of the administrative and political segment before 1991, while twenty-eight of them are completely new elite members. By implication, just as the new elite is concentrated in the economic segment, the elite inherited from the pre-1991 Soviet era saturates the senior administrative positions of power (see Table 2). This suggests that old elite adaptation strategies have depended on their hegemony over administrative power, which has remained largely undisturbed by democratization.

At first sight this would tend to support Hypothesis 1. If so, this would confirm the standard assumption about post-Soviet elites in Russia that an inherited pre-1991

TABLE 2 *Occupational Segment by New/Old Elite*

	New elite (%)	Old elite (%)	Total (%)
Administrative	4.7	40.8	24.7
Political	9.3	11.1	10.3
Economic	62.8	33.3	46.4
Cultural/Prof	23.2	14.8	18.6
Total	100	100	100
(n)	(43)	(54)	(97)

Note: $\chi^2 = 18.01$ $p < 0.001$; Fisher's exact test (two-sided) = 19.63, $p < 0.001$.

TABLE 3 *Attitudes to Change by New/Old Elite*

	New elite (%)	Old elite (%)	Total (%)
Positive	60.4	44.4	51.5
Neither for nor against	16.3	25.9	21.6
Negative	23.3	27.8	25.8
No response	0.0	1.9	1.0
Total (n)	100.0 (43)	100.0 (54)	100.0 (97)

Notes: $\chi^2 = 3.2$, $p = 0.361$; Fisher's exact test (two-sided) = 3.095, $p = 0.303$.

communist-era elite remains entrenched in senior administrative positions as the 'party of power', and that elite turnover has been most marked in the economic sector of society which has been infused with a new dynamic innovator segment. This analysis appears to be reinforced when we analyse the attitudes of the elite to post-1991 changes – democratization, decentralization and privatization. Those who held elite positions prior to 1991 tended to be much more negative towards change than the post-1991 new elite (see Table 3). This seems to be a weak confirmation of Hypothesis 2. However, the associations do not reach the conventional significance levels, both for chi-square and exact tests, which suggests that the difference is not that strong. Even if the values of indifferent and negative are collapsed into one value and cross-tabulated with positive attitudes, the probability level only improves to 0.117 for χ^2 which is still outside the 95 per cent confidence limit.

We found a similar set of relationships over attitudes to decentralization, where there is almost no difference between the new and old elites. The area where there is a major difference is over attitudes to federal privatization, where the associations are strong and highly significant (see Table 4). The new elite is much more positive towards privatization whereas the old elite tends to be negative. Since old elites are generally recognized as having indulged in rent-seeking during the privatization process, this result is counter-intuitive. The explanation of why the elite differs in these attitudes may result from the different composition of the old and new elites. As the new elite is largely

TABLE 4 *Attitudes to Privatization of Federal Property by New/Old Elite*

	New elite (%)	Old elite (%)	Total (%)
Positive	53.5	27.8	39.2
Neither for nor against	11.6	20.4	16.5
Negative	30.2	51.9	42.5
No response	4.7	0.0	2.1
Total (n)	100.0 (43)	100.1 (54)	100.3 (97)

Notes: $\chi^2 = 10.3$, $p = 0.016$; Fisher's exact test (two-sided) = 9.77, $p = 0.013$. Percentage do not sum exactly to 100 due to rounding.

composed of the private sector, it follows that it would be more positive to greater freedom and rights of private ownership. We test this idea more rigorously later.

A much more complicated picture of elite change emerges, however, when we analyse the relationship between attitudes to change and respondents' personal characteristics. We found that level of education had no marked influence on attitudes. The place of education (whether the elite was educated in Novosibirsk, Moscow or another region) was also not important in explaining attitudes to change. Local socialization, however, did have an impact on attitudes to decentralization, with local elites educated in Novosibirsk and Moscow being more sympathetic to greater local autonomy while those educated in other regions tended to oppose it. Neither was there a significant relationship with respect to gender. In contrast, there are more marked differences in attitudes to change between the generation cohorts as younger elites are much more positive and older elites are much more negative irrespective of elite segment, with relationships that are significant at about the 0.05 level (see Table 5). It is important to note that old/new elite is not synonymous with old/young in terms of the generation cohorts, thus, a young person in the elite prior to 1991 is classified as old elite.

To explore these relationships further we estimated competing ordered probit models.¹⁴ We included the hypothesized variables in different combinations to test the hypothesis whether the new/old elite cleavage is the key factor distinguishing between elites (see Table 6). In Model 1, we found that the old–new cleavage is not the key variable explaining differences in elite attitudes to political change when controlling for age. The younger elite members are the more likely they are to favour change, and this applies to both inherited old elites and the supposed innovator new elites alike. If membership of the old elite was not a factor, the relative position in the old elite was. In Model 2, we found that position in the CPSU apparatus (any appointed position within the party) prior to 1991 is one of the factors that has a significant effect on attitudes to change when controlling for age.¹⁵ The political socialization of this part of the old elite, as implied by these posts, partially explains current political attitudes.

TABLE 5 *Attitudes to Change by Age*

	< 39 yrs (%)	40–49yrs (%)	> 49yrs (%)	Total (%)
Positive	66.7	53.3	33.3	51.0
Neither/ negative	33.3	47.7	66.7	49.0
Total (n)	100.0 (24)	101.0 (45)	100.0 (27)	100.0 (96)

Notes: $\chi^2 = 5.82$, $p = 0.054$; Fisher's exact test (two-sided) = 5.74, $p = 0.051$. Percentages do not sum exactly to 100 due to rounding.

¹⁴ See W. H. Greene, *Econometric Analysis*, 3rd edn (London: Prentice Hall, 1993), pp. 926–31.

¹⁵ Much as with the term 'nomenklatura', there are problems in defining the term 'apparatchiki'. The CPSU apparatus covers a spectrum of elites, from a narrow functional pole at one end to an ideological pole at the other. If defined narrowly to capture power elites, the *apparatchiki* would include only the most senior full-time functionaries of the Central Committee, and regional and local party committees. If defined more broadly *apparatchiki* would refer to all those holding an appointed position of ideological and political significance within the CPSU (this would include party secretaries at all levels). We have chosen the broader definition.

TABLE 6 *Ordered Probit of Attitudes to Change*

	Model 1	Model 2
Limit 1	1.034349 (0.4388823)	1.083215 (0.4371339)
Limit 2	1.648566 (0.4503091)	1.722567 (0.4502212)
Age	0.3150984** (0.1507725)	0.2508293* (0.137767)
New/Old	0.0256972 (0.2738503)	
Apparatus	–	0.5692384** (0.250131)
Log-likelihood	– 95.19548	– 92.603631
No. of iterations	4	4
<i>n</i>	96	96

Notes: Standard errors in parentheses. * $p < 0.1$ ** $p < 0.05$, *** $p < 0.01$. One case deleted because of a missing value.

The relationships are more marked over marketization where there was much more of a contrast in the attitudes of the new and old elite in two-way tables. We created three models (see Table 7) where we controlled for membership of national associations, which proved to be a powerful positive predictor of attitudes. Since privatization was largely managed by a clique in the central government (first under Gaidar and then Chubais), those members of the local elite who had close personal ties with the central clique were among the significant 'insider' benefactors of the privatization process. The first model examines the difference between the new and old elite members towards federal privatization which shows the new/old variable to be highly significant. The introduction of the age variable in Model 2 reveals the strong power of the new/old

TABLE 7 *Ordered Probit of Attitudes to Federal Privatization*

	Model 1	Model 2	Model 3
Limit 1	1.600938 (0.4811756)	3.208542 (0.7002516)	3.37281 (0.698538)
Limit 2	2.090791 (0.4926751)	3.746459 (0.7167634)	3.928921 (0.7173645)
New/old	0.4958444* (0.2555192)	0.0704768 0.2856518	
Age		0.5695671*** (0.167835)	0.5197984*** (0.1555758)
Apparatus	–	–	0.5205848* (0.268946)
Natassoc	– .9522591*** (0.2742028)	– 1.035927*** (0.285078)	– 1.115093*** (0.2857144)
Log-likelihood	– 88.236917	– 82.063298	– 80.214316
No. of iterations	4	4	4
<i>n</i>	95	95	95

Notes: Standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Two cases deleted because of missing values.

variable in Model 1 to be spurious. In a similar way, in models not reported here, a dummy variable based on membership of the economic segment on its own appears to predict attitudes to privatization significant at the 0.05 level, but again age proves to be the powerful variable and reduces the influence and efficiency of the economic segment term. We do not include the economic segment in the final model because it does not reach the required level of significance. As a result we cannot explain attitudes to privatization by reference to the economic interests of the different parts of the elites; the sources of attitudes lie in the slowly changing generational transfer of attitudes. As in Table 6, in the final Model 3, we include membership of the apparatus. We found that very similar variables predicted attitudes to municipal privatization, with the exception that membership of the apparatus did not have so much influence here, and that membership of local associations was important along with membership of national associations. In fact, with a few variations, we can observe a similar small number of factors that predict elite attitudes to the major changes, with the bulk of the expected relationships being spurious, of the wrong sign or outside the required level of significance.

Segmented or Power Elite? The Role of Local Administrative Hegemons

After initial uncertainty in the immediate post-collapse period, the power of the old administrative elite was underpinned by the institutional design of the Yeltsin presidential system. Yeltsin's pyramidal concentration of power in the vertically organized administrative hierarchy replicated the clientelistic systemic features of the Soviet era by reinforcing the power of patrimonial networks. The structure of the elite in Novosibirsk during the time-frame of our study indicates that there were parallel, but interlocked, well-defined political and economic network systems. The authority of the formal institutions of political power (regional and city soviets) varies: the regional soviet (and regional politics) was more powerful largely because local administrative and business elites colonized it and enhanced its reputed power. Elite networks were dominated by the senior administrative elite, however, which was only accountable to the electorate through its two leaders: Governor Vitaly Mukha and Mayor Viktor Tolokonsky. The governor and mayor perform the roles of two local hegemons presiding over their respective administrative branches, which in turn regulate local power.

One of the more obvious defining features of the local transition in Russia is the conflict between these two levels of power and their respective hegemonic leaders, and the role of the centre in such struggles. At a deeper elite structural level, however, there is an apparent division of power between a specific element of the pre-1991 old elite, namely the inherited administrative elite from the CPSU apparatus (*apparatchiki*) which is dispersed in both regional and city administrations, and the new post-1991 innovator economic elite which is concentrated in the privatized business sector.

The self-preservation adaptation strategy of the *apparatchiki* was to abandon the party and colonize the post-1991 state institutions, and thereby continue to dominate, if not hold a near-monopoly, of administrative power at the regional and city sub-state levels. Of twenty-four administrative elite interviewees, the *apparatchiki* accounted for fourteen, and two others were inherited from the pre-1991 state bureaucracy. The argument that post-1991 elite change was marked by the inflow of the Soviet-era economic managerial elite (*khozyaistvenniki*) into the post-communist administrative elite was not supported by our study, as only four members of the current administrative elite originated from this segment. The marginal scale of the turnover of administrative

elites in Russia's post-communist transition is demonstrated by the finding that only two members of the current elite held non-elite positions prior to 1991. Emblematic of the trend in administrative elite recruitment are the careers of the two local hegemons. Governor Mukha was the pre-1991 Novosibirsk Region party secretary, while Mayor Tolokonsky was deputy chairman of the Planning Commission of the city party committee. This continuity was reinforced in the December 1999 gubernatorial election in Novosibirsk, when Mukha was defeated and replaced by Tolokonsky.

The impact of the infusion of innovators into the elite has been felt most dramatically in the economic sector. There is a common view that the privatized business elite in post-communist Russia is saturated with former Komsomol *apparatchiki*, who moved from administration to economic positions during the period of Gorbachev's perestroika.¹⁶ This view is not confirmed from our study. In Novosibirsk we interviewed forty-five current economic elite members, none of whom were recruited from the pre-1991 Komsomol apparatus, and only two had formerly been part of the administrative elite. There was some continuity as thirteen of the economic elite interviewees had held similar elite positions prior to 1991. The majority (thirty out of forty-five) of our economic elite interviewees had assumed their positions post-1991, and most of these (twenty-seven out of thirty) had emerged from non-elite positions in the pre-1991 period. We identify this group as the core of the innovator elite. A significant number of them (sixteen) were drawn from the cultural-professional intelligentsia. Local social capital is an important explanatory factor here, since Novosibirsk has a substantial resource of academic institutions in Akademgorodok, together with the third most important university outside of Moscow and St Petersburg, and economists trained at these institutions have a domestic and international reputation. Significantly, a cluster of the innovator economic elite was recruited from the economics faculty of the university and the Institute of Economics at Akademgorodok. This relevant skills capacity may well be unusual, since most regional capitals' universities do not match the concentration and prestige of Akademgorodok. This factor remains to be tested in other regions.

Reputed Power: A Segmented or Unified Elite?

By asking elites to identify and rank the most important persons/groups in the city, this study has revealed an open structure to the elites, at least as regards elite perception of influence in the city (see Table 8). As one would expect, given the levers of power at the disposal of the administrative hegemons, almost without exception the governor, the mayor and their deputies were named as occupying the top three positions of influence in the city. At the same time, when respondents identified the fourth and fifth positions of influence they nominated a wide range of actors, such as key business leaders and influential pseudo-entrepreneurs from the criminal sector. Few actors outside these top five could attract more than five other mentions as influential. Local power is what counts as regards perceived influence, as local politicians operating at the national level in the Duma were generally not seen as influential. The results show that the balance of power among elites is changing as innovator new elites have emerged and we can expect that given time they will challenge the hegemonic power of the inherited elites of the administrative sector.

¹⁶ Kryshyanovskaya and White, 'From Soviet *Nomenklatura*'.

TABLE 8 *Persons Cited as being the Most Influential in the City*

	1st (%)	2nd (%)	3rd (%)	4th (%)	5th (%)
Mukha ¹	63.9	15.5	5.2	2.1	1.0
Tolokonsky ²	25.8	51.5	8.2	3.1	1.0
Kiselev ³	0.0	9.3	23.7	6.2	1.0
Gorodetksy ⁴	0.0	8.2	1.0	0.0	2.1
Sychev ⁵	0.0	0.0	5.2	9.3	3.1
Others	5.1	9.0	46.4	54.4	50.5
No response	5.2	6.2	10.3	24.9	42.3
Total (n)	100.0 (97)	101.7 (97)	100.0 (97)	100.0 (97)	101.0 (97)

Notes: Others had less than five respondents citing them as influential. Percentages do not sum exactly to 100 due to rounding.

¹Governor Novosibirsk Region

²Mayor Novosibirsk City

³First Deputy Governor Novosibirsk Region

⁴First Deputy Mayor Novosibirsk City

⁵Chairman of Novosibirsk Region Legislative Assembly

CONCLUSION

The conventional focus on the political/economic bifurcation, and the old/new monochrome elite cleavage disguises important sociological factors shaping attitudes to political change in the Russian transition. The significance of the age factor in determining elite attitudes suggests that the challenge of building a post-communist Russia is reflected in a generational conflict as much as it is a struggle between inherited and innovator elites. This is not unlike the kind of elite conflict between 'establishment' and 'newcomer' and generational cohorts that one would encounter in any modernized urban setting. Two main trends in elite recruitment are evident from this study. First, elite continuity is concentrated in the administrative sector, where the administrative structures of post-communist Russia have been colonized by elites from the CPSU apparatus. Secondly, elite change is most apparent in the economic sector, where the move to a market economy has seen the emergence of a completely new innovator elite, largely recruited from the cultural-professional intelligentsia with relevant social capital. While the institutional structures of the CPSU monist regime collapsed rapidly in 1990–91, the values and operational culture of this regime have persisted during the transition and their residues are compressed in the administrative elite, which has been largely inherited intact from the CPSU apparatus. The adaptation of this old elite segment was eased by Yeltsin's concentration of state power in a vertically structured administrative hierarchy that operated on a patrimonial principle. A younger, more dynamic and skilled innovator elite has emerged in the new world of privatized business, which is likely over time to increasingly challenge the existing elite structures and networks since it does not share their values on the transition. Post-communist transition has, therefore, been processed largely within pre-existing power relationships. Generational turnover within the elite will naturally over time erode reform resistance and allow new values to filter through into the system by gradual adaptation, or, in the case of a major rejuvenation imposed from above, flood in. The dissonance of values between age cohorts identified in this study is one of the fundamental determinants of the pace of change in Russia.

APPENDIX: CODING OF THE VARIABLES

CHANGE. We asked respondents about their attitudes to political changes in Russia since 1991. It takes the values of 1 = positive, 2 = neither positive or negative and 3 = negative.

NEW/OLD. This was calculated from a question about respondents' roles before and after the August 1991 coup, new = 0, old = 1.

AGE. This was coded as 1 = <30, 2 = 30–39, 3 = 40–49, 4 = 50–59, 5 = 60–69, 6 = 70 years or order. For the ordered probits, we converted the bands into median ages: <30 = 27, 30–39 = 35, 40–49 = 45, 50–59 = 55, 60–69 = 56, >70 = 75.

APPARATUS. This was coded as 1 = members of the CPSU apparatus, plus members of the Komsomol apparatus; 0 = members and candidate members of the CPSU.

PRIVATI. We asked respondents whether they thought that the privatization of state assets had been a good or bad thing for the city. The variable takes the values of 1 = good, 2 = neither good/bad and 3 = bad.

ASSOCNAT. This variable was coded as 1 = membership of national associations and clubs, otherwise 0.

Is There Really a Link Between Neo-Corporatism and Environmental Performance? Updated Evidence and New Data for the 1980s and 1990s

LYLE SCRUGGS*

In a previous article in this *Journal* entitled 'Institutions and Environmental Performance in Seventeen Western Democracies' (29 (1999), 1–31), I argued that neo-corporatist institutions delivered superior environmental performance during the first two decades of the modern environmental era (1970–90).¹ This note re-examines the thesis using slightly different data from a more recent time period (1980–95). It also controls for some alternative explanations for environmental performance not included in the original article. The results suggest that the beneficial effects of neo-corporatism for environmental performance are robust. In confirming the results from the earlier analysis, this Note demonstrates the effects of neo-corporatism in unexpected policy

* Department of Political Science, University of Connecticut. I wish to thank Bill Bernhard, Scott de Marchi and Michael Munger for their helpful comments and suggestions. Unpublished citations are available from the author upon request.

¹ For other work on the same or similar themes, see Detlef Jahn, 'Environmental Performance and Policy Regimes: Explaining Variation in 18 OECD Countries', *Policy Sciences*, 31 (1998), 107–31; Martin Jänicke and Helmut Weidner, eds, *National Environmental Policies: A Comparative Study of Capacity-Building* (Berlin: Springer Verlag, 1997); Markus Crepaz, 'Explaining National Variations of Air Pollution Levels: Political Institutions and Their Impact on Environmental Policy-Making', *Environmental Politics*, 4 (1995), 391–414; Martin Jänicke, H. Monch and M. Binder, 'Ecological Aspects of Structural Change', *Intereconomics*, July/August (1993), 159–69; Martin Jänicke, 'Conditions for Environmental Policy Success', in M. Jachtenfuchs and M. Strübel, eds, *Environmental Policy in Europe* (Baden-Baden: Nomos, 1992), 71–97; and Martin Jänicke *et al.*, 'Structural Change and Environmental Impact', *Intereconomics*, January/February (1989), 24–35.

areas. The positive results for environmental protection suggest that there may be benefits of neo-corporatist institutions in areas beyond those with which they are traditionally associated.

Environmentalists often suggest that the main neo-corporatist groups (employers and unions) have vested interests in 'growth politics' and little concern for the environment. From this perspective, neo-corporatist *groups* are problematic because their interests focus too much on economic issues, and the institutional *system* of corporatist bargaining is *pathological* because it privileges those economic interests over other, i.e., environmental, interests, thus undermining environmental protection.

There are three main reasons to expect that the environmental critiques of neo-corporatism might be untrue. First, the encompassingness of traditional corporatist groups suggests that they may more willing to consider the negative *environmental* externalities of their decisions, since those externalities fall on their own constituents. In this light, labour and employer associations have a strong organizational interest to resolve disputes in an efficient and effective manner, particularly within the broader confines of environmental demands from popularly elected governments, who retain the threat of state regulation.

Secondly, the authority of peak associations helps to ensure two things that improve environmental performance. They have the authority and inclination to ensure that there is close monitoring and general compliance with environmental laws, lest some firms cheat to the detriment of others under their authority. In addition, those actors comprising the associations have a greater ability and incentive to pursue common *solutions* to industry pollution problems, thus diffusing 'best practices' more readily throughout the economy.²

The third argument in favour of consensual corporatist institutions comes when one considers the performance of the alternatives. While neo-corporatist institutions may provide less than ideal solutions to environmental problems, a competitive, pluralistic system of interest intermediation (which most environmental critiques of corporatism do advocate) may be worse, exhibiting severe co-ordination and enforcement problems in society, even for groups of environmental advocates.

The original test validating the environmental benefits of corporatism involved a cross-sectional multivariate regression analysis. The dependent variable was a composite measure of changes in six pollution indicators – sulphur dioxide emissions, nitrogen oxide emissions, per capita municipal waste production, fertilizer use, recycling rates and the percentage of the population connected to wastewater treatment facilities – between 1970 and 1990. The independent variables in the original article included several measures of 'neo-corporatism' as well as a variety of alternative explanations for environmental performance found in the literature. The results showed a robust relationship between neo-corporatism and the environmental performance indicator. Here, I attempt to replicate the results using newly available data for a more current period (1980–95) and European air pollution data from the European Environmental Agency. I use the same indicators of neo-corporatism though some of the control variables (described below) are updated to reflect the different period.

There are at least three reasons why it is valuable to perform such a test. First, replication serves to further the process of building theories. Secondly, since national

² David Soskice, 'Divergent Production Regimes: Coordinated and Uncoordinated Market Economies in the 1980s and 1990s', in H. Kitschelt *et al.*, eds, *Continuity and Change in Contemporary Capitalism* (New York: Cambridge University Press, 1999), pp. 101–34.

TABLE 1 *Environmental Performance Scores (1980–95) and Bi-variate Correlation with Explanatory Variables*

Country	Environmental performance score	Independent variable	<i>r</i>
		LC Corporatism	0.71
Austria	330.0	Lehmbruch	0.56
Belgium	289.4	Social Market Economy (SME)	0.86
Canada	166.4	Population Density (mean of 1980 and 1990)	0.28
Denmark	277.8	GDP per capita (1980–1992 average)	0.46
Finland	292.8	GDP growth (1980–1995 average)	– 0.43
France	256.0	Misery Index (1980–1995 average)	– 0.46
Germany	370.6	Service Sector (1980)	0.25
Ireland	28.0	Environmental Movement (% 1995)	0.27*
Italy	125.5	Post Materialism (1982)	0.52*
Japan	226.0		
Netherlands	324.1		
Norway	255.9		
Spain	120.2		
Sweden	301.3		
Switzerland	335.3		
UK	167.5		
US	202.3		

*No data for Switzerland and Austria.

data collection methods have been improving and becoming more comparable in this still relatively new domain of environmental indicators, these more recent data may be somewhat more reliable than the data from the previous paper.³ Finally, initial empirical results are often subject to the charge that they are an artefact of the period examined. Examining this slightly different period allows us to see how ‘sensitive’ the results in the first article were.

Are there any reasons to think that comparative environmental performance in the nations in the 1980–95 period would differ from 1970–90? Several reasons suggest that it would. First, the influence of the European Union (EU) on national environmental policy is argued by many to have created upward policy convergence among its member countries, many of which are included in the study.⁴ We might thus expect convergent outcomes in the more recent period. Secondly, some argue that the period since the end of the Cold War has lowered the political salience of environmental issues.⁵ If policies are linked to real outcomes, we would certainly expect more convergence in the 1980–95 period. Thirdly, in countries like the United States, the more contemporary period is marked by several innovations since the mid-1980s: the breakthrough on sulphur dioxide reduction policies under the Clean Air Act of 1990 (for example, using tradable

³ Data for air pollution from the European Environmental Agency’s CORNAIR database was obtained from its website, www.eea.dk/frdb.htm. Data are available from 1980. Other data are from OECD, *Environmental Data Compendium* (Paris: OECD, 1997). Differences between EEA and OECD data are not very significant.

⁴ David Vogel, *Trading Up: Consumer and Environmental Regulation in a Global Economy* (Cambridge, Mass.: Harvard University Press, 1995); Helen Wallace and William Wallace, *Policy-Making in the European Union* (Oxford: Oxford University Press, 1996). Additionally, public opinion data in EU countries suggests convergence in opinion during the late 1980s. The mean percentage of respondents saying that environmental issues are very important became almost unanimously strong among all countries by 1990.

⁵ Jahn, ‘Explaining Performance and Policy Regimes’, p. 107; but see fn. 4 above.

permits) is just one example. Finally, as individual countries approach practical limits to pollution reduction in particular areas, the two periods may differ due to the timing of particular countries' efforts. For instance, Sweden may have achieved its major progress in the 1970s and early 1980s, while Ireland shows progress primarily after the early 1980s. If so, we would expect Ireland to perform better relative to Sweden in 1980–95 compared with 1970–90.

The updated environmental performance scores are reported in Table 1.⁶ Several points should be noted. There are no data in the 1990s for air emissions in Japan, and recycling figures are available only through 1992. Regression results reported below were estimated with and without Japan in the sample, but this had no effect on the results of interest. Secondly, there are no glass recycling data provided for Norway before 1991, Sweden before 1985 and Spain before 1983. For Spain this presents few problems. (Even if one assumed it had a recycling rate in 1980 that was half that in 1983, its overall performance score changes little.) For Norway and Sweden, both neo-corporatist systems, I used only the existing data. This almost certainly *understates* their overall environmental performance in the entire period, and thus biases the results *against* finding a strong effect of neo-corporatism.

The 1980–95 performance score is closely, but far from perfectly, correlated with the 1970–90 measure ($r = 0.85$). The bivariate correlations between the environmental performance scores and three measures of corporatism are also shown in Table 1. The first is the expert ranking of neo-corporatism, developed by Lijphart and Crepaz (LC Corporatism). The second is Gerhard Lehbruch's classification of countries based on their degree of co-operative policy making between labour and employer organizations and the state (Concertation).⁷ The third (SME) is taken from David Soskice's classification of the industry co-ordination, a concept closely linked to corporatism and what I suggest may benefit environmental performance. For all three measures the correlation with the updated environmental performance score is good: 0.71, 0.56, and 0.86 respectively. (They are close to the coefficients reported in the earlier article.) Removing Japan from the analysis does not alter the results. As a rough first cut, these results suggest that the relationship between corporatism and environmental performance is not limited to the first twenty years of the environmental era.

Of course, environmental policy performance is affected by a number of factors. The original article suggested a number of explanations: population density, per capita income, economic growth, the strength of the environmental movement, economic structural change, and cultural values (such as post-materialism). Here I add another potentially important factor – other macro-economic conditions. The priority of environmental issues, and hence the level of attention paid to them, is often considered to depend on economic conditions reflected in such things as inflation and unemployment. Survey evidence in Europe suggests that these two specific issues compete with

⁶ All indicators are computed based on the 0–100 scale. This contrasts slightly with the original article, but is a superior operationalization since it gives equal weight to the recycling measure in the aggregate index. The water treatment variable from the original index was dropped due to missing data for the 1990s.

⁷ Arend Lijphart and Markus Crepaz, 'Corporatism and Consensus Democracy in Eighteen Countries: Conceptual and Empirical Linkages', *British Journal of Political Science*, 21 (1991), 235–56; Gerhard Lehbruch, 'Concertation and the Structure of Corporatist Networks', in John Goldthorpe, ed., *Order and Conflict in Contemporary Capitalism* (Oxford: Clarendon Press, 1984), pp. 60–80. Spain is assigned a value of –1.0 based on Susana Aguilar Fernandez, 'Convergence in Environmental Policy? The Resilience of National Institutional Designs in Spain and Germany', *Journal of Public Policy*, 14 (1994), 39–56, and Alan Siaroff, 'Corporatism in 24 Industrial Democracies: Meaning and Measurement', *European Journal of Political Research*, 36 (1999), 175–205.

environmental protection as valence political issues. To control for such conditions generally, I use the misery index – the sum of unemployment and inflation.⁸ There are, of course, other possible explanations of environmental performance, but the political and background conditions listed here are major challengers to my main hypothesis.⁹

Table 1 also shows the bi-variate correlation between the variables discussed above and the new environmental performance score. The relevant year or period used to calculate independent variable values is indicated in the table and is consistent (given the updated period) with the analysis in the original article.

In order to ensure that these correlations are not spurious, we need to control for competing explanations in a multivariate analysis. Table 2 presents regression estimates using combinations of all of the control variables just discussed along with one of three measures of corporatism. Since the main purpose of this article is evaluating the empirical veracity corporatism hypothesis, I do not discuss the results for these control variables here. The regression results in the first three columns use the six explanatory variables for which there is data for all seventeen countries.

For each measure of corporatism, estimates are both substantively and statistically significant. Holding other factors constant, going from the most to the least corporatist country reduces environmental performance by about 140 to about 190 points. This is more substantively significant than estimated effects for any other variable except levels of income. All three models pass tests for omitted variable bias and heteroscedasticity, and the errors are Gaussian normal. I evaluated a battery of diagnostic and sensitivity tests – such as dropping potentially ‘influential’ cases, robust (bi-weight) regression, extreme bounds analysis, and case-wise deletion. While the list of potential sensitivity tests is vast, all of the tests I performed suggest that the findings here for the variables of interest – the various measures of corporatism – are robust.¹⁰

Columns 4–6 in Table 2 report results adding post-materialism and environmental group membership from the early 1980s. Since including these variables reduces the number of cases with full data by two (Switzerland and Austria) and adds two additional constraints to the model, I dropped the misery index and service sector employment from the model. The former showed no evidence of systematically affecting the performance; the latter is closely correlated with income ($r = 0.80$).¹¹ As the results show, estimates for the corporatist variables are a little smaller, but remain highly significant. Estimates for post-materialism and environmental group strength are not significant statistically.¹²

In summary, the results reported here support the claim that corporatist institutions are closely associated with the effectiveness of national environmental performance. The results are robust to different specifications of the dependent variable, including the

⁸ Income and growth is from Robert Summers and Alan Heston, ‘The Penn World Tables: Mark 5’, *Quarterly Journal of Economics*, 106 (1991), 327–68. Environmental membership data come from the 1982 World Values Survey. Postmaterialism is from Ronald Inglehart and Paul Abramson, ‘Economic Security and Value Change’, *American Political Science Review*, 88 (1994), 336–54. Other data come from various Organization for Economic Co-operation and Development (OECD) sources.

⁹ Other factors, including those controlled for in the original article, were also tested. None significantly altered the estimates for the corporatism variables.

¹⁰ See William Bernhard, ‘A Political Explanation of Central Bank Independence’, *American Political Science Review*, 92 (1998), 311–27.

¹¹ Including these variables in the model does not significantly affect the results.

¹² Sensitivity tests like those performed on the results in columns 1–3 indicate that these results are robust, though not as robust as those in the first three columns. This is undoubtedly due to the loss of 18 per cent of the degrees of freedom (two cases). Other results (not shown) using various subsets of the control variables included in the first article yield coefficients and errors that are similar to these.

TABLE 2 Regression Estimates for Predictors of Environmental Performance

	Corporatism measure			Corporatism measure with extra factors		
	LC			LC		
	Corporatism	Concertation	SME	Corporatism	Concertation	SME
Corporatism	63.1 (12.0)**	63.4 (13.5)**	140.6 (20.0)**	59.2 (12.7)**	55.0 (13.2)**	132.2 (21.8)**
Per capita income	0.025 (0.008)*	0.034 (0.010)**	0.014 (0.006)	0.015 (0.006)*	0.002 (0.006)**	0.008 (0.005)
Growth	-49.2 (20.8)	-49.0 (22.7)	-49.6 (16.6)*	-59.2 (26.2)	-55.3 (28.3)	-51.0 (21.0)*
Misery Index	0.83 (2.36)	0.85 (2.60)	0.52 (1.82)			
Population Density	0.29 (0.084)*	0.28 (0.091)*	0.16 (0.071)*	0.36 (0.093)**	0.36 (0.101)**	0.18 (0.083)
Employment	-5.13 (2.24)	-6.34 (2.48)*	-3.05 (1.79)			
Post-materialism				0.57 (0.94)	0.74 (1.01)	-0.11 (0.81)
Environ. membership				-11.8 (5.0)*	-12.1 (5.5)	-1.8 (4.1)
Constant	280.7 (134.3)	101.2 (159.6)	215.0 (108.7)	154.2 (98.1)	-29.8 (108.0)	120.1 (79.3)
Observations	17	17	17	15	15	15
R ²	0.89	0.87	0.93	0.90	0.88	0.93
Adjusted R ²	0.82	0.79	0.89	0.82	0.78	0.88
F	13.42	11.06	21.98	11.45	9.46	17.79
Normality	3.53	1.29	0.98	0.29	4.11	5.35
CookWeisberg	0.07	0.09	0.95	0.36	2.28	0.72
Reset	1.14	1.02	0.88	1.33	2.14	0.91

Note: Standard errors are shown in parentheses under estimates.
 *Significant at 5 per cent level. **Significant at 1 per cent level.

use of pollution data from more recent years, the inclusion of different and varied control variables, the exclusion of individual cases, differences in how corporatism is operationalized and a battery of other regression diagnostics. As suggested earlier, the positive relationship between corporatist institutions and environmental performance is consistent with the hypothesis that such arrangements encourage public policy with a greater eye to aggregate interests.

In conclusion let me respond to two potential challenges to these results and those in the previous paper.¹³ The first is that the measures of corporatism used are outdated, and that corporatism itself is in decline. First, if the second charge is true, the institutional changes will affect environmental outcomes with some lag; thus, we may not see the results of 'de-corporatization' until years after my dataset ends. Secondly, several recent studies dispute the degree of *de facto* de-corporatization.¹⁴ Indeed, many suggest that corporatism is quite important for success in the 'new wave' of environmental policy making, which seeks to promote structural economic changes in the direction of 'green production'. In line with this claim, it is important to stress most observed 'declines' in the number of corporatist institutions (outside, perhaps, of wage bargaining) within countries over time are small relative to the cross-national differences, and that the meaning of such changes is debatable.

A second criticism is that the results reported here are inconsistent with several recent comparative case studies.¹⁵ Three points are appropriate here. One is that there are also case studies stressing the importance of corporatism in environmental policy, particularly in new areas.¹⁶ Secondly, many policy case studies focus more on policy creation and less on performance and implementation. Nor do such studies tend to assess long-term *performance*. (Of course, policy and performance are hard to separate, and evaluating where corporatist institutions should and should not matter will require further research and debate.) Thirdly, just as there are limitations on the ability to test specific mechanisms when looking at aggregate data (as I do here), there are limits to the inferences that can be made on the basis of several case studies in specific policy-making areas in a few countries. At the very least, the discrepancy between the two levels of analysis may be a fruitful way of generating specific tests.¹⁷

¹³ A third challenge – about the type of statistical analysis in this, and the previous, study – is available in an appendix to this Note, available at this *Journal's* website.

¹⁴ On corporatist 'resilience' in general, see Siaroff, 'Corporatism in 24 Industrial Democracies'. For more specific discussions in particular countries, see Lennart Lundqvist, 'Capacity Building or Social Construction? Explaining Sweden's Shift towards Ecological Modernization', *GeoForum*, 31 (2000), 20–32; Marko Joas and Ann-Sofie Hermanson, eds, *The Nordic Environments: Comparing Political Administrative and Policy Aspects* (Aldershot: Ashgate, 1999); Peter Munk Christiansen, 'Business as Usual? Organized Interests in Danish Environmental Politics', mimeo (1996); Peter Munk Christiansen, ed., *Governing the Environment* (Copenhagen: Nordic Council of Ministers, 1996); and OECD, *Environmental Performance Review: Austria* (Paris: OECD, 1995).

¹⁵ See, for example, Arthur Mol *et al.*, *Joint Environmental Policymaking: New Interactive Approaches in the EU and Member States* (Wageningen: Wageningen Agricultural University, 1998).

¹⁶ See fn. 15; Aguilar Fernandez, 'Convergence'; Robert Brickman *et al.*, *Controlling Chemicals: The Politics of Regulation in Europe and the United States* (Ithaca, NY: Cornell University Press, 1985); Lennart Lundqvist, 'Sweden,' in M. Jänicke and H. Weidner, eds, *National Environmental Policies: A Comparative Study in Capacity Building* (New York: Springer-Verlag, 1997); David Wallace, *Environmental Policy and Industrial Innovation: Strategies in Europe, the USA and Japan* (London: Royal Institute of International Affairs, Earthscan, 1995).

¹⁷ One approach is to use case studies to ascertain whether some of the mechanisms outlined and which corporatist theories are valid for behaviour. Do encompassing interest groups exert some influence in obtaining adequate compliance or interest among their members? Are there 'collective goods' that corporatist interests provide to their members (i.e., regulated exchange of information or technology) to facilitate efficient compliance? Is industry in corporatist systems more willing to share real information with governments in the interest of getting more efficient regulation or standards? Our current research is trying to address these questions.

METHODOLOGICAL APPENDIX

I discuss three methodological issues which have been raised about this and my previous article. Some of these criticisms are common (mis)conceptions about statistical analysis. As in other aspects of social science methodology, there is always a grain of truth or 'technically yes, but ...' when using statistics. Almost all of these comments are relevant in research using statistics on 'small-*n*' datasets, which is not uncommon in comparative politics. Despite the inherent limitations of statistical analysis with such datasets, many of the problems with small-*n* statistical analysis stems from misunderstandings about how to use such data, rather than the inherent limits of the data itself.

Degrees of Freedom and Omitted Variables

Because the main purpose of my article(s) lay in testing particular hypotheses rather than exhaustively accounting for all variation in national environmental performance, I have been interested in showing that the results I obtain are significant (statistically and substantively) under a variety of conditions. Because of this, some of the models reported may be considered 'overspecified', i.e., they contain many 'insignificant' independent variables and consequently few degrees of freedom. One reason for taking this approach is that it shows that, even if one controls for a number of credible predictors of performance, the coefficient for corporatism (i.e., the independent variable of interest) is precisely estimated. If anything, finding 'significant results' *despite* also including extraneous variables in the model improves the credibility of the results.

In an earlier draft of this Note, I included a model with twelve cases and eight explanatory variables (i.e., only three degrees of freedom!) where corporatism was significant. Other, more reasonable (i.e., with more degrees of freedom), model estimates mirrored the results of that 'ridiculous' model. Some colleagues suggested that, because there were so few degrees of freedom in the overspecified model, all of the results in the model were meaningless. Yet the fact that the estimates for the corporatism variables remained statistically significant *despite* the severely limited degrees of freedom available suggests that that particular result is robust.

Another reason for 'overspecifying' models is to avoid an 'omitted variable bias'. If a regression model excludes an independent variable that is in truth correlated with the dependent variable *and* is correlated with the independent variable of interest (such as corporatism), the estimate of the variable of interest will be *biased*.¹⁸ This is a potentially serious problem, since a biased estimate may change the sign of the estimated effect, and hence the substantive interpretation of the independent variable. Though there is no bias if the independent variables in question are not correlated, this seldom occurs in practice. Omitted variable bias is thus a major potential problem. Erring on the side of avoiding a biased estimate, even at the expense of inflating the error associated with that estimate, often justifies examining 'overspecified' models in small-*n* analysis, even if the results never make it into publication.

Unfortunately, such attempts are (apparently) seldom undertaken. Much more typical is the case that someone develops a hypothesis (perhaps from a supporting case study or two), creates an index and finds a correlation, perhaps with a control or two added

¹⁸ Eric Hanushek and John Jackson, *Statistical Methods for the Social Sciences* (New York: Wiley, 1977), pp. 79–86.

in separate models for good measure (though the controls are seldom competing political hypotheses, but structural features, like income or demography). More appropriate is a method that identifies competing political explanations and, in essence, controls for all (or as many as possible) simultaneously.

Of course, an 'overspecified' model cannot be used to proclaim that the particular model *as a whole* explains a lot of the variation in a particular dependent variable (say, by looking at an R^2 statistic). With enough variables in the model (even if none of their effects are really different from zero), the R^2 will be high. But if the results are used to examine the validity of particular parameter estimates, it can enhance our confidence in that particular estimate. Where one draws the line is not easy. In most respects the two approaches (parsimony or avoiding a possible omitted variable problem) trade off. For instance, a significant coefficient in a model with fifteen cases and ten independent variables may become insignificant if we drop one of the other variables in the model.

Sensitivity Tests and Outliers

Regression results typically are interpreted as being, in some sense typical effects. Technically, however, they are based on mathematical averages, and everyday and mathematical uses of 'average' are not the same. If nineteen people have an income of \$20, and 1 of \$500, the 'average' person has \$44; the same is true if ten people have \$40 and ten people have \$48 in income. The first example demonstrates how a single 'influential' case can distort statistical analysis particularly when the number of cases is small.¹⁹ Thus, it is generally useful to provide some type of 'sensitivity analysis' to estimated coefficients. This is the second critical methodological issue related to this Note and to small- n analysis more generally.

Two recent cross-national statistical analyses have made extensive use of a number of sensitivity tests available to researchers.²⁰ As these studies note, the simplest and most popular methods are (1) ensuring the residuals obey the typical Ordinary Least Squares (OLS) assumptions (constant variance); (2) alterations in the specification of the model (for example, what happens to the estimates of interest when other variables in the model are excluded?); (3) sequential exclusion of individual 'extreme' cases to ensure that particular estimates are not wholly responsible for the overall estimated effect. The authors also use other approaches that are variations of non-parametric weighted-regression techniques, weighting observations based on the size of their errors or their 'influence' on the simple regression estimates. (Dropping cases is equivalent to assigning them a weight of zero.)

Though these techniques are advanced, it is interesting that they cast no further light on either the authors' results (or the results in my papers). Neither Bernhard's nor Granato *et al.*'s paper provides us with insight as to the relative importance of any of these tests. Is failure on one of the tests dispositive of the simple regression results? If

¹⁹ A classic debate in comparative political economy over just this issue in small- n analysis is between Peter Lange and Geoff Garrett and Robert Jackman in the mid-1980s. See Peter Lange and Geoff Garrett, 'The Politics of Growth in Industrial Democracies, 1974–1980', *Journal of Politics*, 47 (1987), 244–56. A review and update of the literature, employing some of the tests mentioned in the text, is Lyle Scruggs, 'The Politics of Growth Revisited', *Journal of Politics* (forthcoming).

²⁰ James Granato, Ronald Inglehart and David Leblang, 'The Effect of Cultural Values on Economic Development', *American Journal of Political Science*, 40 (1996), 607–31; William Bernhard, 'A Political Explanation of Variations in Central Bank Independence', *American Political Science Review*, 92 (1998), 311–28. Granato *et al.* notes that they are the most widely used sensitivity tests (pp. 620, 622, fn. 12).

not, which tests should we rely on? Granato *et al.* suggest that the popular method of dropping cases is the method they ‘like the *least*’, because there is no theoretical reason to drop cases and the information therein. Yet the same applies to the use of the non-parametric weighting techniques. Why should we assign weights between zero and one based on residuals from a model that was presumably correctly specified in the first place?

While it is essential to use various sensitivity tests in small-*n* analysis, like deciding where to draw the line between parsimony and omitted variable bias, there is often a trade-off in small-*n* analysis between a correctly specified theoretical model with coefficients that are less robust in the face of ‘high tech’ tests and one that is parsimonious yet more robust in such tests. Indeed, this is precisely a reason why altering the set of control variables in a model *is* a test of estimator robustness. These questions should not be taken to suggest that sensitivity tests are useless. In terms of the current Note and its predecessor, the results for the corporatism estimates, which are the primary focus of both papers, do not appear to be based on highly influential cases, and are robust across all of these various tests. In short, how the batteries of sensitivity tests should be used to evaluate the robustness of results and how these results are interpreted depends on the particular questions being asked.

Collinearity among Regressors and Hypothesis Testing in Small-n Analysis

A third methodological issue from my papers concerns correlation between independent variables or *multicollinearity* in statistical analysis. Many statistical analyses using small datasets to test competing theories are bound to face this problem. When two variables are correlated it is hard to confidently estimate the effect of each variable independently (since they technically are not). The impact of multi-collinearity is to inflate standard errors (i.e., increase the confidence interval around an estimated effect), *but it does not bias the estimates themselves*.²¹ The practical implication is that high correlation between the measures of a variable of interest (such as corporatism) and other explanatory variables in the model (such as the Misery Index) will, if anything, make us *less likely to reject the null hypothesis* (no effect) on the main variable. For example, the fact that the corporatism estimates in the paper remain statistically significant here (and in the first paper) suggests that, *despite the inclusion of collinear regressors*, the corporatism estimates are still statistically different from zero at typical confidence intervals (such as 95 per cent).²²

²¹ Hanushek and Jackson, *Statistical Methods*, pp. 86–90.

²² There are a number of methods for diagnosing collinearity problems. All are poor at differentiating severe and slight collinearity problems. For instance, in the data used in this Note, service sector size and income are correlated at 0.80. Most researchers – including two methodologists I consulted on the issue – consider that a clear collinearity problem. However, standard diagnostic statistics (variance inflation factors) are contradictory. The main point from the Note and discussion, however, is that the argument is moot, since the corporatism estimate of interest is significant with any permutation of the regressors.