Public Managers in the Policy Process: More Evidence on the Missing Variable?

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Questions have been posed about the lack of knowledge of the role public managers play in the policy process. In this study, following on the suggestions of Hicklin and Godwin and Meier in this journal, we identify different dimensions of the analyst–manager divide among professional policy workers. Using the results of several recent large-N surveys of Canadian federal, provincial, and territorial policy workers, we explore the roles each group plays in the policy analytical process and the variations in their behavior in terms of duties and tasks, attitudes, and interrelationships. We also examine these to see the impact of federalism on professional policy practices. The study uncovers three groups of policy workers and policy managers—coordinator-planners, research-analysts, and director-managers. Differences between groups of policy workers are found for their policy-related work and their perceptions of tools of policy effectiveness, and differences between levels of government are identified for issues of time demands and coordination and tools of policy effectiveness. The implications of these findings for the study of public managers in the policy process are considered in conclusion.

KEY WORDS: policy process, policy analysts, public managers, policy managers

Introduction

Questions have been long posed in the management, public administration, political science, and sociology literatures about groups of actors, or echelons, differently placed in organizational hierarchies such as managers and workers (Aiken & Hage, 1968; Hambrick, 1981; Lipsky, 1980; Meier & O'Toole, 2006; Walker & Brewer, 2008; Walker, O'Toole, & Meier, 2007). This research has shown that different sets of organizational actors have different attitudes and exhibit different behaviors that have a significant impact upon organizational outcomes. In this article, we contribute empirical evidence to aid the understanding of the activities and importance of policy managers in the realm of professional policy analysts and advisors in government (Halligan, 1995; Seymour-Ure, 1987; Weaver & Stares, 2002). In the context of a study of the roles that policy managers play vis-à-vis those played by nonmanagerial policy analysts in the Canadian policy bureaucracy (Meltsner, 1975, 1976), we argue that inquiry about the roles and behavior of managers taken from other areas of social science inquiry can be usefully employed to

develop more appropriate understandings of the differences managers make in the world of professional policy work (Colebatch, 2006a, 2006b; Colebatch, Hoppe, & Noordegraaf, 2011).

This article begins from this observation and the associated hypothesis that management and managerial behavior are crucial but underexplored and underexamined variables in the policy literature. We tackle this omission by focusing on the behavior and attitudes of a key set of public managers in the governmental policy bureaucracy (Page, 2010; Page & Jenkins, 2005), namely, those policy managers who work within the internal policy advisory system of government. This specialized group of policy actors is active in the policy formulation and evaluation stages of the policy process, unlike many of the public managers cited by Hicklin and Godwin (2009), who are primarily involved in policy implementation (Howlett, Ramesh, & Perl, 2009). Given the impact this specific group of managers has on formulating and assessing policy alternatives, their role is at least as, if not more, significant in terms of its impact on policy content and outputs. As such, a study of this subset of public managers provides a "strong" case against which to test hypotheses related to the impact of public managers on public policymaking in general (Wu, Ramesh, Howlett, & Fritzen, 2010).

The study uses a data set of Canadian civil servants involved in the policy process and undertakes both exploratory analysis of the behavior of professional policy actors in government and builds upon a number of previously published studies that have made use of these surveys to investigate other aspects of policy analytical behavior in government (Howlett & Joshi-Koop, 2011; Wellstead & Stedman, 2010; Wellstead, Stedman, & Lindquist, 2009). We study echelons of policy actors to identify discrete actor groupings, and then examine these groupings by studying their behavior in different aspects of policy-related work, how they spend time dealing with key demands and questions of coordination, and what their attitudes are toward the management reform initiatives aimed at augmenting the effectiveness of policy. Given the nature of the data, we are also able to assess the impact significant macroinstitutional variables—like federalism—have on these dimensions of professional policy work in government.

Hypotheses

Policy managers are members of policy bureaucracies who administer policy appraisal processes, both at the formulation and evaluation stages of the policy process (deLeon, 1992, 1999; Feldman, 1989; Howlett et al., 2009; Jann & Wegrich, 2007). They are not the only policy advisors to government, of course, but are part of a group of "privileged insiders" serving within policy advisory systems to government (Halligan, 1995; Howlett & Lindquist, 2007; Verrelli, 2009). Figure 1 lays out these relationships.

Knowledge of the nature and activities of many members of policy advisory systems such as the media, public opinion, senior political and administrative government advisors, scientists and experts, and think tanks is fairly well known (Abelson, 2002; Campbell & Szablowski, 1979; Eichbaum & Shaw, 2007; Hoppe, 2009;

	Proximate Actors	Peripheral Actors
Public/Governmental Sector	Core Actors *Central agencies* *Executive staff* *Professional governmental* *policy analysts*	Public Sector Insiders *Commissions and committees* *Task forces* *Research councils/scientists*
Nongovernmental Sector	Private Sector Insiders *Consultants* *Political party staff* *Pollsters*	Outsiders *Public interest groups* *Business associations* *Trade unions* *Academics* *Think tanks* *Media*

Figure 1. The Four Communities of Policy Advisors.

Maley, 2000; Petry, 1999; Soroka & Wlezien, 2009). However, other members of the policy system shown in Figure 1 such as business associations, trade unions, nongovernmental organizations, academics, ministerial staff, consultants and, surprisingly, professional analysts in government, are much less well studied and understood (Colebatch & Radin, 2006; Connaughton, 2010; Jackson & Baldwin, 2007; Perl & White, 2002; Phillips, 2007; Stritch, 2007).

Studies of the professional policy bureaucracy are in fact somewhat unique in being the subject of a great deal of research effort at the same time that the empirical basis for what knowledge does exist is very weak (Durning & Osama, 1994; Shulock, 1999; Wellstead & Stedman, 2010). Further, many studies are dated as much of the empirical work on this key group of actors is over 35 years old and/or is based on a very small number of interviews or unscientific survey research into the actual activities and structure of actors in this group (Feldman, 1989; Meltsner, 1976; Page & Jenkins, 2005). However, this work has shown that policy workers in different strata within public organizations have particular roles to fulfill and have different levels of authority and functional responsibilities (Feldman, 1989; Meltsner, 1975, 1976).

More recently, drawing on a large-N survey of Canadian policy workers, Howlett (2011) argued that policy managers, while sharing many of the same characteristics and activities as other professional analysts, have some unique and significant differences with their analytical counterparts that qualifies them for more detailed study. These included variations in socioeconomic and demographic characteristics with policy managers being more likely to be male, slightly older, and more experienced than analysts but slightly less well educated. And, as might be expected, policy managers were found to be more involved in administrative, planning, and budgeting work, and enjoyed closer relationships with senior administrators and decision makers. Finally, managers on average worked on longer-term issues and were less likely to be involved in short-term firefighting than their analytical colleagues and subordinates. Some of these findings are not surprising while others—like the differential educational characteristics and gender of managers and

analysts—may be changing as hiring patterns and practices alter between genera-
tions of employees in government.

Regardless of their source and future, however, these variations in demographics,
hierarchical position, or functional specialization may result in different interpreta-
tions of purposes, functions, and roles on the part of policy workers and affect their
role(s) in the policy process. Variations such as these bind together groups of actors
with common interests, job functions, and roles in a form of hierarchical structure
characterized by the presence of distinct levels, or "social positions" (Aiken & Hage,
1968), "tiers of bureaucracy" (Brewer, 2005), and "echelons" (Aiken & Hage, 1968;
Walker & Enticott, 2004). In this study, we identify and investigate the composition,
roles, tasks, and attitudes found among echelons of policy workers in government.

We move the discussion of policy work forward by focusing on three areas of
policy activity: behavior in policymaking, time spent dealing with key demands and
processes of coordination, and the impact of key management reforms on the effec-
tiveness of policy. We use the same data set featured in Howlett (2011) and Wellstead
and Stedman (2010) to test several propositions derived from the existing literature
concerning the behavior of actors in managerial and analytical echelons within the
ranks of professional policy analysts in government. Since this data set covers two
levels or orders of government in a federal system, it also allows us to inquire into
the extent to which any significant variations in policy workers' behavior varies
across macroinstitutional settings.

The study proceeds by developing several hypotheses gleaned from the public
management and organization studies literature. First, research evidence from
public organizations has shown that actors in different echelons undertake different
tasks (Frazier & Swiss, 2008; Moore, 1995; Walker & Brewer, 2008; Walker et al.,
2007), and our study describes the roles and behavior of managers and nonmanagers
with the expectation that they too will perform different actions. Following Howlett
(2011), it is anticipated that behavior in the policymaking process will vary across the
manager–analyst divide with analysts emphasizing policymaking (policy identifica-
tion, option appraisal, data collection and research, etc.) and managers focusing
upon the delivery of programs and interaction, negotiation, and consultation with
key stakeholders. This leads to our first hypotheses:

> Hypothesis 1a: Managers and analysts in professional policy organizations will
> exhibit distinct differences in tasks and activities.

> Hypothesis 1b: Analysts will emphasize policymaking (policy identification, option
> appraisal, data collection and research, etc.) and managers the delivery of programs
> and interaction, negotiation, and consultation with key stakeholders.

Second, existing work on public sector managers in the management and admin-
istrative sciences literature generally shows that different behaviors are associated
with different positions in the organizational hierarchy. For example, senior manag-
ers or directors manage upward to politicians and outward into the wider organi-
zational environment while those more focused on the professional areas of public
management predominately focus on managing downward toward the tasks and

demands of their jobs but less with the groups that they serve (Brewer, 2005; Lipsky, 1980; Moore, 1995). For example, in relation to network behavior among local government employees, Walker et al. (2007) show that senior managers and service directors have an outward orientation toward higher levels of government and societal demands from business leaders while frontline supervisory officers isolate trade unions. In the policy process, analysts and managers have to respond to a range of demands that emanate from society and government and coordinate government action (Howlett et al., 2009). It might similarly be expected that these vary by echelon within the policy bureaucracy, with policy analysts reacting to pressures and demands in the policy process that come largely from outside while managers manage "upward" and "downward" within the administration, seeking to coordinate government action to formulate and deliver policy. This leads to our second hypothesis, namely:

> Hypothesis 2: Analysts focus their activities on external demands while managers focus on coordinating government action.

Third, our study anticipates that managers and analysts will show variations in behaviors and attitudes toward their work and the perceived effectiveness of policy. Here we expect to find policy managers to be more optimistic than their nonmanagerial counterparts in terms of the prospects for such activities as the future provision of policy analytical and organizational resources, and the future trajectory of their organizations. Evidence for this argument is drawn from studies of red tape and results-based management reforms. This shows that top managers typically have more optimistic views of current and future performance than line-workers and lower-level managers: they see less red tape and better effects from results-based management than do their counterparts lower down the hierarchy (Frazier & Swiss, 2008; Walker & Brewer, 2008). In relation to attitudes toward management reform strategies on the effectiveness of policy, analysts that are involved in policymaking may welcome customer focus strategies as this could bring them information that will permit the development of policies appropriate to recipients' needs. Similarly, networking has become a central variable in the management reform rubric adopted by public agencies over recent years (Agranoff, 2007; Walker et al., 2007). Those taking more managerial roles and associated with the implementation of policies and programs may be more likely than analysts to view management practices associated with networking as likely to be effective. This generates our third key hypothesis:

> Hypothesis 3: Managers are more optimistic than their nonmanagerial counterparts for the prospects of the effectiveness of management reforms.

Finally, given the institutional nature of these tasks and the difference associated with different policy organizations, we also expect to see some variation across the manager–analyst divide in terms of macroinstitutional factors such as multilevel governance. Research evidence drawing upon the large-N surveys of policy analysts and managers has shown thus far that there are differences between policy practices found in the different levels of government in federal systems (Howlett & Wellstead, 2012), and some of these differences may be attributed to the distribution of power,

responsibility, and autonomy between levels of government. In particular, managers in larger central governments enjoy more autonomy than those in smaller subnational or regional ones (Howlett & Wellstead, 2012; McArthur, 2007). This leads to our fourth and final hypothesis:

> *Hypothesis 4: Variations in the views and attitudes between analysts and managers will vary between levels of government.*

In the next sections, we evaluate these hypotheses in the context of professional policy workers in the policy process of a modern federal state—Canada—and outline the empirical relationships found to exist between policy managers and policy analysts. The data from which the study is derived are explained next, while measures are elaborated as we move through the examination of the hypotheses. The statistical evidence presented in the findings section points toward quite significant variations in the behavior of these sets of actors across our three areas of inquiry and generally confirm our expectations. This analysis of management and managerial behavior and attitudes helps us to better understand the influence of each of these sets of actors on policy processes and outcomes. This is important given the changing governance context of policy in recent years, which has pushed public management variables to the forefront in the development of open government, placed emphasis on network consultation and similar network management activities, and has seen a shift away from many of the traditional analytical activities undertaken by policy analysts (Klijn, Steijn, & Edelenbos, 2010; Mayer, van Daalen, & Bots, 2004). However, results of variation between levels of government are not as strong as those between groups of actors. As a result, in conclusion, we argue that policy managers are indeed a part of a "missing link" in policy studies and call for further research that examines in more detail the multifaceted roles they play in the policy process.

Data

This study examines the behavior and attitudes of core civil servant policy actors in the Canadian "policy bureaucracy" (Page & Jenkins, 2005), a "typically" structured, Weberian, multilevel system of professional policy advice (Halligan, 1995; Waller, 1992).

Data are drawn from two survey sources: one covering federal employees and the other provincial (10) and territorial (3) governments. The data are summarized in Table 1. Federal data came from two surveys: first, a census of 1,937 people identified by members of the Regional Federal Council from all provinces and territories that undertake policy-related work; second, from a random sample of 725 National Capital Region-based (Ottawa-Hull) policy employees identified from the Government Electronic Directory of Services (Wellstead & Stedman, 2010; Wellstead et al., 2009). The federal response rates were 56.8 percent (n = 1,125) and 56.4 percent (n = 395), respectively, giving a total sample of 1,520 policy workers.

Provincial and territorial data were collected from each subnational jurisdiction in 13 separate surveys conducted in late 2008. Respondents were identified from job

Table 1. Sample

Sample Frame		Sample	Respondents (*n*)	Response Rate (%)
Federal	Census members of Regional Federal Council	1,937	1,125	56.8
Federal	Random sample of National Capital Region-based policy employees	725	395	56.4
Provincial	Census of publicly listed provincial and territorial policy employees	3,856	1,357	35.2
Total		6,518	2,877	44.1
Usable responses			2,730	41.9

titles listed in publically available sources (online government telephone directories, organizational charts and manuals, and members of commissions, etc.) (Howlett, 2009; Howlett & Newman, 2010). This yielded a population of 3,856 policy-based actors and 1,357 responses were received for a response rate of 35.2 percent.

The total population surveyed across the federal, provincial, and territorial governments was 6,518 with an overall combined national response rate of 2,877 or 44.15 percent. The sample used in this study is restricted to full-time employees only. Term, casual, or part-time employees along with interns, co-op students, visiting scientists, and contractor/consultants were excluded from the analysis on the grounds that they were less likely to be knowledgeable about the topics included in this study. Removal of these cases, together with nonrespondents to the specific questions used in the analysis, resulted in a final sample of 2,730 core civil servant policy workers and an overall 41.9 percent response rate (1,391 usable responses federal and 1,339 provincial government). The principal statistical techniques applied are difference of means tests and exploratory factor analysis which used varimax rotated principal component analysis to draw out unobserved variables. For difference of means tests, we performed nonparametric Kruskal–Wallis one-way tests of variance, suited to ordinal data, and one-way analysis of variance (ANOVA) tests. These two tests reported very similar results (the exception being "demand input from societally based organizations" and "demand public consultation," which were not significantly different in the ANOVA results reported here). Given that ANOVA permits *post hoc* tests, we opted for this so that differences between groups could be discussed.

Findings

The survey results were used to evaluate the four hypotheses set out above. In what follows below, the measures used to assess each hypothesis are set out, and the results of the analysis are presented. The Appendix lists the survey questions for each area of inquiry together with descriptive data.

Evaluating Hypothesis 1: Policy analysts versus managers: Three different sets of tasks and weights

Table 2. Descriptive Data and Factor-Analytic Results for Self Described "Role in Organization"

	Mean	SD	Coordinator-Planner	Researcher-Analyst	Director-Manager
Advisor	0.54	0.50	0.47	0.35	−0.21
Analyst	0.52	0.50	0.30	**0.61**	−0.38
Communications officer	0.09	0.28	**0.57**	0.14	0.06
Coordinator	0.29	0.45	**0.70**	0.22	−0.07
Director	0.14	0.35	−0.13	0.04	**0.62**
Evaluator	0.16	0.37	**0.50**	0.41	0.10
Liaison officer	0.14	0.34	**0.71**	−0.02	0.03
Manager	0.22	0.41	0.30	−0.08	**0.60**
Planner	0.23	0.42	**0.63**	0.29	0.13
Researcher	0.24	0.43	0.25	**0.75**	−0.12
Public participation expert	0.04	0.20	0.19	0.41	0.31
Program analyst	0.13	0.34	0.15	**0.72**	0.08
Program manager	0.05	0.23	0.00	**0.55**	0.41
Eigenvalues			3.73	1.24	1.14
Cumulative %			28.69	38.36	46.99
N = 2,730					
N per group					
Federal			501	156	734
Provincial			404	695	240
Total			905	851	974

In order to assess Hypothesis 1a concerning differences in roles and activities of managers and analysts across all governments, respondents were asked about their policy role within their organization and could check as many of the 13 possible response categories listed in Table 2 as possible. The means in Table 2 show that around half the respondents classified themselves as "advisor" and "analyst" and around a quarter as "coordinator," "manager," "planner," or "researcher." Smallest proportions of roles undertaken were "communications officer," "program manager," and "public participation expert," with less than 1 in 10 of the respondents ticking these boxes on the survey.

Interestingly, factor analysis produced three, not two, factors that capture key combinations of the 13 self-described roles identified by core policy workers (Table 2). The results explain nearly 50 percent of the variation in the data, and the factors are crisp (loadings over 0.50 are used to indicate strong factors; Costello & Osborne, 2005).

The first factor draws together a range of activities that include communications officer, coordinator, evaluator, liaison officer, and planner. These activities involve a range of tasks both supporting the more traditional policy research/analysis role but also reflecting new directions in more consultative or stakeholder-based policy process management or "postpositivist" policy analysis (Howlett & Lindquist, 2007; Mayer et al., 2004). This echelon is labeled "coordinator-planner" and provides an interesting level of complexity to the managerial-analytical divide in echelons of professional policy workers.

The second echelon is the expected and more traditional "researcher-analyst." Variables in this factor correlate with expected traditional policy analyst's roles: that is, analyst, researcher, program analyst, and program manager. The final factor is

Table 3. Means and ANOVA for Involvement in Policy-Related Work by Job Type

| | All | | | | |
| | Coordinator-Planner | Researcher-Analyst | Director-Manager | F-Score | Differences |
	1	2	3		
Identify policy issues	3.28 (1.05)	3.11 (0.94)	3.29 (1.07)	8.142***	2-1, 3
Identify policy options	2.96 (1.07)	2.88 (0.94)	3.02 (1.07)	4.110*	2-3
Appraise policy option	2.85 (1.07)	2.81 (0.95)	2.92 (1.09)	2.466	
Collect policy-related data	3.12 (1.04)	3.20 (0.91)	2.98 (1.11)	10.191***	1-3, 2-3
Conduct policy-related research	2.81 (1.13)	3.09 (0.95)	2.56 (1.24)	48.336***	1-2, 3, 2-3
Implement or deliver policies	2.86 (1.36)	2.31 (1.10)	3.30 (1.42)	119.031***	1-2, 3, 2-3
Negotiate with stakeholders	2.56 (1.13)	2.19 (0.89)	2.78 (1.17)	64.476***	1-2, 3, 2-3
Negotiate with central agencies	2.15 (1.04)	2.03 (0.88)	2.14 (1.06)	3.211*	
Negotiate with program managers	2.72 (1.17)	2.34 (0.95)	2.93 (1.22)	60.142***	1-2, 3, 2-3
Consult with public	1.94 (1.00)	1.74 (0.79)	2.09 (1.05)	26.162***	1-2, 3, 2-3
Consult with stakeholders	2.55 (1.05)	2.21 (0.79)	2.70 (1.04)	55.191***	1-2, 3, 2-3

How often are you involved in the following types of policy-related work?
1 = never, 2 = yearly, 3 = monthly, 4 = weekly, 5 = daily.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

again expected; one that is clearly associated with management, being populated by director and managers. As such, this echelon is labeled "director-manager." These factor-analytic results offer support for Hypothesis 1a by pointing to distinctly different tasks and activities. However, they go beyond the hypothesized relationships by pointing to three groups of policy actors and thereby indicate more complexity in these roles than hitherto expected.

In order to examine differences in behavior among these three groups of policy actors, we turned the factor-analytic results presented in Table 2 into categorical data by assigning each respondent, based on the highest score across the three factors, to either the coordinator-planner, researcher-analyst, or director-manager group. Using this categorical data, differences of means tests were undertaken to test Hypotheses 1b, 2, and 3, and exploratory factor analysis for Hypothesis 4.

Hypothesis 1b proposed that there would be differences in behavior in policy-related work. To explore this, respondents were asked about the frequency with which they are involved in key issues of policymaking ("identifying policy issues" and "options," "option appraisal," "collecting data," and "undertaking research") and "implement and deliver policies and programs," and "negotiation" with key parties and "consultation" with external actors (measurement scale given in the Appendix). The means for all respondents are shown in Table 3 by echelon, together with the F-score from the ANOVA analysis and where differences between groups lie. Mean scores typically ranged between 2 (yearly) and 3.3 (monthly), indicating some variation in policymaking processes and negotiation and consultation.

The highest means were for "implement or deliver policies" and "identify policy issues" where each actor scored above 3, suggesting that this was at least a monthly

activity. The lowest scores were for "consult with public," and the means indicate that this is likely to be an annual activity at best for coordinator-planners and researcher-analysts, and slightly more than annually for director-managers. The highest reported mean scores for the policymaking variables were recorded by either researcher-analyst or director-manager, with research-analyst undertaking "data collection" and "conducting research" and director-managers "appraising options" and "identifying issues and policies." In relation to the "implement policy" and "negotiate" and "consult" variables, researcher-analysts reported being involved in this type of work less frequently than either coordinator-planners or director-managers. Director-managers were most actively involved in this type of work, with the exception of "negotiation with central agencies." However, the frequency of involvement in these types of policy-related work was low, typically between yearly and monthly with one exception: director-managers were involved in "implement or delivering policies" at least monthly. These findings suggest that research-analysts were most involved in collecting data and undertaking research while director-managers involved themselves the most (or nearly the most) for all other activities. Coordinator-planners were located between these two groups of policy actors, suggesting this role is a bridge between the process of policymaking and the implementation of policy and process of management centered around negotiation and consultation.

Prima facie, the data in Table 3 show that differences between the mean scores for the 11 variables were statistically significant in 10 cases, with clear differences between groups for 9 of these cases. The *post hoc* results support the observations made about the means: on six occasions, all differences between the three groups are statistically significant, while in the remaining three cases, there are differences between the highest and lowest scores. These findings support Hypothesis 1b by indicating that coordinator-planners, researcher-analysts, and director-managers have differing levels of involvement in the policymaking and implementation process. These findings can be summarized thus: Director-managers are more active in scoping policy options, implementing policy, and negotiating and consulting with internal and external actors. As would be expected, researcher-analysts' time is spent on core policy analysis functions of collecting data and undertaking research. The coordinator-planners play an active role in all parts of the policymaking and implementation process: They are typically more active than director-managers in the policymaking process and have more regular involvement in the policy implementation aspects of the policy process than researcher-analysts. This not only reinforces the notion that they form a bridge between researcher-analysts and director-managers to assist in effective policymaking and implementation but also reveals a different pattern of activity than hypothesized.

Evaluating Hypothesis 2: Policy actors' interaction with external demands and coordination

In order to better assess the directionality of each group's work orientations, we examined respondents' answers when they were asked about how much time they spent responding to outward or external demands ("societally based organizations,"

Table 4. Means and ANOVA for Time Spent Dealing with Demands and Coordination

	Coordinator-Planner	Researcher-Analyst	Director-Manager	*F*-Score	Differences
	1	2	3		
Demand input from societally based organizations	2.44 (1.20)	2.54 (1.14)	2.46 (1.19)	1.835	
Demand public consultation	2.36 (1.10)	2.41 (1.03)	2.29 (1.04)	2.525	
Emerge as a result of public pressure on government	3.07 (1.10)	3.24 (1.08)	2.96 (1.14)	12.582***	1-2, 2-3
Emerge as a result of governmental priorities in headquarters	3.57 (1.04)	3.58 (1.05)	3.52 (1.01)	.945	
Require coordination across regions	3.15 (1.10)	2.98 (1.13)	3.10 (1.09)	5.068**	1-2
Require coordination with head office	3.54 (1.10)	3.44 (1.12)	3.58 (1.05)	3.123*	2-3
Require coordination with other levels of government	3.01 (1.13)	2.81 (1.08)	3.01 (1.07)	9.443***	2-1, 3

How much time do you spend dealing with: 1 = never, 2 = yearly, 3 = monthly, 4 = weekly, 5 = daily.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

"public consultation," "public pressure on government"), and emergent pressures from inside and outside government (e.g., "governmental priorities in headquarters," "coordination with head office," "require coordination across regions"). For each of these two batteries of questions, respondents were quizzed about the frequency with which they where involved in these issues (see the Appendix for full listing of items and measurement scale).

The findings indicate that the three groups of policy actors dedicate differing amounts of time to key parts of the policy process, namely, responding to demands and coordinating. Table 4 presents the mean scores for each echelon together with *F*-scores. The lowest mean scores for all three echelons were for "demand public consultation," suggesting that these were barely annual pressures. The highest scores were 3.58 (falling between monthly and weekly) for director-managers in relation to "coordination with head office" and 3.57 and 3.58 for "government priorities in headquarters," suggesting that these pressures were responded to at least monthly. The second thing to note, particularly in comparison to Table 3, however, is that there are relatively few statistically significant differences. Where there are differences, they nevertheless do reinforce the above-noted divisions of labor between the three groups. The results show that researcher-analysts responded to issues emerging as a result of public pressure on government more than coordinator-planners and director-managers, and that coordinator-planners were more often engaged in requirements to coordinate across regions than researcher-analysts. The ANOVA results also suggest that director-managers were more often involved in coordination with head office than researcher-analysts and that researcher-analysts were least involved in coordination with other levels of government. These findings are somewhat supportive of the distinctions drawn in the management literature but are not very robust. Overall, these weak results lead to a rejection of Hypothesis 2 as the strength of the similarities across categories overrides that of the differences cited above.

Table 5. Means and ANOVA for Variables Likely to Improve the Perceived Effectiveness of Policy

	Coordinator-Planner	Researcher-Analyst	Director-Manager	*F*-Score	Difference
	1	2	3		
Involving the general public	3.67 (1.05)	3.82 (1.01)	3.57 (0.98)	12.419***	2-1, 3
Involving interest groups	3.70 (0.99)	3.84 (1.02)	3.53 (0.97)	19.416***	2-1, 3 1-3
Networking: federal government	4.10 (0.81)	4.04 (0.86)	3.99 (0.80)	3.854*	1-3
Networking: NGO	3.88 (0.86)	3.96 (0.85)	3.73 (0.85)	14.773***	3-1, 2
Networking: provincial government	4.16 (0.83)	4.31 (0.72)	3.98 (0.83)	32.085***	2-1, 3 1-3
Networking: municipal government	3.60 (1.06)	3.68 (1.02)	3.34 (1.05)	21.576***	1-3 2-3
More control: central agencies	2.55 (1.04)	2.67 (1.04)	2.41 (1.01)	11.434***	1-3 2-3
More control: head office	2.74 (1.01)	2.79 (1.02)	2.61 (1.01)	7.038***	1-3 2-3
More control: regions	3.12 (1.00)	2.92 (1.03)	3.20 (1.03)	15.522***	1-3 3-2
Devolution	2.94 (1.06)	3.03 (1.05)	2.85 (1.10)	5.861**	2-3
Smaller government	2.73 (1.06)	2.73 (1.05)	2.66 (1.01)	1.151	

What are the impacts of the following actions on the effectiveness of policy?
Makes policy much less effective = 1, and Makes policy much more effective = 5
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Evaluating Hypothesis 3: Policy actors' perception of management reform variables on the effectiveness of policy

Questions on the impact of management reform variables on policy effectiveness allowed us to assess differences in attitudes and future expectations between the echelons. Respondents were asked to rate the likely effectiveness of strategies that included involving external actors ("general public" and "interest groups"), networking ("federal government," "nongovernmental organizations" or NGOs, "provincial government," and "municipal government"), centralization ("more control from central agencies," "more control from head office") and decentralization ("more control from the regions," "devolution of federal government programs"), and the size of government ("small government overall"). These questions reflect key reforms and are in keeping with international trends over the past decade (Pollitt & Bouckaert, 2004). Critically, these strategies for effectiveness are all attainable relatively easily by government because they do not require structural changes, but rather can be implemented by shifting the balance of power and communication between stakeholder groups. Other studies have shown the importance of these management strategies as mechanisms to increase the effectiveness of government programs (for a review, see Walker, Boyne, & Brewer, 2010).

Table 5 presents the means and ANOVA results for respondents' attitudes toward perceptions of the effectiveness of management reform across the three echelons. All respondents have a positive view of the likely impact of the "involving" and "networking" questions on the effectiveness of the policy process as all the mean scores are above 3, the midpoint on the 5-point Likert scale where 1 = makes policy much less effective and 5 = makes policy much more effective. Respondents were less optimistic about management reform actions that involved centralization/decentralization and smaller government with only 3 of the 15 means above 3. Interestingly, the researcher-analyst echelon offers the highest assessment in all cases

except for "networking: federal government" and "more control: regions" which are rated as more likely effective tools by coordinator-planners and director-managers, respectively. Also, interestingly, researcher-analysts felt that decentralization to the regions would not produce more effective policy impacts but that devolution in general would. By contrast, and again counter to our hypothesis, director-managers (who as we saw above spend more time with policy implementation) offer the most pessimistic assessments except for "more control: regions," which was lowly rated 2.92 by researcher-analysts. The coordinator-planners echelon typically sits between researcher-analysts and director-managers, with the exception of "networking: federal government."

These patterns are reflected in the difference of means tests, which are statistically significant except for smaller government. For all statistically significant differences, bar "more control: regions," director-managers have the most pessimistic view in contradiction to Hypothesis 3. Rather, the results of the ANOVA and *post hoc* tests suggest that the impact of these variables on policy effectiveness is judged most positively by researcher-analysts who are least involved in implementing policy and service delivery (a central facet of effectiveness) and most pessimistically by those director-managers most involved in service delivery.

Evaluating Hypothesis 4: The impact of institutional structures

The structure of the survey itself, examining separate sets of federal and provincial/territorial employees, allowed us to assess the impact of important contextual institutional variables—namely federalism in this case—on the findings with respect to Hypothesis 4 set out above. To this end, factor analysis of the three sets of variables discussed in Tables 3–5 was undertaken.

First, it should be noted that the three echelons identified in Table 2 are not evenly distributed across federal and provincial and territorial governments. There are 1,391 federal respondents in the factor analysis and they are distributed 36 percent coordinator-planner, 11 percent research-analyst, and 53 percent director-manager. At the provincial and territorial level, a total of 1,339 policy actors completed these questions, and the distribution of these echelons is weighted toward the researcher-analyst role: 30 percent coordinator-planner, 52 percent research-analyst, and 18 percent director-manager.

To determine if there were distinct underlying involvements in policy-related work behavior patterns among the three echelons of policy actors across the federal and provincial levels of government, the items were factor analyzed. Each rotated principal component analysis produced a strong first factor and typically explained over 60 percent of the variance in the data (results available on request from the authors). The three federal government level echelons produced similar factor-analytic results with the policy process variables loading onto one factor and the implementation and negotiation and consult variables the second, highlighting the separation between policymaking and implementation. The patterns at the provincial and territorial level were the same for coordinator-planners and researcher-analysts. The results were, however, more nuanced for the director-managers with a third-factor solution emerging as a distinct type of activity: "negotiate with

central agencies" and "negotiate with program managers." Director-managers in provincial governments thus see distinctions between activities involving stake-holders and those dealing with central agencies, which federal officials do not, undoubtedly due to the smaller size of provincial and territorial governments and the ability of central agencies and actors to more significantly impact policy ana-lytical activities. However, on balance, these findings suggest that differences in policymaking are not as distinct as others have argued (Howlett & Wellstead, 2012; McArthur, 2007) when echelons of policy actors are factored into these relationships.

Turning to time spent on demands and coordination, analysis at the federal and provincial levels suggests a different set of relationships than that for policy-related work (Table 6). At the federal level, the coordinator-planners and director-managers produce two factor-analytic result, researcher-analysts a single factor. At the provin-cial level, a two-factor solution is derived for the researcher-analysts and the director-managers with a single factor for coordinator-planners. This suggests that there are different unobserved variables in relation to demands and coordination across levels of government. Looking within the factors, there are similarities between the director-managers—the federal respondents see the inside variables load onto one factor, the exception being public "pressures from government" for the provincial director-managers.

The three outside variables load onto one factor for the federal director-managers, and the provincial actors draw together demands from societally based organizations and public consolation. The single factor solutions vary by level of government: researcher-analysts at the federal level and coordinator-planners in provincial government. The two factor-analytic solutions for the federal coordinator-planners and the provincial researcher-analysts bear some similarity. At the provin-cial level, the first factor identifies the three "outside" variables together with "priorities in headquarters," and the federal level actors add "coordination with other levels of government." The second factor includes the three "coordination" variables for provincial researcher-analysts. These findings would suggest that there are somewhat different sets of behaviors in relation to demands and coordination at the federal and provincial levels. These are in relation to coordinator-planners and researcher-analysts, however, rather than director-managers as earlier studies have suggested.

With respect to federal and provincial/territorial differences in attitudes toward the perceived effectiveness of policy, there are subtle differences, which not only add further support to the notion that the level of government matters, but also point to important nuances that arise between echelons (Tables 7 and 8). The factor-analytic solution for director-managers is similar at the two levels. This reinforces the above observation in relation to demands and coordination that director-managers' behav-ior is similar. Further, and while there was a difference between the factor-analytic results for director-managers at the two levels of government in relation to key policy-related work, these differences were small. It is, therefore, possible to con-clude that differences between federal and provincial are limited in the director-manager echelon.

Table 6. Factor-Analytic Results for Time Spent Dealing with Demands and Coordination

	Federal					Provincial				
	Coordinator-Planner		Research-Analyst	Director-Manager		Coordinator-Planner	Research-Analyst		Director-Manager	
	1	2	1	1	2	1	1	2	1	2
Demand input from societally based organizations	0.78	0.08	0.70	0.07	0.82	0.67	0.68	0.19	0.21	0.86
Demand public consultation	0.79	0.09	0.71	0.10	0.82	0.71	0.68	0.20	0.17	0.88
Emerge as a result of public pressure on government	0.66	0.34	0.71	0.41	0.68	0.67	0.80	0.14	0.67	0.34
Emerge as a result of governmental priorities in headquarters	0.53	0.44	0.71	0.60	0.42	0.68	0.72	0.21	0.78	0.06
Require coordination across regions	0.12	0.85	0.74	0.85	0.03	0.72	0.14	0.83	0.73	0.29
Require coordination with head office	0.21	0.87	0.73	0.85	0.12	0.71	0.30	0.67	0.79	0.08
Require coordination with other levels of government	0.57	0.46	0.73	0.55	0.47	0.63	0.17	0.74	0.61	0.35
Eigenvalue	2.33	2.01	3.63	2.28	2.22	3.26	2.23	1.83	2.66	1.84
Cumulative %	33.36	62.09	51.82	32.55	64.24	46.57	31.92	58.11	37.98	64.45

Table 7. Factor-Analytic Results for Variables Likely to Improve the Perceived Effectiveness of Policy: Federal Government

	Coordinator-Planner			Researcher-Analyst				Director-Manager			
	1	2	3	1	2	3	4	1	2	3	4
Involving the general public	**0.69**	0.09	0.12	0.23	**0.86**	0.09	-0.05	0.25	**0.73**	0.18	-0.09
Involving interest groups	**0.67**	0.03	-0.03	0.15	**0.89**	-0.02	0.13	0.19	**0.81**	0.05	0.06
Networking; federal government	**0.68**	0.01	-0.10	**0.77**	0.07	-0.03	-0.07	**0.70**	0.25	-0.16	0.02
Networking; NGO	**0.83**	-0.01	0.10	**0.68**	0.45	-0.15	-0.17	**0.61**	**0.56**	-0.02	-0.06
Networking; provincial government	**0.81**	-0.05	0.09	**0.80**	0.20	0.12	-0.11	**0.79**	0.29	-0.05	-0.00
Networking; municipal government	**0.77**	-0.03	0.06	**0.78**	0.08	0.03	0.15	**0.73**	0.25	0.06	-0.07
More control: central agencies	0.11	**0.87**	0.15	0.09	-0.04	0.11	**0.81**	0.09	-0.09	-0.15	**0.87**
More control: head office	0.10	**0.88**	-0.15	-0.16	0.02	-0.00	**0.84**	**-0.19**	0.06	-0.06	**0.87**
More control: regions	0.39	-0.12	0.29	0.23	-0.03	**0.71**	-0.06	**-0.62**	-0.29	0.33	-0.12
Devolution	0.05	-0.07	**0.84**	-0.04	0.14	**-0.87**	-0.01	0.03	0.09	**0.86**	0.03
Smaller government	0.01	0.14	**0.83**	-0.18	-0.04	**0.69**	0.27	-0.05	0.09	**0.84**	0.07
Eigenvalue	3.60	1.62	1.47	3.20	1.94	1.35	1.17	3.36	1.71	1.44	1.03
Cumulative %	32.68	47.41	60.74	29.06	46.72	59.03	69.62	30.56	46.15	59.25	68.64

Table 8. Factor-Analytic Results for Variables Likely to Improve the Perceived Effectiveness of Policy: Provincial Government

	Coordinator-Planner				Researcher-Analyst			Director-Manager			
	1	2	3	4	1	2	3	1	2	3	4
Involving the general public	0.18	−0.03	**0.83**	0.07	**0.72**	−0.05	0.11	0.25	**0.77**	−0.22	−0.04
Involving interest groups	0.27	−0.00	**0.79**	0.05	**0.69**	0.02	−0.02	0.03	b	−0.02	−0.08
Networking; Federal government	**0.78**	−0.03	0.14	0.08	**0.66**	0.15	0.12	**0.83**	−0.02	−0.09	0.02
Networking; NGO	**0.64**	0.01	0.44	−0.07	**0.82**	0.06	−0.00	**0.53**	**0.56**	−0.20	−0.09
Networking; Provincial government	**0.74**	−0.00	0.13	0.06	**0.67**	0.12	0.08	**0.66**	0.30	−0.14	0.04
Networking; Municipal government	**0.81**	0.00	0.07	0.01	**0.72**	0.12	0.05	**0.76**	0.12	0.24	−0.03
More control: central agencies	−0.02	**0.86**	0.07	0.00	0.09	**0.84**	0.07	0.03	−0.13	0.07	**0.82**
More control: head office	−0.09	**0.87**	−0.01	0.03	−0.01	**0.88**	−0.00	−0.04	0.03	−0.06	**0.86**
More control: regions	0.19	0.48	−0.34	0.28	0.16	**0.55**	0.20	0.07	−0.22	**0.62**	0.43
Devolution	0.07	0.07	−0.04	**0.81**	0.18	0.14	**0.76**	0.05	0.03	**0.78**	−0.13
Smaller government	−0.01	0.03	0.12	**0.76**	−0.02	0.08	**0.82**	−0.13	0.14	**0.71**	0.03
Eigenvalue	2.94	1.86	1.21	1.09	3.37	1.78	1.13	2.78	1.84	1.54	1.08
Cumulative %	26.71	43.61	54.56	64.44	30.65	46.79	57.09	25.25	41.96	55.91	65.77

The coordinator-planners offer a three-factor solution in federal government and four factors in provincial government. Views are shared on the role of "devolution" and "smaller government" and "control: central agencies" and "control: head office." The provincial-level coordinator-planner separate out "involving" and "networking," whereas the federal government actors draw these two sets of processes together. For research-analyst, similar three- and four-factor solutions are derived. However, the four-factor solution is at the federal level.

These factor-analytic results do not provide crisp evidence on Hypothesis 4. It is suggested that the data do not reject Hypothesis 4, rather they offer some limited support. Policy-related work across the analyst–manager divide is not influenced by the level of government, reflecting the core nature of these tasks to policy work. However, responses to questions of demands and coordination or outward and inward processes and perceived effectiveness of management reforms for policy are clearly different at the federal and provincial levels among coordinator-planners and researcher-analysts. This suggests that the behavior of core policy workers is contingent upon the level of government, whereas the role of directors and managers remains similar.

Conclusions

In 2009, this journal published a symposium entitled the "Policy Shootout" (Eller & Krutz, 2009) in which articles by Hicklin and Godwin (2009) and Meier (2009) addressed the question of the state of knowledge existing in the policy literature on the role(s) played by public managers in the policy process. They argued that middle-range theories from public administration can assist in understanding the relationship between policymaking practices and effective outcomes and made the case for the inclusion of insights from the public management literature in policy studies. In so doing, they raised important questions about the impact of public management practices and the behavior of actors in the policy process and suggested that policy managers may be a "missing link" in policy studies; advocating that more study of these actors be a key item on future research agendas directed toward better understanding, and improving, policy processes and outcomes.

Following this admonition, in this study, we have sought to identify where different roles and perceptions lie in the manager–nonmanager divide among professional policy workers. Using the results of several recent large-N surveys of Canadian federal, provincial, and territorial policy workers, we explored the roles different groupings of policy workers play in the policy analytical process and the variations in their behavior in terms of time spent on demands and coordination. We also examined their attitudes toward public management reforms. One of the main contributions of this study was to identify three distinct groups of policy workers—researcher-analysts, coordinator-planners, and director-managers—rather than the two previously identified in earlier studies. This indicates that the world of the policy analyst and manager is more complex than hitherto argued or demonstrated. While we found important differences between policy workers and policy

managers in many of these tasks as well differences between levels of government, further research and elaboration is required because not all of the expected relationships and behaviors derived from the management and organizational studies literatures were supported by the survey analysis.

First, we not only did find, as expected, that significant differences in roles and activities existed between managers and nonmanagers, but also found that nonmanagers were divided into distinct groupings, with some having more in common with managers than others. This suggests that a less hierarchical relationship exists among policy workers than is found in many traditional, hierarchic, bureaucratic organizations and has important implications for the ability of managerial precepts and findings from such organizations to "carry over" to policy ones.

Second, although we did find differences among groups in the direction of their contacts and activities, we found more and stronger similarities in their orientations and activities. This contradicts our hypothesized relationship. Again, this suggests that policy bureaucracies differ in important respects from more traditional bureaucratic organizations in that managers are at least as concerned with outside organizations and constituencies as with internal ones, while policy workers are divided between those who deliver services primarily within the organization rather than to the public and those who interact with external organizations on a regular basis.

Third, with respect to the attitudes characteristic of either group, we found researcher-analysts to be more optimistic than director-managers; again, contrary to expectations derived from the management literature. This may be due to the professional nature of researcher-analysts, coupled with their own methodological propensities to believe problems can be solved and that enhanced knowledge generates superior outcomes, which differ from the attitudes often found among nonprofessional rank-and-file managers.

Finally, we found some support for the idea that these variations exhibit differences across institutional contexts, in our case, by levels of government. Even the number of policy workers falling into each grouping varied by jurisdiction with the researcher-analyst echelon accounting for just over half of all respondents in provincial government while a similar proportion was represented by director-managers at the federal level. Variations in tasks and attitudes were also to be discerned across level of government.

All of these groups of policy workers should be studied in more detail in more countries in order to tease out their behavior and their attitudinal variations and their causes. However, prima facie, this study has both confirmed the existence of distinct management practices and orientations among policy workers worthy of more detailed study, while suggesting that if insights are to be gleaned for policy scholars from the management literature as Hicklin and Godwin (2009) and Meier (2009) suggested, it must be tempered with the insights of organization theorists that "context matters" with respect to management behavior (Mintzberg, 1980). That is, evidence of important differences in the behavior of professional policy workers from typical nonprofessional rank-and-file civil servants was found, and the significance of organizational structure (federalism) was also highlighted. This suggests, as

outlined above, that future managerial studies in the policy realm include organizational variables that affect policy work—factors such as the size of government and the degree of horizontality or lack of hierarchy found in policy organizations.

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Appendix

Descriptive data for policy-related work, time spent dealing with issues, and the effectiveness of policy for all respondents

	Mean	SD
How often are you involved in the following types of policy-related work?		
Identify policy issues	3.23	1.03
Identify policy options	2.96	1.02
Appraise policy option	2.86	1.04
Collect policy-related data or information	3.10	1.03
Conduct policy-related research	2.81	1.14
Implement or deliver policies or programs	2.84	1.37
Negotiate with stakeholders on policy matters	2.52	1.10
Negotiate with central agencies on policy matters	2.11	1.00
Negotiate with program managers on policy matters	2.67	1.15
Consult with the public on policy matters	1.93	0.96
Consult with stakeholders on policy matters	2.49	0.99
How much time do you spend dealing with issues that ("demands and coordination"):		
Demand input from societally based organizations	2.48	1.18
Demand public consultation	2.35	1.06
Emerge as a result of governmental priorities in headquarters	3.55	1.04
Emerge as a result of public pressure on government	3.08	1.11
Require coordination across regions	3.08	1.11
Require coordination with head office	3.52	1.11
Require coordination with other levels of government	2.95	1.10
Above items scored: never = 1, yearly = 2, monthly = 3, weekly = 4, daily = 5		
What are the impacts of the following actions on the effectiveness of policy?		
Involving the general public in the policy process	3.68	1.02
Involving interest groups in the policy process	3.68	1.00
Networking with federal government departments or agencies	4.04	0.82
Networking with nongovernmental organizations	3.85	0.86
Networking with provincial government departments or agencies	4.14	0.81
Networking with municipal government departments or agencies	3.54	1.06
More control from central agencies	2.54	1.04
More control from head office	2.71	1.01
More control from the regions	3.08	1.02
Devolution of federal government programs	2.94	1.07
Smaller government overall	2.70	1.04
Items scored: Makes policy much less effective = 1, and Makes policy much more effective = 5.		