

REPRESENTATIVE BUREAUCRATS: ATTITUDINAL CONGRUENCE AND AGENCY EXPERTISE

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Abstract

This paper evaluates the representativeness of bureaucrats by comparing their general attitudes and more detailed understandings of policy with those of the public. Specifically, I study responses to the State Environmental Managers Survey – a survey of senior-level officials working in state environmental agencies, and the MIT PORTL Pilot Study – a nationally-representative public opinion poll. The responses from these two surveys suggest that while the public and the bureaucrats share basic environmental attitudes about the appropriate level of regulation on business to protect the environment, they differ in their understandings of the specific dynamics of economic competition and the role of environmental regulation in industry investment decisions. Drawing on representative bureaucracy theory and principal-agent theory, I conclude that despite these divergences, these bureaucrats are representative agents of the public.

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1. Introduction

Are bureaucracies democratic? The answer to this question, in part, hinges on the representativeness of public agencies to the general public. Krislov and Rosenbloom (1981, p. 21) suggest that “if public bureaucracies could be constituted so as to provide political representation of the general public, their power could be made to comport substantially with democratic values.” Stated simply, one might argue that representative bureaucracies are ones that share preferences with the public, and take actions to translate these preferences into policy decisions.

Concerns about the representativeness of public bureaucracies, of course, are not new.² Threats to representative bureaucracies come from both the top – that is, agencies running amok, accountable to their clients but not the public writ large (e.g. Lowi 1979) and the bottom – that is, street-level bureaucrats using their discretion to carry out policies as they see fit (Lipsky 1980). And, of course, individuals in public bureaucracies may pursue their own objectives (Brehm and Gates 1997; Niskanen 1971). There is a large theoretical and empirical literature studying the degree to which political principals can control agency behavior (Whitford 2005; Hammond and Knott 1996; Wood and Waterman 1991, 1993; Wood 1988, 1991; Moe 1985). In this paper, I examine the degree to which bureaucratic attitudes comport with public preferences, or what I refer to as attitude congruence.

I examine this notion of attitude congruence in the context of a specific public policy area – environmental regulation and economic competition. The notion that there might be a trade-off between environmental protection efforts and economic development is well-established, although it has found sparse support in the empirical literature (Meyer

² Gormley and Balla (2004) provide a nice recent treatment of this subject.

1995). Nevertheless, the jobs v. environment tradeoff is one that continues to resonate in public policy debates.

My empirical strategy is to compare responses from two recently conducted surveys – one of state bureaucratic officials and the other of the public. To summarize the main findings, I demonstrate that the bureaucratic officials and the public share similar environmental policy attitudes – that is, they share basic underlying opinions about the appropriate level of environmental regulation. However, bureaucrats and the public have much different understandings of the forces driving economic competition, differences which may lead them to dissimilar policy preferences. While at first glance, these differences may seem to threaten the representativeness of bureaucracies, it may also simply reflect information asymmetries and the informational advantages enjoyed by bureaucrats gained through their specialized backgrounds and experiences. In this regard, I argue that the bureaucratic officials I survey may, in fact, be good agents of the public they represent, even though their understanding of complicated public policy matters may diverge.

The paper proceeds as follows. In the next section, I discuss two theoretical literatures – representative bureaucracy theory and principal-agent theory – which are useful for thinking about how well bureaucracies represent the general public. In section three, I describe the survey data I examine in the paper. In section four, I compare the policy attitudes and policy preferences of bureaucrats. Last, in section five, I offer some brief conclusions and discuss the implications of this research for future work on representative bureaucracy.

2. Theoretical Perspectives on Representative Bureaucracy

Two theoretical perspectives are useful for addressing the questions of interest in this paper: representative bureaucracy theory and principal-agent theory. In the representative bureaucracy literature, scholars seek to determine whether passive representation³ – the idea that officials serving in government agencies demographically represent society at large – translates into active representation – the notion that bureaucrats make decisions or adopt policies that specifically benefit their counterparts within the agency’s clientele group. These concepts, first articulated by Mosher (1968), primarily have been empirically tested with respect to race and gender. For example, Meier, et al. (1989) and Meier and Stewart (1991) found, respectively, that passive representation of African-American and Hispanic schoolteachers was positively correlated with the quality of education African-American and Hispanic children received in elementary schools. In a series of studies on the representation of the U.S. Equal Employment Opportunity Commission, Hinderer (1993a, 1993b) found that passive representation of African-American and Hispanic investigators in district offices was positively correlated with the number of discrimination charges filed on behalf of African-American and Hispanic workers.

Scholars have conducted similar studies examining whether passive representation of women translates to active representation. Keiser, et al. (2002), Wilkins and Keiser (2006), and Meier and Nicholson-Crotty (2006) each find confirmatory evidence with respect to female teachers, child welfare officers, and law enforcement officers, respectively. There are also some studies finding contradictory results (Selden

³ Passive representation is similar to the idea of “representation by personnel,” as articulated by Krislov and Rosenbloom (1981).

1997; Hinderer 1993b), but increasingly there is evidence consistent with representative bureaucracy theory regarding gender.

The fundamental assumption made in this literature is that bureaucrats sharing demographic characteristics with served populations, will do a better job of representing these populations. The mechanism is the socialization process which generates shared values and beliefs. This assumption seems uncontroversial in the context of distributive policy or client-based relationships. But, what about bureaucratic representation in the context of other public policy domains that do not include the allocation of individually-received benefits? Specifically, does this assumption still make sense in the context of public goods provision? It may if policy preferences for items such as national defense and environmental protection are correlated with demographic attributes such as race and gender. But, if they are not, this assumption is problematic.

In this paper, I adopt a different notion of bureaucratic representation, which I believe is more applicable to the public goods context. I consider the degree of congruence of attitudes on public policy. Examination of attitudinal congruence resembles a past tradition in the representative bureaucracy literature, in which scholars examined the correspondence of preferences of the public and bureaucratic officials (Gormley et al. 1983; Uslaner and Weber 1983; Meier and Nigro 1976; Hansen 1975).

More recently, scholars have compared bureaucratic officials and the public along attitudinal measures, as well. Garand, et al. (1991) used data from the American National Election Studies (NES) to examine the degree of correspondence between government officials and the general public on questions about government spending in public policy areas, feeling thermometers toward various political institutions and individuals, and

other general ideological scales. They found some evidence that government employees were more liberal on matters of public spending and leaned more toward the Democratic Party, though the differences were not always statistically different or large in magnitude. In a similar study, Lewis (1990) examined General Social Survey data to compare the attitudes of the public and bureaucrats. A strength of the Lewis study is that he also considered “top” bureaucrats, not simply all government employees, the latter which would include everything from street-level bureaucrats to senior level public administrators. Dolan’s (2002) study comparing the attitudes of general public and members of the Senior Executive Service on federal spending priorities shared this approach.

Hindera (1993b) argues that the attitudinal congruence approach is limited in its ability to test theories of representative bureaucracy because attitudes are poor surrogate measures of behavior. This is undoubtedly true, particularly with regard to distributive policies when behavioral outputs are available to measure active representation. Nonetheless, an empirical examination of attitude congruence can still help us establish passive representation, and is particularly relevant concept in the context of policies involving public goods provision. Dissimilar to the context of distributive policy, there is not strong theoretical reason to believe that personal demographic attributes should matter. Or, at minimum, they should only matter the extent to which demographic attributes are correlated with policy preferences.

A second theoretical framework – principal-agent theory – is useful for thinking through the degree of attitude congruence we should expect to find between bureaucrats and the public. In the bureaucracy literature, scholars commonly apply principal-agent

theory to characterize the relationship between elected officials (the principals) and agency officials (the agents). In particular, scholars have adopted the principal agent model to explore the degree to which elected officials are able to exert political control over the bureaucracy (e.g., Wood and Waterman 1994), or conversely, agency officials are able to shirk their principals to pursue their own preferences and policy objectives (e.g., Brehm and Gates 1997).

The utility of principal-agent theory for questions about bureaucratic representativeness, however, extends beyond the context of political principals. This delegation model also is informative for thinking about the relationship between bureaucracies and the public. In essence, the public (principals) entrusts bureaucratic officials (agents) to carry out their policy preferences, though the nature of the delegation is less direct than in the case of political principals, and the public is less able to guard against agency loss with screening mechanisms. The public implicitly delegates authority to bureaucracies for public policymaking through the election of executives and legislators, and at the same time relies on these elected officials to serve as instruments of control.

This is not to say, however, that bureaucratic officials respond to these public principals with the same regularity or seriousness as they respond to political principals. Empirical work by Waterman, et al. (2004) comparing the influence of multiple principals found that the public has only modest influence on agency decision-making relative to political principals. This is not surprising given the fact the public is limited in its ability to directly monitor and sanction bureaucratic behavior. One implication of this loose arrangement is the informational advantage enjoyed by the bureaucrats, which can

lead to adverse selection and moral hazard problems. Of course, agents almost always enjoy informational advantages over their principals, which is why principals utilize a variety of screening mechanisms to minimize potential agency loss (Kiewit and McCubbins 1991). It is important to emphasize, however, that the mere existence of informational advantages does not necessarily result in agency loss. At issue here is that extent to which the preferences of the agents and principals coincide or diverge.

There is another angle on information asymmetries which is particularly relevant in the context of the representativeness of bureaucrats of the public. A primary reason for delegating responsibility, authority, and discretion to agents in the first place is due to the specialized knowledge or expertise that agents have relative to their principals.

Bureaucrats are thought to be best-placed to use their judgment, especially when it comes to technical matters. In most regulatory matters, there is a high degree of information asymmetry between the regulators and the public. In the case of the effects of environmental regulation on economic investment decisions considered here, this information asymmetry would seem particularly evident.

Principal-agent theory and, specifically, the informational and expertise advantages enjoyed by bureaucrats compared to the public they represent, are informative for developing expectations about what representative bureaucracy means in a public goods context where policy is complicated and not client-based. When it comes to general attitudes, one can make a simple argument that representative bureaucrats are those that share similar attitudes as the public. However, when the subject becomes more complex – that is, contexts where the specialized knowledge of bureaucrats is most relevant – we should expect divergence between elite- and mass-level understandings,

which may lead to different policy preferences. As I argue later in the paper, this divergence does not necessarily mean that bureaucrats are unrepresentative of the public. Rather, bureaucrats may simply be more informed about the specifics of policy.

In the present context, an argument consistent with a representative bureaucracy in the context of environmental regulation and economic development translates into two hypotheses. First, we should expect to observe bureaucrats and the public sharing similar underlying attitudes on environmental regulation. Second, we should expect wide disagreements when it comes to the specificities of the relationship between environmental regulation and economic development, with bureaucrats expressing more objectively accurate responses. As I describe in the next section, I test these hypotheses using data from two recently conducted surveys.

3. Data and Methods

To accurately measure the degree of congruence between the attitudes and policy preferences of agency bureaucrats and the public, it is necessary to have commensurate survey data. In this paper, I study responses primarily from two surveys.

The primary source of public opinion data comes from the MIT Public Opinion Research Training Laboratory (PORTL) Pilot Study. The MIT PORTL study is a public opinion survey of a representative sample ($n = 1,173$) of the American public that was carried out in fall of 2005. The survey included a wide-range of questions, covering topics on politics, the use of military force, fiscal policy, and a number of other salient policy issues. The PORTL study also included a few questions on environmental

regulation and economic competition, which closely resemble those of the elite level survey I discuss next. I also use data from the NES as supplementary evidence.

The elite-level survey that I consider in this paper is the State Environmental Managers Survey (SEMS), which I conducted in the summer of 2005. The primary purpose of the survey was to learn about the perceptions of senior managers serving in state environmental agencies on a number of issues related to environmental regulation and interstate economic competition. Since many areas of environmental policy, particularly at the state level, afford bureaucratic officials considerable administrative discretion, examining their attitudes is an important component to understanding regulatory decision-making (Konisky, 2006). The SEMS was the first survey to ask these types of questions to such a large group of agency officials.⁴

The sample for the SEMS consisted of senior, career regulators serving in the fifty state environmental agencies across the country. The SEMS yielded a response rate of approximately 34% (498 of 1459 potential respondents), which is on par with that of some other recent surveys of government agency officials (e.g., Waterman, et al. 2004; Cho and Wright 2004). I provide more details about the MIT PORTL and SEMS samples in the Appendix.

To evaluate the degree of attitudinal congruence between the public and bureaucratic officials on environmental policy I use responses from the “jobs v. environment” question that has been recently included in the NES.⁵ This question taps into underlying attitudes about the appropriate level of government intervention in the economy to protect the environment, and Berinsky and Rosenstone (1996) found this

⁴ Engel (1997) conducted a similar survey, but it had a much smaller sample of state environmental regulators.

⁵ Gallup and Princeton frequently ask a similar question in their public opinion surveys.

question to be an accurate measure of general environmental attitudes. The question reads:

Generally speaking, some people think we need much tougher government regulations on business in order to protect the environment. (Suppose these people are at one end of the scale, at point 1.) Other people think that current regulations to protect the environment are already too much of a burden on business. (Suppose these people are at the other end of the scale, at point 7.) And, of course, some other people have opinions somewhere in between, at points 2, 3, 4, 5, and 6. Where would you place yourself on this scale?

This question was asked both in the MIT PORTL study and in the SEMS, which enables a comparison to be made between these groups. The purpose here is to assess the degree of congruence on basic environmental attitudes.

To compare the specific knowledge of the public and the state agency officials regarding the relationships between environmental regulation, economic competition, and industry investment decisions, I consider two questions. The first question regards the source of economic competition for intrastate businesses. There has been considerable attention to the issues of outsourcing and loss of jobs overseas in the media (particularly with respect to the manufacturing sector), so this issue has a high level of salience. The question in the MIT PORTL study reads as follows:

Recently, there has been a lot of discussion about U.S. companies moving to new places to maintain their competitiveness. Thinking about the companies in your state that have recently moved to new locations, where do you think most of them have gone?

The response categories included: “Other places in your state,” “Other states,” “Countries outside of the United States, and “Don’t know.” The question on economic competition included in the SEMS was worded in a slightly different way, in large measure due to the difference context of the elite-level survey. The question reads:

Thinking about the primary industry that your office regulates, where does the most intense economic competition for firms in this industry come from: other firms within the state, firms in other states, firms in countries outside the United States, or are you not sure?

When designing the instrument for the MIT PORTL study, we considered using the same question as in the SEMS, but elected to use the alternative wording for several reasons. Of foremost concern was the validity of the question. The SEMS survey focused on many issues regarding economic competition so the question asked above was in a context and employed a language familiar to the respondents. We simplified the wording in the MIT PORTL study because the question did not share the same context (it was asked as part of broad set of public policy questions) and because some of the language in the SEMS version of the question was specific to the regulatory climate in which the bureaucrats work. Although the response categories are the same in each question, the difference in question wording introduces the possibility that observed similarities or differences are caused, in part, by question design. There was tradeoff here between symmetry and validity, and we determined that the latter was of higher priority. We discuss the implications of the question wording choice later when analyzing the responses below.

The second question regarding economic competition asked the public and the state bureaucrats about their perceptions about the factors that the private sector weighs when making decisions about where to (re)locate a new facility. This type of question has been frequently used in surveys of corporate executives and other industry officials involved in facility siting decisions (e.g., Davis, 1992; Lyne; 1990, Manufacturers Alliance/MAPI, 2001), as I will discuss later in the paper.⁶ As was the case above, the

⁶ Engel (1997) also used a similar question in her study of state-level environmental decision-makers.

wording of the two questions varies a little between the two surveys. In the MIT PORTL study, the question is as follows:

When companies decide where to locate a new factory, their decisions depend on a lot of factors. How important do you think each of the following factors are to companies: being close to customers, low taxes, cheap labor, weak environmental regulations, easy access to shipping routes, and being close to raw materials?

The respondents were asked to rate the factors as being not a factor, not too important a factor, a fairly important factor, or a very important factor. I included a similar question on the SEMS:

Companies consider a number of factors when making decisions about where to locate a new facility. Suppose a company in an industry regulated by your agency was deciding where in the United States to locate a new facility. How important do you believe the company would consider the following factors: proximity to customers/markets, tax incentives/subsidies, labor costs and quality, environmental regulations, quality and proximity of transportation facilities, and proximity to natural resources/raw materials.

The response options were identical to those for the questions in the MIT PORTL study.

The differences between the question asked in the elite survey and in the public opinion poll are twofold. First, the question wording was simplified in the MIT PORTL study to remove the regulatory-specific component. Second, the set of factors asked about were the same, but we modified the wording modestly in the MIT PORTL study to make them more transparent for the public respondents.

These questions serve a couple of purposes. First, they represent knowledge-based questions about the dynamics of economic competition and the role that environmental factors play in private sector investment decisions. Second, the questions imply policy preferences in a more specific way than does the question used to measure general environmental attitudes. Responses to these questions hint at what the

bureaucrats think about the potential effectiveness of using environmental regulation (or lack thereof) as instrument for promoting industrial development.

Before analyzing the data from the two surveys, it important to note that I am not making claims of direct representation in this paper. The bureaucratic officials surveyed in the SEMS do not directly represent the public surveyed in the MIT PORTL study. Doing this would require a large, representative sample of the public for each state. Rather, I am interested in whether the bureaucratic attitudes found in the SEMS are broadly congruent with those of the general public.

4. Analysis

In this section of the paper, I first compare the basic environmental attitudes of the senior civil servants and the public, and then turn to comparing their understanding of issues more directly related to environmental regulation, economic competition, and industry competitiveness.

Comparing Attitudes

To compare the policy preferences of the public with those of bureaucrats, I consider the responses to the NES jobs v. environment question. Recall, the NES question asks respondents to place themselves on scale, based on their beliefs about whether tougher regulation on business is required to protect the environment or whether existing environmental regulations already put too much of a burden on business. This question provides a measure of basic environmental attitudes, and enables an opportunity

to examine the extent to which the policy attitudes of high-ranking bureaucrats match those of the public.

I present the responses to the NES question in Table 1. In addition to the data from the MIT PORTL study and the SEMS, I also include the responses from the NES itself for comparative purposes. Considering the responses from the public first, the mean position on the 7-point scale from the MIT PORTL survey is 3.86. According to these data, the public places itself just to the more “pro-environmental” side of the scale – that is, the average respondent was slightly more likely to identify with the position that tougher regulation on business is necessary to protect the environment, even if such regulation results in job losses or diminishments in standard of living.

Public response to this question in the MIT PORTL study differs somewhat from those given by respondents participating in the NES. I present the data from the NES in the middle column of Table 1, pooling the responses from 1996 to 2000.⁷ The mean response from NES respondents was 3.23,⁸ which suggests that the public supports tougher environmental regulations on business. Though the results from the MIT PORTL study and the NES differ ($t = -9.97$, $p = .000$), both suggest that the public supports tougher environmental regulation on business. A likely explanation for the higher level mean between the MIT PORTL and the NES may be that the MIT PORTL study did not offer respondents an opportunity to answer “don’t know.” This may have forced some individuals to respond to the indifferent position on the scale (4), raising the overall mean somewhat (only 2 individual failed to respond to this question in the MIT PORTL study).

⁷ The jobs-environmental question was not included in either the 2002 or 2004 NES.

⁸ The mean response from the NES was 3.42, 3.10, and 3.14 in 1996, 1998 and 2000, respectively.

Turning to the elite survey, the senior managers serving in state environmental agencies I surveyed as part of the SEMS share similar policy attitudes with the public. As reported in the final column of Table 1, the mean response to the jobs v. environment question for these bureaucrats was 3.26, which is essentially the same as the average response of a member of the public questioned in the NES ($t = .162, p = .872$), though statistically different than the average respondent from the MIT PORTL study ($t = -6.53, p = .000$).

In a traditional representative bureaucracy study, one would consider the demographic characteristics of the state agency officials compared to the public to measure the degree of passive representation. Due to differences in the demographic data collected in the two surveys, I can do this for only small set of characteristics – age, gender, education.⁹ In Table 2, I compare the MIT PORTL sample with that of the SEMS with respect to these attributes. The mean age of the respondents was similar between the survey samples, but the state officials responding to the SEMS were, on average, more likely to be male and highly-educated than the respondents to the MIT PORTL study.

I can also compare the respondents to the two surveys in terms of their political party affiliation and political ideology. First, with respect to the public sampled for the MIT PORTL study, nearly 46% self-identified as Democrats, compared to about 40% and 14% self-identifying as Republicans and Independents, respectively. The party affiliation of the civil servants in the SEMS sample was slightly more evenly-distributed among these 3 categories, with about 37% self-identifying as Democrats, 20% as Republicans,

⁹ The MIT PORTL pilot study did not ask respondents about their household income, and the SEMS did not ask respondents about their race or ethnicity.

and 31% as Independents (about 12% replied that they had no party affiliation). In terms of political ideology, the bureaucrats sample clearly contained more politically liberal respondents than did the public sample.¹⁰ Overall, the differences observed here regarding demographic and political characteristics are generally consistent with those found by Aberbach and Rockman (2000) in their comparisons of the federal executive and the public.

Using the representative bureaucracy framework, one might conclude that the senior managers serving in the fifty state environmental agencies across the country are not representative of the public. However, these demographic attributes are relevant only to the extent to which they correlate with public policy attitudes. And, in the area of environmental policy, there is not much evidence that these factors matter much. In the most extensive study of environmental attitudes of the public, Guber (2003) finds modest evidence that education and income helps predict policy preferences, but little such evidence regarding gender or race. Guber found the best predictors of environmental attitudes and policy preferences to be political party affiliation and political ideology.

I use regression analysis to systematically examine the relationship of demographic attributes with environmental attitudes. Specifically, I regress the responses to the jobs v. environment question (for clarity of presentation, the values are inverted such that higher levels reflect a more pro-environmental response) on respondent demographics, controlling for political party affiliation and political ideology. Due to the ordinal nature of the dependent variable, I estimated ordered logit models. The results are presented in Table 3. Overall, the results from these regressions suggest that

¹⁰ The SEMS utilized a 7-point ideological scale, while the MIT PORTL study used a 5-point ideological scale. To make these scales comparable, I converted each into a 3-point scale.

demographic characteristics are much less important than are political characteristics. The most substantive result in the model using the responses from the MIT PORTL study is that individuals with more education are more likely to believe that there should be environmental tougher regulations on business. The magnitude of the effect, however, is much smaller than the political party and political ideology effects.

In sum, comparisons between the attitudes of the senior managers in the state environmental agencies surveyed as part of the SEMS, and the public surveyed in the MIT PORTL study suggest relatively congruent attitudes on environmental regulation. By in large, both the elites and the members of the public support environmental regulation even if it results in some job loss or decline in standard of living, a result which may not have anticipated had we simply compared the demographic attributes of the bureaucratic and public respondents. I infer from this attitudinal congruence that the bureaucrats and the public surveyed share some, common basic policy objectives, and, at least at this general level, these state environmental bureaucrats represent the attitudes of the public well.

Comparing Policy Understanding

The next part of the paper turns to the question of whether the degree of congruence demonstrated above in basic environmental attitudes can also be found with respect to understanding more complicated policy issues. Specifically, I am interested in gauging the public and bureaucratic respondents understanding of issues related to the dynamics of economic competition and the role that environmental factors play in private sector investment decisions.

As described in the previous section, to compare the perceptions of the public and the state bureaucrats regarding economic competition, each set of respondents was asked about the main source of economic competition for companies in their state. In response to each question, the state bureaucratic officials and the public were asked to characterize the most competition as coming from companies in their own state, companies in other states, or companies in other nations. As I discuss below, in the MIT PORTL study, the public was asked about economic competition in terms of where companies in their state have moved. The results are presented in the first column of Table 4. An overwhelming majority of the respondents (59%) indicated that most companies had moved to other countries, while 22% indicated to other locations in the state. Only about 4% of the respondents to the MIT PORTL survey indicated that companies had moved to other intrastate locations.

These perceptions regarding the source of economic competition for companies are quite different from those held by the officials serving in state environmental agencies. As shown in the second column of Table 4, the bureaucratic officials perceived most competition for firms they regulate coming from other firms within their state (31%), followed by from firms in other states (27%) and from firms in other countries (17%). The order of the sources of economic competition are inverted, with the bureaucrats clearly ascribing less threat to competition from other countries than the public.

These data clearly indicate that the state bureaucratic officials have a different perception of economic competition than expressed by the public. Question wording may account for some of the magnitude of the difference in the responses. Specifically,

the specific mention of “moving” in the MIT PORTL study question may have cued the public respondents to think more about outsourcing and the overall loss of manufacturing jobs to other countries, subjects that the media have given quite a bit of attention to in recent years. Though it is not possible to quantify the effects of question wording here, the comparison of the responses to the MIT PORTL study and SEMS seems suggest different notions about economic competition.

The second question to which we can compare responses from the public and the state bureaucratic officials regards the factors important to industry investment decisions, and, specifically, the factors important to companies when they decide where to locate a new facility. For each factor, the respondents indicated whether it was “not a factor,” not too important a factor,” “a fairly important factor,” or “a very important factor.” The results presented in Table 5 are organized in terms of the mean level of importance assigned by the respondents, where the response “not a factor” was assigned a value of one, the response “not too important a factor” was assigned a value of two, etc.).

Considering first the responses from the MIT PORTL study, the public perceived the most important factor to industrial location decisions to be low taxes, followed (in order) by cheap labor, access to transportation routes, environmental regulations, proximity to raw materials, and proximity to customers. The bureaucrats’ perceptions about the importance of each factor suggest a very different rank ordering. The state officials’ believe proximity to transportation facilities and labor costs are the most important factors, followed (in order) by proximity to customers, tax incentives, proximity to natural resources and raw materials, and, last, environmental regulations. Difference of means tests between the mean level of importance assigned to each factor

by the participants in the two surveys suggest that they are all statistically different in call cases, with the exception of the perceived importance of labor costs.

Asking about the factors important to industry facility location decisions in the MIT PORTL study and the SEMS provides an opportunity to make direct comparisons with similar surveys administered to corporate executives and other business officials involved in facility siting (Manufacturers Alliance/MAPI 2001; Davis 1992; Lyne 1990; Calzonetti and Walker 1988; Epping 1986; Stafford 1985; Barker 1983; Schmenner 1982).¹¹ Of particular importance here is the private sector's perception about the importance of environmental regulations to their decisions about where to (re)locate a facility. Almost across the board (Davis (1992) and Lyne (1990) are exceptions), these surveys have found scant evidence that environmental regulations (e.g., air quality standards, environmental permitting requirements) play more than a marginal role in industrial location decisions.¹² Business officials have typically pointed to market accessibility and labor costs as the main drivers of industrial location decisions.

When we compare the responses from the public and the state environmental bureaucrats with the private sector officials actually making facility location decisions – particularly as they relate to the relative importance of environmental regulation – it is quite clear that the public overstates their role. While the state bureaucrats rank environmental regulations as the least important of the six location factors asked about, which closely coincides with most surveys of business officials, the public ranks

¹¹ Greenhut and Colberg (1962) and Mueller and Morgan (1962) conducted similar surveys in the 1960s, but they did not specifically ask about environmental regulations.

¹² Kieschnick (1978) argues that “environmental regulations are much more likely to play a role in the selection of specific sites within a region previously selected for other reasons.” That is, factors such as environmental regulation are likely to emerge during the site selection process, rather than during the initial decision of whether to construct a new facility.

environmental regulations higher, ahead of both proximity to natural resources and proximity to markets.

I consider the differences between the public and bureaucratic responses regarding environmental regulation in more detail in Table 6. These data show the full distribution of responses. Large majorities of both the public (74%) and the state officials (72%) indicated that environmental regulations were either a fairly important or a very important factor to companies when they decide where to locate a facility. The difference, however, is that 43% of the respondents to the MIT PORTL study indicated that environmental regulations were a very important factor, compared to just 21% of the respondents to the SEMS. Thus, relative to the state bureaucrats, not only does the public believe that environmental regulations are a more important factor in industrial siting decisions relative to other factors, the intensity of these beliefs appear to be stronger as well.

5. Discussion and Conclusion

The analysis presented in this paper suggests attitudinal congruence between a nationally-representative sample of the public and a large sample of senior-level bureaucrats responsible for state environmental policy. The public and these officials generally agree about the level of government regulation necessary to achieve environmental protection goals. Yet, when it comes to detailed understandings of economic competition and the effect of environmental regulation on private sectors investment decisions, the perceptions of the public and of the bureaucrats diverge significantly. What does this mean for representative bureaucracy?

One might reach a pessimistic conclusion that even though bureaucrats share basic environmental attitudes with the public, when it comes to the details of the underlying conditions important for determining policies, bureaucrats operate under a different set of perceptions. Their understanding of the sources of economic competition and the role of environmental regulations in industry investment decisions, suggests different policy prescriptions than what might expect to come from the public. For example, we might infer from the public's responses to the MIT PORTL study that the average citizen believes that relaxing environmental regulatory burdens might be a key ingredient to stem the flow of manufacturing jobs to other countries. In contrast, the state environmental bureaucrats perceived environmental regulations to play only a minor role in such decisions, perceptions largely shared by industry officials themselves.

If this is the case, are these state environmental officials unrepresentative bureaucrats? The logic of the principal-agent relationship suggests a more optimistic conclusion. The difference of opinion observed in the responses to the surveys may simply reflect disparities in the level of knowledge of the public, compared to that of the senior regulators. Principal-agent theory would predict such an outcome. A fundamental rationale for delegating authority to agents, is that they have expertise obtained through their privileged informational position. Thus, we may still have representative bureaucrats, if they carry out policies consistent with the general environmental attitudes of the public, even if they develop policies based on different understandings of the role and effects of environmental regulation in industry investment decisions.

More generally, the research presented in this paper points to the need to broaden the theoretical and empirical reach of the representative bureaucracy literature. The

empirical strategy of examining whether passive representation translates into active representations has less theoretical value in the context of bureaucracies working in the areas of public goods provision. The context is different, and the concepts of attitudinal congruence and policy understanding are more relevant when it comes to policy domains such as environmental protection.

Finally, the role of bureaucrats' specialized knowledge demonstrated in this paper suggests that we should be cautious about ballot initiatives and referenda that prescribe specific policies. These direct democracy efforts can strip away decision-making from public bureaucracies, which may lead to democratically-legitimate, but inferior policy outcomes. Stated simply, the public may get the details wrong, while the much maligned public bureaucrats get the details right.

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Appendix

MIT Public Opinion Research Training Laboratory (PORTL) Pilot Study

The MIT PORTL study (<http://web.mit.edu/polisci/portl/index.html>) was led by Steve Ansolabehere. In the fall of 2005, the MIT PORTL contracted with Polimetrix to administer an online survey. To create a nationally-representative sample, Polimetrix used a technique that matches its panelists to characteristics among randomly selected records in the 2004 NES. The survey had a nationally representative sample of 1,173 people.

State Environmental Managers Survey

I identified potential respondents for the State Environmental Managers Survey by examining each state environmental agency's organizational chart. Specifically, I compiled the name, title, and division for individuals in the second and third tiers of the state agencies (i.e., the two levels immediately beneath agency administrators). Second-tier officials typically included directors of major divisions, such as divisions of air quality. Third-tier officials included directors of major offices or bureaus within these divisions. I also included managers of sections within these divisions specifically involved in permitting, standard-setting, and implementation and enforcement activities.

This sampling strategy did have some limitations. States provide different levels of information about their agency structure and personnel on their public Web sites. Since I was limited to this information, there was some inconsistency across the fifty states in the number of individuals ultimately included in the sample due, not to agency structure, but to information accessibility. Once I had identified the respondents, I then

collected contact information (email addresses and phone numbers) for each from information available directly on the agency's Web site, from online state directories, or, when necessary, from individual-level internet searches. I was unable to find email addresses for a small number of individuals, and of the 1494 email addresses compiled, twenty-two proved to be duplicate, inaccurate, or obsolete.

The survey was administered through the internet by the Indiana University Center for Survey Research. Similar to mail-based surveys, the web-based format eliminated the potential of interviewer bias and provided the confidentiality required to enable the agency officials to respond to questions that were potentially sensitive in nature. The web-based format also provided the additional benefit of permitting completion of the survey at time convenient for the respondent.

To improve the chances of a high response rate, the survey was administered using Dillman's (1978, 2000) Total Design Method, with some minor modifications due to the web-based format. An initial announcement email was sent to respondents describing the nature of the project. A few days later, an invitation email was sent to the respondents reiterating the purpose of the survey, and containing login and password information for the web-based interface. This message made clear that participation was voluntary and that all responses would be kept confidential. Approximately two weeks later, a follow-up email was sent to those individuals that had not yet responded to the survey (excluding 106 individuals that had explicitly indicated to us that they wanted to decline participation), asking for their participation. Resource limitations prevented sending out a second reminder notice. The survey was in the field for about six weeks in total (during June and July 2005). The survey was administered in a second wave for

respondents in Vermont during September 2005, due to an inadvertent omission of respondents from this state during the first wave.

Table 1. Comparison of Responses to the Jobs-Environment Question

<i>Response</i>	<i>Position</i>	<i>MIT PORTL (public)</i>	<i>NES (1996-2000) (public)</i>	<i>SEMS (bureaucrats)</i>
1	Protect environment, even if it costs jobs, standard of living	119 (10.2%)	620 (15.5%)	16 (3.3%)
2		208 (17.7%)	562 (14.1%)	94 (22.9%)
3		163 (14.0%)	603 (15.1%)	163 (34.0%)
4		288 (24.6%)	690 (17.3%)	169 (35.2%)
5		135 (11.6%)	358 (9.0%)	33 (6.9%)
6		139 (11.9%)	183 (4.6%)	5 (1.0%)
7	Jobs, standard of living more important than environment	119 (10.1%)	143 (3.6%)	-
9	Don't know, haven't thought much about it	-	836 (21%)	-
<i>n</i>		1,171 (100%)	3,995 (100%)	480 (100%)
mean		3.86	3.23[†]	3.26
(s.d.)		1.80	1.68	0.99

[†] Does not include “don’t know” responses.

Response to question: “Generally speaking, some people think we need much tougher government regulations on business in order to protect the environment. (Suppose these people are at one end of the scale, at point 1.) Other people think that current regulations to protect the environment are already too much of a burden on business. (Suppose these people are at the other end of the scale, at point 7.) And, of course, some other people have opinions somewhere in between, at points 2, 3, 4, 5, and 6. Where would you place yourself on this scale?”

Table 2. Demographic Attributes of Public and Bureaucratic Survey Respondents

	<i>MIT PORTL</i> <i>(public)</i>			<i>SEMS</i> <i>(bureaucrats)</i>		
Age (mean)	47.7 years			49.6 years		
Gender	<u>Male</u> 50.9%	<u>Female</u> 49.1%		<u>Male</u> 80.3%	<u>Female</u> 19.7%	
Education	<u>No H.S.</u> 10.9%	<u>H.S.</u> 34.7%	<u>Some Coll.</u> 24.4%	<u>H.S.</u> 0.6%	<u>2-yr Coll.</u> 1.7% 1.7%	
	<u>2-yr Coll.</u> 4.5%	<u>Coll.</u> 15.7%	<u>Adv. Deg.</u> 9.9%	<u>Coll.</u> 41.8%	<u>Adv. Deg.</u> 55.9%	
Income	--	--	--	< <u>50K</u> 3.4%	<u>50K-100K</u> 53.0%	> <u>100K</u> 43.6%
Political Party	<u>Rep.</u> 39.7%	<u>Dem.</u> 45.7%	<u>Ind.</u> 13.9%	<u>Rep.</u> 19.5%	<u>Dem.</u> 36.8%	<u>Ind.</u> 30.8%
	<u>Other</u> --		<u>None</u> 0.7%	<u>Other</u> 1.2%		<u>None</u> 11.7%
Political Ideology	<u>Conservative</u> 33.1%		<u>Moderate</u> 39.0%	<u>Conservative</u> 29.5%		<u>Moderate</u> 28.2%
	<u>Liberal</u> 24.5%		<u>Not Sure</u> 3.4%	<u>Liberal</u> 42.4%		<u>Not Sure</u> --

Table 3. Ordinal Logistic Regression of Correlates of Environmental Attitudes

Dep. Var. = Responses to Jobs v. Environment Question (1-7)		
	<i>MIT PORTL</i> (public)	<i>SEMS</i> (bureaucrats)
Age	0.99 (0.00)	1.03* (0.02)
Female	1.13 (0.14)	1.48 (0.37)
Education	1.14** (0.04)	1.16 (0.15)
Income	--	0.92 (0.05)
Democrat	5.42** (1.12)	1.60 (0.57)
Independent	3.87** (0.83)	1.04 (0.33)
Political Ideology	1.84** (0.16)	1.67** (0.16)
n	1,109	356
Log-likelihood	-1850.80	-471.47
LR Test	LR $\chi^2(6) = 503.4$	LR $\chi^2(7) = 83.3$
Prob > LR	p = .000	p = .000

Coefficients are odds-ratios. Significance levels: *.05, and **.01.

Table 4. Comparison of Responses to Sources of Economic Competition

	<i>PORTL</i> [†] (public)	<i>SEMS</i> [‡] (bureaucrats)	Total
Within State	45 (3.9%)	147 (31.0%)	192 (11.75)
Interstate	262 (22.4%)	128 (27.0%)	390 (23.7%)
International	685 (58.6%)	79 (16.6%)	764 (46.5%)
Don't know/Not Sure	177 (15.1%)	121 (25.5%)	298 (18.1%)
Total	1,169 (100.0%)	475 (100.0%)	1,644 (100.0%)
<i>Pearson $\chi^2(3) = 363.2, p < .001$</i>			

[†] Response to question: Recently, there has been a lot of discussion about U.S. companies moving to new places to maintain their competitiveness. Thinking about the companies in your state that have recently moved to new locations, where do you think most of them have gone?

[‡] Response to question: Thinking about the primary industry that your office regulates, where does the most intense economic competition for firms in this industry come from: other firms within the state, firms in other states, firms in countries outside the United States, or are you not sure?

Table 5. Comparison of Responses to the Location Factors Question

	<i>PORTL</i> [†] (public)	<i>SEMS</i> [‡] (bureaucrats)	
<i>Factor</i>	<i>Mean (St. Dev.)</i>		<i>Difference of means t-test</i>
Low taxes (tax incentives and/or subsidies)	3.62 (.662)	3.41 (.694)	-5.80*
Cheap labor (Labor costs and quality)	3.55 (.754)	3.57 (.608)	0.33
Easy access to shipping routes (quality and proximity of transportation facilities)	3.30 (.783)	3.59 (.561)	8.18*
Weak environmental regulations (environmental regulations)	3.09 (.950)	2.91 (.720)	-4.13*
Being close to raw materials (proximity to natural resources and raw materials)	2.85 (.848)	3.27 (.770)	9.75*
Being close to customers (proximity to customers and markets)	2.02 (.940)	3.46 (.672)	34.7*

Significance levels: *.05, and **.01.

[†] Response to question: When companies decide where to locate a new factory, their decisions depend on a lot of factors. How important do you think each of the following factors are to companies: being close to customers, low taxes, cheap labor, weak environmental regulations, easy access to shipping routes, and being close to raw materials?

[‡] Response to question: Companies consider a number of factors when making decisions about where to locate a new facility. Suppose a company in an industry regulated by your agency was deciding where in the United States to locate a new facility. How important do you believe the company would consider the following factors: proximity to customers/markets, tax incentives/subsidies, labor costs and quality, environmental regulations, quality and proximity of transportation facilities, and proximity to natural resources/raw materials.

Table 6. Comparison of Responses to Location Factors Question – Environmental Regulations

	<i>PORTL</i> [†] (public)	<i>SEMS</i> [‡] (bureaucrats)	Total
Not a factor	84 (7.2%)	5 (1.1%)	89 (5.4%)
Not too important a factor	224 (19.3%)	130 (27.4%)	354 (21.6%)
A fairly important factor	356 (30.6%)	240 (50.6%)	596 (36.4%)
A very important factor	499 (42.9%)	99 (20.9%)	598 (36.5%)
Total	1,163 (100.0%)	474 (100.0%)	1,637 (100.0%)
<i>Pearson $\chi^2(3) = 115.7, p < .000$</i>			

[†] Response to question: When companies decide where to locate a new factory, their decisions depend on a lot of factors. How important do you think each of the following factors are to companies: weak environmental regulations?

[‡] Response to question: Companies consider a number of factors when making decisions about where to locate a new facility. Suppose a company in an industry regulated by your agency was deciding where in the United States to locate a new facility. How important do you believe the company would consider the factor: environmental regulations?