

**Negotiated and Conventional Rulemaking at EPA: A Comparative Case Analysis**

Laura Langbein  
School of Public Affairs  
American University

(Cornelius Kerwin was co-author in the design of the survey instrument, the collection of the data for this case study, and the description of many of the results.)

**Introduction to the case family**

Negotiated rulemaking is a notable alternative to conventional rulemaking. While it is most often considered a procedural reform of more conventional administrative practice, it is, in fact, statutory public policy. The use of negotiated rulemaking was promoted by the Negotiated Rulemaking Act of 1990 and by a presidential executive order (Kerwin, 1994). Negotiated rulemaking (“reg neg” hereafter) uses an advisory committee, comprised of representatives from the rulemaking agency and affected entities, including relevant industries and professional associations, public interest groups, and state and local officials, to draft the rule that is to be proposed by the agency. Once the negotiated rule is proposed, conventional procedures move the rule from proposed to final. In conventional rulemaking, the agency writes the proposed rule, seeking as much advice from affected parties as it deems necessary. While both forms of rulemaking have their defenders and detractors, previous research has not provided a solid evidentiary basis to help decision makers choose between these two alternatives. Previous research has been based on theory or legal argument (e.g., Harter, 1982; Rose-Ackerman, 1994), with scant empirical evidence based on case studies of particular reg negs, with no explicit comparison to conventional rulemakings (e.g., Suskind and McMahon, 1985; Perrit, 1986). The one exception is Coglianesse (1997); that study uses comparative empirical evidence, but it examines only one aspect of rulemaking--the lawsuits that result. This study uses survey data from participants in both negotiated and conventional rulemakings at EPA, one of the most frequent users of reg neg, to compare these two policy alternatives using multiple criteria.

**Selection of cases within the case family**

We collected data on litigation, data from the comments on proposed rules, and data from systematic, open-ended interviews with participants in 8 negotiated rules (7 became final) and in 6 “comparable” conventional rules. Collecting meaningful data on litigation requires that the rules we select for study cannot be so recent that litigation is precluded from occurring; collecting useful interviews requires that the rulemakings not be so dated that respondents can no longer be located, and once located, cannot remember the rulemaking. The compromise was, with one exception, to select, from the 11 rules that EPA had negotiated at the time we designed our study (1994), 8 that had become final between 1987 and 1993, and 1 additional rule that seemed, at the time, likely to become final in the very near future. We interviewed as many members of each negotiating committee that we could locate. We had to drop one negotiated rule because we could not locate enough respondents (Farmworker Protection Standards).

Our next step was to select conventional rules that were “comparable” to the negotiated rules. We asked the survey respondents who had participated in a reg neg to identify a conventional rule that they were personally familiar with and that seemed as comparable as possible to the rule they had helped to negotiate. Ideally, the conventional rules were to be comparable in terms of the time it was developed, the authorizing statute, the type of substantive issue involved, its complexity, the scope and scale of its impact on the affected parties, and, to the extent it could be determined, maturity of the issues and the depth of disagreement the planned rule generated. In the analysis below, no attempt has been made to compare individual negotiated rules to their conventional counterparts, partly because of differences in the rules, and partly because the number of respondents to each conventional rule was too small to allow statistically reliable comparison of a single pair of conventional and negotiated rules. We present evidence below on the degree to which our expectation of overall comparability is met. We contend that, taken together, the set of conventional rules is roughly comparable to the set of negotiated rules. However, the analysis below reveals some important differences between the negotiated and conventional rules. In the final multivariate analyses, I control for these differences statistically.

We interviewed as many of the members of the negotiation committees that we could locate, resulting in a response rate of 41% of the 249 committee members that we wanted to locate. Securing respondents for the conventional rules was also difficult. We defined a participant as anyone who had submitted a written comment on the proposed conventional rule, and selected from that list a random sample sufficient for 20 interviews per rule. Our response rate for these rules was 43% of the random sample. We wound up with a total of 51 respondents to conventional rules and 101 respondents to negotiated rules; this is sufficient in size and diversity for the types of statistical analyses needed to compare the conventional rules as a whole to the negotiated rulemakings as a whole. Further, the response rates, while low, were comparable, and are not atypical of those in other surveys of public and private-sector professional employees (Bozeman, 1998; Langbein and Lewis, 1998).

Identical, structured interviews with open ended responses comprise the core of our methodology. The survey was designed so that respondents were asked a series of questions about a specific rulemaking, be it negotiated or conventional, in which they were known to have participated. They were not asked directly to compare reg neg to conventional rulemaking either generally or on a given dimension. Rather, their responses to identical questions pertaining to the specific rulemaking in which they had participated were the basis for comparison. Thus our findings are not based on the subjective perceptions of differences between conventional and negotiated rulemakings; instead, the findings emerge from the data analysis, based on comparing responses (either coded or direct) to the same interview instrument.<sup>1</sup> Allowing open-ended responses prevented us from miscasting responses into preconceived but incorrect categories and from losing information by coding “other” when respondents came up with an unanticipated response. All codes were verified by the person who entered the data, who was never the person who coded the data. There were few differences; differences were resolved by discussion between the coder and the interviewer.

### Description of the case study rules

While we make no claim of rule-by-rule comparability, and our analyses below do not rest on that kind of comparability, we list below and briefly discuss each negotiated rule and the matching conventional rule. The following are brief descriptions of the negotiated and

conventional rules taken from summaries available in EPA documents and information obtained from the interviews. By no means comprehensive, they merely provide some sense of the rules' subject matters. There are 8 negotiated rules and 6 conventional rules. For each conventional rule, we describe not only the rule but also the negotiated rule we found it to resemble most closely. Recall, however, that the important comparisons, and the ones we report on below, are those that match the negotiated rulemaking group as a whole to the conventional rulemaking group as a whole. No attempt has been made to compare individual negotiated rules to their conventional counterparts, partly because of differences in the rules, and partly because the number of respondents to each conventional rule was too small to allow statistically reliable comparison of a single pair of conventional and negotiated rules.

*Negotiated rules:*

Woodstoves. This rule is a new source performance standard for woodburning stoves, implementing part of section 111 of the Clean Air Act. It covers emissions from newly manufactured units. Work on the negotiation began in 1986 and the final rule was issued in 1988. In addition to setting emissions limits, respondents noted a number of other issues, including the means of limiting emissions and the testing procedures by which wood stoves would be certified as being in compliance with the standard. Several respondents indicated the impact of the standard on the industry's smaller manufacturers was also a major concern.

Asbestos in Schools. This rule was developed under a mandate in the Asbestos Hazard Emergency Response Act of 1986 that required inspections and abatement of asbestos containing materials in school buildings. Work on the rule occurred and was completed in 1987. Completion of this rule required consideration of a number of issues. These included the definition of what constituted a school building; the conduct of inspections for asbestos; types of laboratory analysis required and laboratory equipment to be used; and record keeping, reporting, and the type of plans of action that school districts and independent schools would be required to develop and submit for approval.

Hazardous Waste (or Underground) Injection. This rule implements the prohibition on underground injection of hazardous wastes found in the Hazardous and Solid Waste Amendments of 1984 to the Resource Recovery and Conservation Act. The negotiating committee began work in 1986 but did not reach final consensus. The Agency did issue a final rule in 1988. Among the important issues considered during these negotiations were whether underground injection of wastes was to be allowed and, if so, under what conditions. In addition, the implementation of the "no migration" of waste policy was a major focus of attention during the rulemaking, particularly how this was to be defined and enforced.

Hazardous Waste Manifest. This rule was a response to a petition received by EPA from the Association of State and Territorial Solid Waste Management Officials requesting standardization and improvement of the then-current manifest system. The negotiating committee began work in 1992. To date, the rule has yet to be issued. The central issue in this rulemaking was the appropriate way to introduce uniformity into the manifest form used in the

transport and in other activities related to hazardous wastes. Great variation in forms could be found across state jurisdictions and certain substantive policies, such as those dealing with returned or rejected wastes.

Minor Permit Modifications. EPA undertook this rule to revise the existing permit system governing minor modifications under the Resource Recovery and Conservation Act. The negotiating committee began work in 1986 and the Agency issued its final rule in 1986. The fundamental issues in this rulemaking were the types of modifications that would be considered “minor” and the procedures that would be required to obtain permission for such changes. Under the previous system, all changes, whatever their magnitude, were subject to a uniform process. In this case, the rule-making would have to balance speed and flexibility for inconsequential changes, with the right of the public to be informed and to participate in permit modifications.

Coke Ovens. This rule establishes national emission standards for coke oven batteries. The 1990 Clean Air Act Amendments required that the rule be issued by December 31, 1992. The negotiating committee began work in 1992 and published a proposed rule in 1992. The issues associated with this rulemaking are common to Clean Air regulations. They included the emission standards themselves, methods by which inspections of coke ovens and attendant facilities would be undertaken, and dates for compliance.

Fugitive Emissions. This rule was undertaken by EPA in an effort to determine if a new approach to emissions leaks from equipment was feasible under sections 111 and 112 of the Clean Air Act. The negotiating committee began work in 1989 and the final rule was issued in 1994. The committee considered both the types of volatile organic compounds that would be subject to leak standards and the types of equipment, such as pumps and valves, that were to be regulated. Also considered were testing requirements for different types of processes, monitoring techniques, permissible actions when leaks are found, and other dimensions of compliance and enforcement.

Clean Fuels. The 1990 Amendments to the Clean Air Act required regulations governing the use of reformulated and oxygenated fuels. A negotiating committee began work in 1991 and a final rule was issued in 1994. By any measure, this was a highly complex rulemaking, involving a large number of issues. In addition to setting basic standards for the use of these types of fuels, the negotiating committee had to deal with fuel availability, the seasonal and regional variations affecting the standards, the use of mathematical models to determine compliance, and whether compliance would be gauged using an averaging or a “gallon by gallon” principle. Several issues related to these fuels, notably the use of ethanol and NOX emissions, were not considered during the course of the negotiations, but rules covering them were issued separately by the Agency. Considerable controversy attended these rules. While they were separate actions, they are frequently associated with this reg neg.

*Conventional rules:*

“Third-Third” Rule. The Resource Conservation and Recovery Act established a schedule of hazardous wastes to be regulated and divided the overall list into thirds. This rule

covers the third third of that schedule of hazardous wastes, as well as a limited number of wastes from the first and second thirds that were included in the so-called "soft hammer" category. The rule covers a number of subjects, including the Act's prohibition on land disposal and treatment standards of the wastes in question.

Phase I respondents recommended this rule as a match for the Hazardous Waste Injection (HWI) negotiated rulemaking. The reader will recall that the HWI also implemented sections of RCRA, dealt with the underground disposal of potentially hazardous materials and considered the possibility of outright prohibitions of certain practices. We agreed with this conventional rule recommendation because of these similarities in subject matter and the regulatory decisions they required.

Superfund Right-to-Know. Amendments to the Superfund statute enacted by Congress in 1986, known as the Emergency Planning and Community Right-to-Know Act, authorized the Administrator of EPA to establish reporting thresholds for hazardous chemicals present at facilities. In effect, the rule established quantities of regulated chemicals below which the facility would not have to comply with the Act's reporting requirements.

Phase I respondents recommended this rule due to its perceived similarity to the Hazardous Waste Manifest (HWM) negotiated rulemaking. The HWM reg neg dealt with comparable reporting issues associated with hazardous substances and materials, and sought to achieve a degree of standardization in reporting forms and uniformity in what was reported. We were persuaded that this conventional rule was acceptable for inclusion in the research.

Lead Paint. The Residential Lead-Based Paint Hazard Reduction Act of 1992 required promulgation of rules to require notification of purchasers and lessors of houses of the possibility of lead-based paint hazards. The rule required a pamphlet and dwelling-specific information be provided those who the legislation sought to protect and that those persons be given ample opportunity to assess the potential risk before having to complete a purchase or enter into a lease.

Phase I respondents considered this rule similar to the Asbestos-in-Schools negotiated rulemaking. Like that reg neg, it dealt with a potentially dangerous substance found in buildings, inspection and notification issues, as well as a number of other matters. While the Asbestos in Schools rule covered a wider array of topics, we considered the fundamental regulatory issues being addressed as sufficiently similar to merit adding the Lead Paint rule to our conventional rulemaking research set.

Lead Smelters. Under Section 112 of the Clean Air Act, the Environmental Protection Agency is required to regulate categories of hazardous air pollutants. This rule established a National Emission Standard for Hazardous Air Pollutants (NESHAP) for new and existing lead smelters. It calls for reduction of hazardous air pollutants from new and secondary lead smelters to the "maximum degree achievable through the application of maximum achievable control technology," which is specified in the rule.

Phase I interviewees thought that this rule matched up well with the Wood Stoves negotiated rulemaking, and we agreed. Both are NESHAPs that deal with a relatively small and narrowly focused source of air pollution. The similarities in both the basic regulatory issues and relative situations of the affected industries were persuasive.

Stormwater. This rule deals with the National Pollution Discharge Elimination System (NPDES) permitting system as it applies to stormwater-related discharges from a variety of industrial activities in a number of regions of the country. The rule contains a final general NPDES permit for several dozen industrial categories that discharge into large and medium-sized municipal separate water systems.

Respondents in Phase I interviews thought this rule was comparable to the RCRA Minor Permit Modifications rule. While written to implement a different EPA statute, it too deals with the content of permits and the rights of the public when such permits are changed. The likelihood that both types of permits would affect a similar grouping of public sector interests was influential in our decision to include Stormwater in our conventional rule set.

Petroleum Refineries. This rule, also related to Section 112 of the Clean Air Act, establishes a NESHAP for petroleum refineries located at major sources. The rule defines the "petroleum refinery affected source" in order to identify emission points subject to the regulation. The rationale for inclusion of this rule in the group of conventional rule that we studies is virtually identical to that outlined above for Lead Smelters. Respondents regarded it as comparable to the Coke Oven Batteries negotiated rulemaking. Both deal with substantial industries. Like the Lead Smelter/Wood Stoves pair, both the negotiated and conventional rules in this pair are also NESHAPs.

As a group, the conventional rules provide a range of technical issues, impact and interested parties quite comparable to those in the reg neg group. The opportunity they provide for comparison is as strong as any group of rules that could be assembled using any reasonable selection techniques.

The core of the method by which we compare negotiated rules to conventional rules is the extensive questionnaire we employed in our interviews with negotiated rulemaking participants. The same questions were asked of both pools of respondents, with obvious changes where a given question was linked only to one or the other technique. This approach allows for direct comparison on the widest variety of dimensions ever attempted in a study of this sort.

Our initial research design recognized the possibility that securing willing and knowledgeable respondents for interviews on conventional rules might be more challenging than developing the pool for negotiated rules. Random samples sufficient for a maximum of twenty interviews were taken from the lists of all those who had submitted written comments on the proposal that had emerged from the conventional rulemaking. In working through these initial sets of prospective respondents, a large number could either not be located or declined to participate, often stating that they remembered little about the rulemaking or their participation. In one instance, the inability to obtain a reasonable set of respondents, after several attempts to supplement the original list, led us to drop the rule from the study. The following summarizes the number of interviews we conducted for each of the rules:

<u>Conventional</u>		<u>Negotiated</u>	
Lead Paint	10	Asbestos in Schools	16
Superfund Right to Know	9	Hazardous Waste Manifest	19
RCRA Third Third	10	Underground Injection	6
Petroleum Refineries	6	Coke Oven	11
Smelters	9	Wood Stoves	7

Stormwater	7	Minor Permit Modifications	10
		Fugitive Emissions	12
		Clean Fuels	20

While 51 conventional rule respondents is not as large a sample as we originally intended, it is sufficient in size and diversity for the types of statistical analyses needed to compare the conventional rules as a whole to the negotiated rulemakings reported in Phase 1.

I describe the results below, using the focal categories of outcome indicators and possible explanatory factors to structure the comparison of negotiated and conventionally written rules. The first set of categories pertains to outcome indicators; they are followed by characteristics that pertain to possible explanatory factors. Multivariate analysis concludes the report.

## **OUTCOME CATEGORIES**

### **Results: Quality of the Output of the Process**

#### *Conflict, Consensus and Satisfaction*

There are competing hypotheses about the relation between reg neg and conflict, with most scholars expecting reg neg to reduce conflict among the regulated parties, and between the regulated parties and the regulating entity; but at least one scholar speculates that, compared to conventional rulemaking, negotiated rules will fail to reduce conflict and is even likely to increase it. We use our survey data and data from public comments to test these expectations. We discuss the survey results first.

#### Survey Results

If negotiated rules generate less conflict than conventional rules, we should observe participants in negotiated rules to be more satisfied with the both the process and the eventual outcome (i.e., the final rule). Further, if conflict implies a lack of consensus, we should also observe more agreement among respondent's assessments of the final rules that emerge from the negotiated than from the conventional process. In our survey, we asked participants to rate their assessment of both the benefits and the costs of the final rule to their organization on a scale that ranged from -5 ("couldn't be worse") to +5 ("couldn't be better"). We added these two responses to form a "net benefits" scale that ranged from -10 (both the benefits and the costs "couldn't be worse") to +10 (both the benefits and the costs "couldn't be better"). We also asked survey respondents to rate their perception of the rule's general "efficiency", its general "cost effectiveness", and the process overall on the same -5 to +5 scale. Table 1 reports the mean and the standard deviation of these, and other, responses. In each case, the rating of the negotiated rule is significantly ( $p < .0001$ ) higher than that of the conventional rule. If conflict breeds dissatisfaction, then these results are consistent with the contention that negotiation is less conflictual.

Table 1 also reports the standard deviation of responses to each of the rating scales. The table reveals generally (but not always significantly) higher standard deviations of responses to the ratings of the conventional rules than to the negotiated rules (despite higher means for the negotiated rules). This result is consistent with the hypothesis that negotiation reduces conflict among the parties, resulting in more homogeneous, consensual views of the eventual outcome.

Table 1 further reveals that, with respect to other aspects of the final rule, the scale means are consistently and, with one exception, significantly higher for the negotiated rules, indicating

higher level of satisfaction with the final rule. Table 1 also shows that, again with one exception, the standard deviation of the ratings of these other aspects is smaller (and often significantly smaller) for the negotiated rules, indicating less disagreement about the assessments of the negotiated final rules.

Another indicator of overall satisfaction emerges indirectly from open-ended responses when we asked participants to describe what they liked about the process, and what they didn't like. Table 2 reports the mean number of items mentioned as "likes" per respondent for the conventional and negotiated rules. When asked what they liked about the process, participants in negotiated rules mentioned significantly more likes per respondent than participants in conventional rules (the difference is .5 mentions per respondent). According to Table 3, negotiated rule participants also report more dislikes, but the difference is smaller (.3 mentions per respondent, significant at the .05 level under a 1-tailed test). This evidence, while not strong, indirectly reveals somewhat greater satisfaction among negotiated rule participants than conventional rule participants. Once again, if conflict breeds dissatisfaction, then these results are consistent with the view that negotiated rules engender less conflict.

### Written Comments

We examined written public comments on the proposed negotiated and conventional rules by selecting at random a sample of 10 comments from the population of comments submitted on each rule. We coded the comments as positive, negative, or neutral. The positive category included only those comments that offered unqualified support for the rule. The negative category included comments that opposed the rule outright or made recommendations for changes without offering general or specific support for EPA's actions. The mixed category captured those comments that either offered some combination of both support and criticism or suggestions for changes. Table 4 shows that there are significantly more negative (and fewer mixed) comments among the conventional rules than among the negotiated rules ( $p < .001$ ), consistent with the expectation that negotiation reduces conflict. However, public comments on any proposed rule are likely to be characterized by reservations of some sort expressed by those who take the trouble to file written comments: criticism of any sort is far more likely than praise. If negotiated rules reduce conflict, a smaller proportion of the comments should express reservations. While there are significant differences between the rules in the distribution of negative and mixed categories, if these were combined into a single category called "reservations," the experience of the public comment dimension of these two sets of rules would be very similar, and no different statistically ( $p < .35$ ). In terms of the number of comments, there were a total of 667 comments on the 7 proposed rules that emanated from the negotiating committees, or about 95 comments per negotiated rule. The Clean Fuels rule was an outlier in this respect, generating 322 comments. Under these circumstances, the median is more reflective of the typical case; the median number of comments per negotiated rule was 58. Comparable data for the 6 conventional rules shows a total of 3256 comments, or 542 comments per rule. The median number is 535. Clearly, the conventional rule group attracted far more comments than the negotiated rule group. Still, the overall evidence based on comments, while sketchy at best, does not support the argument that negotiation augments conflict; nor, however, does the evidence consistently support the expectation that negotiation reduces conflict.

### **Results: Quality of output of the process**

### *Agency responsiveness*

In order to tap respondents' perceptions of agency responsiveness to their participation, we asked about the impact of public participation in general and about the impact of the respondent's own personal participation on both the proposed and final rule. It is not surprising that negotiated rule participants are significantly more likely than conventional rule participants to view the public in general, and their personal participation, as having "major" impact on the proposed rule (Tables 5 and 6).

It is also not surprising that conventional participants are more likely than negotiated rule participants to see "major" differences between the proposed and final rule. Nor is it surprising that conventional rule respondents are also more likely than negotiated rule participants to believe that public participation in general, and their personal participation, had a "major" or "moderate" impact on that change (Tables 7, 8, and 9). Negotiated rules are designed so that public participation should have its greatest impact on the proposed rule. Conventional rules are structured so that public participation should have its greatest impact on the final rule, meaning that one should expect to observe more change between proposed and final rules when rules are processed conventionally than when they are negotiated. In this respect, both procedures appear to operate as they were designed.

Given these differences in how access is designed, the existence of differences in the perceived responsiveness of the agency's rulemaking process to affected parties must be gauged overall, rather than at the two separate points of access. To measure EPA's overall responsiveness to public participation, I add two variables. Specifically, I add the respondent's perceived contribution of public participation to the proposed rule (measured on a 1-4 scale, ranging correspondingly from major to none) to the respondent's perceived contribution of public participation to changes between the proposed and final rule (also measured on the same 1-4 scale). While the number of responses is small, because only a minority of respondents answered both questions, the mean score among negotiated rule respondents is only slightly higher than that of conventional participants (Table 10). On a scale that can range from 2 to 8 (where 8 is no public influence, and 2 is major public influence), the mean for negotiated rule participants is 4.7 and that for conventional rule participants is 4.2; the half-point difference is not statistically significant. Similar results emerge for the total impact of the respondent's own contribution. I sum the respondent's assessment of his or her personal contribution to the proposed rule (measured originally on a 5-point scale, but recoded to a 4-point scale where 1 is "major" and 4 is "none") and the respondent's assessment of his or her own contribution to change between proposed and final rule (measured on the same 1 to 4 scale)<sup>ii</sup>. The results reveal slightly higher means for total personal than total public contributions (indicating less total personal influence than public influence). For negotiated rule participants, the mean total personal contribution score is higher than it is for conventional rule participants (5.2 versus 4.8, respectively), but the difference is not significant (Table 10). If the direction of difference means anything, it suggests that conventional participants perceive their public and personal contribution to rulemaking to have slightly more impact (i.e., a lower scale score) than negotiated rule participants perceive their contribution to have. However, the lack of significance indicates that it is probably safer to conclude that the agency is equally responsive to outside pressures in both rulemaking processes.<sup>iii</sup>

## **Results: Quality of output of the process**

### *Legitimacy of the output and the process among affected parties: Conflict and Litigation*

We examined litigation, but, while our data are not as comprehensive as that used by Coglianese (1997), our evidence is consistent with his. We are unable to definitively compare the litigation experiences of the conventional rules we studied to those of the negotiated rulemakings studied in Kerwin and Langbein (1995). This is due in large part to the limitations of the approach we used to determine the occurrence and outcomes of litigation. Information about non-enforcement litigation involving the negotiated rules came from the Administrative Conference of the U.S.; similar information involving the conventional rules came from the survey respondents who participated in those rulemakings. We were informed that two of the six conventional rules (or 33%) we studied were the object of some form of non-enforcement litigation. Litigation had also been filed that affected the one conventional rule (refueling) we dropped from the study due to difficulties locating interview respondents. This compares with the two negotiated rules (among seven) (29%) that we found in our study to be subjected to similar non-enforcement legal challenges. While the numbers are too small for statistical comparison, they conform to Coglianese's findings of little difference in litigation rates between conventional and negotiated rules, and overall litigation rates of under 40%.

Coglianese's (1997) research employs more rigorous methods for analyzing the occurrence of litigation and reports findings that bear on our research. Coglianese uncovered evidence of one additional legal challenge to a negotiated rulemaking that we did not (Fugitive Emissions). More important, in examining overall litigation rates for significant EPA rules, he finds little difference in the non-enforcement litigation experience of negotiated and conventionally written rules (33% and 35% respectively). Resource limitations prevented us from replicating his methodology for the conventional rules studied here, but our superficial evidence also suggests little difference in litigation rates (29% and 33% for negotiated and conventional rules, respectively).

## **Results: Capability of the Agency and the Parties for Making Future Similar Decisions**

### *Conflict, Learning and Information*

We mentioned above that there is significantly less variance in the respondents' ratings of negotiated compared to conventionally written final rules, or there is no significant difference. (Recall Table 1.) If less variance indicates less conflict and more agreement, this evidence would be consistent with the hypothesis that negotiating rules reduces conflict, or at least does not exacerbate it.

The impact of negotiation on learning is connected to the issue of the link between negotiation and conflict. By learning more about the issues, and by learning more about one another, the amount of conflict can increase--or decrease, depending on the theory. We have seen that negotiation appears not to increase conflict. We provide empirical evidence to show that negotiation is also associated with more learning.

Consider first various measures of the amount learned. We asked respondents to mention what they learned that was new to them during the course of the rulemaking. Table 11 gives the results, which include multiple responses from many of the respondents. It shows, first, that nearly 20% of conventional rule participants reported learning nothing new, compared to no negotiated rule participant who offered that response. Further, negotiated rule participants are

far more likely to say that they gained new technical information, better knowledge of the issue, and new information about the positions of other parties. Overall, 42% of negotiated rule participants volunteered learning these sorts of new information, compared to 13% of conventional rule participants. Of those respondents who mentioned learning something new, there were significantly ( $p < .0001$ ) more mentions of new items learned among negotiated rule participants (2 items per respondent) than among conventional rule participants (1.6 items per respondent).

When asked what they liked about the process, negotiated rule participants are far more likely than conventional rule participants to mention something that they learned. As Table 12 shows, 42% of negotiated rule participants volunteered that they liked learning about the positions of others (15%), about the process (10%), about the issue (9%), and about EPA or about information for use in the future (8%). This compares to 13% of conventional participants who mentioned learning something as an example of what they liked about the process. No conventional participant reported learning about the positions of others among their likes (compared to 15% of negotiated participants).

### **POSSIBLE EXPLANATORY FACTORS**

#### **Results: Representation of Interested and Affected Parties**

When asked whether anyone was not represented in the rulemaking who should have been, Table 13 shows that, while a higher proportion of conventional rule participants believe that a party was omitted, the difference is not statistically significant. Specifically, a majority of both negotiated and conventional rule participants believe that the parties who should have been involved, were involved (66% versus 52%, respectively), but this difference is not large enough to differ from what would be expected if the null hypothesis of no difference were true. Further, when asked what they disliked about the process, less than 10% of both negotiated and conventional participants volunteered “disproportionate influence.” (See Table 14.)

We also asked respondents whether any party seemed to have disproportionate influence during the development of the rule. (See Table 15.) About the same proportion responded with a direct “yes” answer in both types of rulemakings (44% in conventional and 48% in negotiated rules). Conventional rule respondents were more likely to respond with a direct “no” than negotiated rule respondents (56% versus 25% respectively), but negotiated rule respondents also volunteered that much of this participation reflected “air time” or noise at the negotiating table but not actual influence. When the results in Table 15 are viewed as a response of “yes, there was a party with disproportionate influence” versus a category combining “no” and “yes--but it’s participation, not influence,” the significant difference reported there disappears. Further, when those who saw disproportionate influence were asked who had disproportionate influence, Table 16 reveals that EPA is as likely to be seen as having disproportionate influence in negotiated as conventional rules (25% versus 32%, respectively). It follows that roughly equal proportions of participants in negotiated and conventional rules view other participants as having disproportionate influence.

We went on to ask respondents who saw disproportionate influence what it was about the rule that led them to believe that lopsided influence existed. Table 17 shows that negotiated rule participants are significantly more likely to see excessive influence by one party in the process

rather than in the rule itself, as compared to conventional participants (55% versus 13%, respectively). However, when asked what it was about the process that fostered disproportionate influence, conventional rule participants were twice as likely as negotiated rule participants to point to the central role of EPA (63% versus 30% respectively, as shown in Table 18). By contrast, negotiated rule participants pointed to other participants who were particularly vocal and active during the negotiation sessions (26% of negotiated rule respondents versus no conventional rule respondents).

### **Results: Preexisting Relationships among the Parties**

When asked whether EPA encouraged their participation, participants in negotiated rules were significantly more likely to answer in the affirmative than conventional rule participants (66% vs. 33%, respectively). (See Table 19.)

### **Results: Intensiveness of Deliberation**

#### *Costs*

There is widespread concern about the costs of regulatory negotiation, particularly as it applies to the parties directly involved in the negotiation. High costs can deter some from participating in negotiation sessions, and can be a source of power asymmetry between large and small regulated businesses, and between business and public interest group participants in negotiation sessions. However, aside from issues of equity which I consider separately in Langbein (2002), no matter what the initial cost of participation in a negotiated rule, if the net benefits of participation in reg neg exceed those of participation in conventional rulemaking, then even the high up-front cost might not deter participation. Our survey included a number of items concerning these issues. We asked participants how much they spent for participation in the particular rulemaking under discussion. Specifically, we asked about the number of professional staff hours, the number of clerical staff hours, and how much was spent on research and information collection and on legal counsel and/or consultants. We also asked about the proportion of “available resources” that this spending represented, the subjective magnitude of the costs, and the subjective perception of whether the benefits of participation exceeded the costs. Table 20 reports our findings.

One concern is that participation in reg neg is more costly than participation in conventional rulemaking. Reg neg participants report spending significantly more than conventional participants in terms of professional staff hours; the magnitude of this difference is nearly 2000 staff hours (about 1 person-year). However, although the table is not shown, this difference is mostly attributable to the fact that EPA spends significantly more than other participants on regulatory negotiation. (Recall that EPA is not a “participant” in conventional rulemaking, and so there were no EPA respondents among the conventional rule participants.) Once EPA’s response is removed, respondents report using 138 more professional staff hours for negotiated than conventional rules, but the difference is not statistically significant. Reg neg participants also spend nearly twice as much as conventional participants in terms of resources relative to those available. (This difference is significant and is not attributable to EPA’s response.) However, with respect to clerical hours and monetary resources for research, information, legal counsel, and consultants, the differences are not significant.

We also asked respondents to state what they disliked about the process. As another indicator of costs, Table 21 reveals that 30% of the dislikes volunteered by negotiated rulemaking participants concerned some aspect of costs, measured in time, money, or personal aggravation, compared to 9% of conventional rulemaking participants, whose dislikes centered on EPA or the quality of the rule.

We went on to inquire of respondents whether the benefits of participation exceeded the costs. About 78% of all respondents believed that the benefits of participation outweighed or equaled the costs. The proportions who share this belief do not differ between negotiated and conventional rule participants. Nonetheless, the data in Table 22 are consistent with the previous evidence that the benefits of participation in negotiated rules exceed those of participation in conventional rules. Even if the costs of participation in negotiated rules are also higher, the ratio of benefits to costs appears no different. On the average, participation in either conventional or negotiated rulemaking is, *ex post*, a “rational” decision.

### **Results: Procedural Quality of Deliberation**

#### *Source of Information*

Negotiated rule participants are more likely than conventional rule participants to see other participants as a source of information. For example, when asked about the source of the new information that they learned during the process, negotiated rule participants were far less likely to cite EPA and far more likely to cite other participants as the source of their new information. (See Table 23.)

When asked how they got the information (new or old) that they needed to participate in the rulemaking process, the modal respondent in both types of rulemakings pointed to their own resources (about a third in each type of rulemaking). (See Table 24.) However, negotiated rule participants are more likely to report relying on other participants for the information they needed to participate (17% versus 5%), while conventional participants are more likely to report reliance on groups in their own coalition (27% versus 13%). Reliance on EPA is not that much different between the two types of rulemakings.

We also asked respondents about the type of information they needed to participate. Table 25 shows that negotiation participants were more likely than conventional rule participants to volunteer needing information about the positions of other parties (18% versus 7%), while conventional rule participants were more likely to report needing information about the relevant statute or proposed rule (30% versus 10%).

Despite the differences in the amount learned and in the source of the information, there is no significant reported difference between the two types of rulemaking procedures in terms of the amount of information that was needed but not available to the respondent. Table 26 shows that, when asked whether they needed certain information to participate in the rulemaking but didn't have it, about half of the respondents in both types of rulemakings responded that they needed no additional information beyond what they had.

Overall, this evidence upholds the expectation that, compared to conventional rulemaking, which is hierarchically directed by EPA, participants learn more in negotiated processes and that negotiated processes are more horizontal in their sources of information.

However, the consequences of this informational edge are not so clear. Theorists allege, on one hand, that learning more can reduce conflict by increasing understanding of the position of those on the other side of an issue (e.g., Kelman, 1992) or, on the other hand, that learning more will exacerbate conflict by increasing the number of issues on which participants can

disagree (e.g., Coglianesi, 1997). We proxy both satisfaction and conflict. We first measure satisfaction with the final rule in a variety of ways (rating of the overall process, rating of the rule's economic efficiency, rating of the rule's cost effectiveness, and rating of the net benefits of the rule to the respondent's organization). We next proxy conflict as disagreement (i.e., the amount of deviation of the individual response from the group mean) in those ratings. Although we do not display the results, bivariate regressions of the 4 rating variables on the number of new items learned show no significant regression coefficients. Further, regressing the absolute value of the disagreement residuals reveals that the absolute value of the distance from the mean rating is also not related to the number of new items learned.

Thus, it appears that the amount learned bears no positive or negative relation to our measures of conflict in rulemaking. However, even if learning has no clear instrumental value, it may still have inherent value, and, on this dimension, negotiated rulemaking appears superior to conventional rulemaking. As we have seen, negotiated rules also appear to engender higher ratings of the final rule than conventional rules, and less disagreement (lower standard deviations). But there appears to be no direct connection between the amount learned and our measures of satisfaction/disagreement with the final rule.

## **Results: Procedural Quality of Deliberation**

### *Informal rules and lines of communication*

There is often a presupposition that, compared to negotiated rulemaking, there is no informal negotiation or similar consensual process in conventional rulemaking. There is little empirical evidence one way or the other. We asked reg neg respondents with whom they communicated outside of the formal negotiation sessions; similarly, we asked conventional rule participants with whom they communicated during the rule making process. Table 27 shows that conventional respondents are somewhat more likely to communicate directly with EPA, and with others in their own area of interest, than reg neg participants, but the differences, though significant, are not large. We went on to ask those who acknowledged informal communications during the rulemaking process whether any of these communications could be characterized as negotiations. We expected to find an acknowledgment of informal, sidebar negotiations among reg neg participants, but we were uncertain regarding the possible existence of informal negotiation in conventional rulemaking. Table 28 shows that, as expected, nearly half of negotiated rule respondents participated in informal negotiations that went on along with the formal negotiation sessions. The same Table shows that significantly fewer, but still one-quarter, of conventional rule participants also carried on informal negotiations during the rulemaking process. Table 29, however, reveals a major difference between the negotiations carried on by conventional and reg neg participants. For the modal conventional rulemaking participant, the guiding decision rule was "what EPA wanted," which is not a consensual process. By contrast, for reg neg participants, the guiding decision rule was "what we could live with" or "unanimity," both of which are more consensual processes.

Both rulemaking processes entail informal negotiations among the parties, whether bilateral or multilateral. Reg neg also entails formal negotiations, while conventional procedures do not. No matter whether they are formal or informal, relatively more consensual decision rules (i.e., those that require more than a majority for agreement) should lead to greater satisfaction with the eventual outcome, and to greater homogeneity in those judgments. Table 30-31 partly upholds those expectations. Consider the results for informal negotiations. Although informal, these negotiations are not chaotic; they are governed by unstated rules. Specifically, Table 30

reveals that ratings (on a -5 to +5 scale) of the overall process are substantially lower when the governing decision rule in these informal negotiations is “what EPA wanted” than when any other decision rule is used. (The rating is second highest when the decision rule is “what one party wanted”, but the number of responses is too small for this result to be meaningful; further, the “one party” is the respondent himself in at least one of the two cases.) The standard deviation of judgments is largest when the decision rule is “what EPA wanted,” or when the decision rule is consensual (unanimity, or “what people could live with”). Table 30 also reveals that judgments of net benefits to the respondent’s organization (measured on a -10 to +10 scale) are lowest, and negative, when the decision rule is “what EPA wanted.” The standard deviations of the net benefit ratings are not much different among the different decision rules. Overall, these results regarding the type of decision rule used during informal negotiations do little either to support or contravene the expectation that more consensual decision rules reduce conflict and raise satisfaction.

Only reg negs use formal negotiations. We asked all the reg neg participants what constituted consensus in their formal negotiation sessions. Once again, the expectation is that more consensual decision rules will be associated with greater satisfaction with the process, with higher ratings of organizational net benefits, and with less conflict about those judgments. Table 31 is consistent with these expectations. It shows that ratings of the overall process (on a -5 to +5 scale) are lowest, and the standard deviations highest, when the decision rule is “what EPA wanted;” the other differences are not significant. The table also shows significantly lower, and negative, net benefit ratings (and the highest standard deviation) when the decision rule is not consensual (“what EPA wanted”). More consensual processes yield significantly higher net benefit ratings, and more agreement.<sup>iv</sup> (“Majority” and “supramajority” yield the highest net benefit ratings, and are not very consensual, but the number of responses is very small.)

The overall conclusion is that negotiated rulemaking indeed appears to be more consensual than conventional rulemaking, consistent with its intended design. Further, while we have no direct evidence on conflict, there appears to be somewhat greater satisfaction with the process, and with the net benefits of the final rule to the respondent’s organization when consensual processes are used, either informally or formally. When formal negotiation processes are used, as in reg neg, there is also less conflict about the outcome when the decision rule is consensual than when it is imposed by EPA.

## **Results: Procedural Quality of Deliberation**

### *Setting the agenda and deciding on the issues to be decided*

The data suggest that our supposedly “comparable” negotiated and conventional rules are in fact not so comparable, indicating that EPA officials actually do not select just any rule for negotiation.

Specifically, when asked how the issues for the rulemaking were established, significant differences between respondents emerge (Table 32). The participants in negotiated rulemaking were far more likely than their counterparts to report that the participants in the process established at least some of the issues to be decided (44% to 2%). Conventional rulemaking

parties were more likely claim ignorance of the process by which issues were established than those in reg negs (17% to 0%) or that the issues were set by regulated entities (11% to 0%). A majority of both groups reported that at least some of the issues were set either by EPA or the legislation that provided the authority for the rule.

We asked respondents to describe in their own words the issues that were to be decided in the rulemaking, and we coded their responses into general categories that emerged from the data. We found that the types of issues appeared to differ between negotiated and conventional rules. Conventional rules are more likely than negotiated rules to entail issues regarding the standard (its level, timing, and/or measurement). The standard was identified as an issue in 52% of conventionally processed rules, compared to 31% of negotiated rules. (See Table 33.) By contrast, negotiated rules are more likely than conventional rules to entail compliance/implementation issues (58% versus 39%, respectively). Compliance issues are also more often cited by reg neg participants than by conventional participants as causing the greatest amount of conflict (53% versus 32%, respectively). Arguments about the standard varied only slightly between the two types of rulemakings (Table 34).

As to the resolution of the issues once they were identified, the conventional rulemaking respondents were more likely to report that not all were decided by the rulemaking (30% to 14% for negotiation participants ) but also more likely to report that there were no "surprise" issues during the course of the rulemaking (74% to 44%). (See Tables 35 and 36.)

#### *Understanding the Issues to be Decided*

Reg neg participants also appeared to have a more nuanced view of the issues to be decided than conventional participants. We interpreted this detail as a perception of "complexity." I computed a complexity score by adding the number of sides mentioned on each issue that was mentioned, divided by the number of respondents in the rulemaking. Thus, as measured, perceived complexity is an aggregate property of the rulemaking, and not a property of each individual respondent. The more issues and the more sides to each issue, relative to the number of respondents in the rulemaking, the more nuanced or complex the view of the rulemaking. The resulting score ranged from 1.9 to 5.0 issue-sides in a rulemaking, with a mean complexity score of 3.6. Negotiated rulemaking's mean complexity score was a relative high of 4.1 issue-sides, while the conventional rulemaking mean was a relatively low 2.5. This difference is significant at the .0001 level, and means that negotiated rules were perceived to have more issues and/or more sides on each issue than conventional rules. (See Table 37.)

In addition to the complexity or detail with which issues and sides were perceived in the two kinds of rulemakings by the average respondent, we were also struck by the ability of some respondents to perceive more differences in issues or sides than others. For instance, in some rulemakings, not one respondent could identify more than, say, 3 different sides and one issue (e.g., the level of the standard is the single issue, and the 3 sides are business, environmentalists, and EPA). Yet in other rulemakings, there would be at least one respondent who mentioned 4 different issues, with 3 different sides on 2 of these issues, and 2 sides on the other 2 issues. We characterized the latter rulemaking as one in which at least one respondent had a deeper or more clear understanding of the issues than in the former. We developed a "clarity" or understanding measure that counted the number of mentions of different issues or sides by respondents in a rulemaking. In the two examples above, the former rulemaking would score 3, and the latter rulemaking would score 10 (the maximum possible score that we could code). In our data, this "clarity" scale ranged from a low of 3 to a high of 10; the mean was 7.9. Reg neg participants

had a more clear understanding of the issues that were to be decided than the conventional participants: 6 different issue/sides were mentioned in the average conventional rulemaking versus 8.9 in the average negotiated rulemaking. This difference is statistically significant ( $p < .0001$ ). (See Table 37.)

### **What Matters: Multivariate Analysis**

These bivariate results may not hold up under statistical controls. For example, we have seen that reg neg participants are more satisfied with the overall process than conventional respondents, but we cannot attribute this to the type of rulemaking process. It may be that the reason for greater satisfaction is due to the different kinds of issues that negotiation entails--that is, their greater complexity, or the focus on compliance rather than on the standard itself. Similarly, it is not clear whether the greater overall satisfaction is attributable to the greater satisfaction with the substance of final rules produced by reg neg, or to greater satisfaction with various ancillary aspects of the reg neg process itself--or to factors not considered in our research.

The regression below incorporates numerous independent variables. There are two ancillary aspects of the reg neg process; two aspects of the perceived content of the rule; and several dummy variables. One indicator dummy captures the type of rule-writing process itself (reg neg vs. conventional). Another set indicates the affiliation of the respondent. A final dummy indicates the types of issues dealt with in the particular rulemakings. Table 38 lists the variables in the regression, their measurement, and their expected relation with the overall evaluation of the process. Table 38 also lists a number of variables that were included in various versions of the multivariate analysis but are not included in the results reported below. These variables are excluded because they were never significant in any version of any multivariate analysis.

Table 39 reports multiple regression results. Robust regression results, with stochastic terms clustered for each rule, are reported<sup>V</sup>. OLS standard errors were not used, because, within each rule, the respondents do not represent truly independent observations. Respondents clearly worked together on the negotiated rules, and so their responses are likely to be correlated. Further, for each rule, the interviewer was the same. Thus, the stochastic term is likely to be autocorrelated within each rule, and the correlation is likely to be larger within the negotiated rule panels than within the conventional rule panels. It is also likely that the variance of the residuals is likely to be larger for the conventional rule respondents than the negotiated rule respondents. That is, since conventional rule respondents were less involved in the process than the negotiated rule respondents, and because there are fewer of them in the sample, the error in their recollections could be larger. Unequal variance of residuals necessitates the use of robust regression estimates of standard errors, and correlation of residuals among the respondents to the same rule necessitates clustering the estimates according to the rule. Making these corrections had only a minor effect on the estimates of the standard errors, and does not alter the conclusions for the theoretically and empirically most important variables.

The model also survives a Hausman specification test of the hypothesis that factors omitted from the model that are specific to each rule are uncorrelated with the included independent variables. Rejecting the null hypothesis of no correlation requires a statistically significant chi-square test of the difference between the more efficient random effects estimator and the less efficient, but probably better specified, fixed effects estimator (Greene, 1990: 495).

The actual chi-square is 20.48 ( $p \leq .12$ ), which is not significant at conventional levels, and the null hypothesis of no correlation cannot be rejected. Finally, the equation was re-estimated as a general estimation equation using robust standard errors and a fixed correlation matrix of stochastic terms within each rule, but independent between rules; this combines the advantages of robust estimates of standard errors with the efficiency advantages of a random effects model. It was also estimated as a random effects model, where each stochastic term was hypothesized to vary with the rule. Finally, the equation was estimated using ordered logit and ordered probit. In no case did the central theoretical parameter estimates differ from those reported in Table 39 using robust regression.

Of the dummy variable indicators for the affiliation of the participant, compared to EPA as the reference group, that for big business is significant in these results, but the estimate is not stable when the method of estimation is changed. With respect to procedural characteristics of rule-writing, settling all issues was expected to improve participants' evaluations of the overall process, and it does. The regression coefficient is not large, but it is consistently significant and positive (1-tailed  $p < .049$ ). It was also expected that the belief that one party in the rulemaking had disproportionate influence would result in poorer evaluations of the overall process. The insignificant coefficient reported in Table 39 does not uphold this hypothesis. However, the estimate is not stable; it is significant and negative in 2 of the 6 estimating equations.

Even though negotiated rules are more complex and receive an overall more positive rating in the bivariate results, the direct impact of complexity on the rating of the overall process need not be positive. In fact, greater complexity, or "messiness," as measured by the number of sides plus the number of issues per participant in a rulemaking, may raise the psychic and possibly the time costs of decision-making. It could therefore produce poorer evaluations of the overall process. The consistently significant negative (and large) coefficient reported in Table 39 upholds this expectation.<sup>vi</sup> Specifically, each additional side or issue per respondent reduces the overall evaluation by 2 points on an 11-point scale, holding the other variables in the regression constant.

How well participants understood the issues is another characteristic of the process; greater clarity or understanding of the underlying issues is expected to improve overall evaluations of the process. While complexity measures the number of issues/sides per participant in a rulemaking, clarity measures the number of different issues or sides that respondents could identify in a rulemaking. It was expected that the ability to see different subissues and subconflicts meant that there was greater understanding of the issues, and that this would improve the overall evaluation of the rulewriting process. The consistently significant and positive (but not particularly large) coefficient in Table 39 upholds this expectation.

The regression measured two substantive aspects of the rule under consideration. One was the rating of the net benefits of the rule to the respondent's organization (perceived benefits less perceived costs), and the other was the respondent's rating of the "economic efficiency" of the rule to society in general. Both were expected to have a positive effect on the evaluation of the overall rulewriting process, and the consistently significant and positive coefficients reported in Table 39 uphold that expectation. Table 39 also reveals that when one of the primary issues to be decided concerns the standard (its level, measurement, or timing) the evaluation of the overall process is consistently and significantly higher (by 1 point on the 11-point scale) than when the primary issue concerns compliance or implementation.<sup>vii</sup>

Even though conventional rules are more likely to engage issues of the standard itself, while negotiated rules are more likely to engage issues of compliance or implementation, Table

39 reveals that, controlling for the type of issue, and for other aspects of substance and procedure included in the regression, the overall process of negotiating rules is still rated significantly higher (by 2.5 points on an 11-point scale) than the conventional process (2-tailed  $p < .0000$ )<sup>viii</sup>. That the coefficient for the reg neg versus conventional process dummy variable remains significant and substantively large even after introducing numerous “process” and “substance” control variables indicates that the control variables only partly explain why negotiated rulemaking is rated higher than conventional rulemaking.

Overall, the regression results show that participants prefer reg neg to conventional rulemaking mostly because they believe they get a better rule out of the process, and partly because some aspects of the process, but not all, work well. For example, in reg negs, more issues are settled, and participants have a better understanding of the issues, as measured by “clarity.” Perceived complexity, on the other hand, is greater in reg negs, yet it also contributes to significantly (statistically and substantively) poorer evaluations--yet it is not enough of a factor to overwhelm the still higher ratings that reg neg participants give to the overall process, even after numerous statistical controls.

### Policy Implications

Our research contains strong but qualified support for the continued use of negotiated rulemaking, at least at the EPA. The strong support comes in the form of positive assessments provided by participants in negotiated rulemaking compared to assessments offered by those involved in conventional form of regulation development. Further, there is no evidence that negotiated rules comprise an abrogation of agency authority, and negotiated rules appear no more (or less) subject to litigation than conventional rules. It is also true that negotiated rulemaking at the EPA is used largely to develop rules that entail particularly complex issues regarding the implementation and enforcement of legal obligations rather than those that set the substantive standards themselves. However, participants' assessments of the resulting rules are more positive when the issues to be decided entail those of establishing rather than enforcing the standard. Further, in the bivariate analysis, participants' assessments are also more positive when the issues to be decided are relatively more complex. Our research would support a recommendation that negotiated rulemaking continue to be applied to complex issues, and more widely applied to include those entailing the standard itself.

The generally strong evaluations are tempered, however, by other considerations related to the perceived net benefits of these alternative procedures. While the perceived costs of participation in negotiated rulemaking are higher than in conventional rulemaking, the net benefits of participation show no significant difference. We offer two recommendations that might improve the net benefits of negotiation in the development of rules. First, much of the marginal cost of participation in negotiated rulemaking, especially for smaller entities, is attributable to the large commitments of time by key staff required by numerous lengthy and intense formal negotiation sessions. These costs could be significantly reduced when the formal requirements of negotiated rulemaking are relaxed. The result is an informal process, sometimes called a “policy dialogue” by EPA staff, that potentially provides a similar venue for the horizontal exchange of information but does not carry the burdensome requirements of reaching a consensus. While the agency sacrifices the prospects of a collectively determined and mutually binding agreement, a multilateral policy dialogue could provide valuable information for the agency and a forum for the affected parties to provide information to one another and collective

advice to the agency. Such a multilateral policy dialogue lets EPA undertake the costs of setting up a forum for possible cooperation among regulated entities, who can potentially provide a proposal to EPA that at once reduces their compliance costs while complying with statutory requirements. While EPA apparently has expanded its use of policy dialogues, there has been no systematic evaluation comparing rules made using policy dialogues to rules developed with conventional and negotiated procedures. Whether policy dialogues actually increase net benefits by reducing the costs of participation while retaining many of the informational benefits of negotiated rulemaking remains unknown. Nor is it clear whether these dialogues are multi- or bilateral.

The second recommendation designed to improve the performance of negotiated rulemaking with regard to net benefits would introduce a new participant in the process, no matter whether the process is a formal negotiated rulemaking or a policy dialogue. We reported above that there is little evidence that any interested parties with significant interests in the outcomes of negotiated rulemakings were excluded from participation. We also report that the participants rate the organizational net benefits of the negotiated final rules, apart from the net benefits of their own participation, higher than those of conventionally written final rules. We do not, however, claim that the aggregate of these reported organizational net benefits reflect underlying social net benefits, partly because, even though the participants see no omitted players, representation on the negotiating committee could still be problematic. There are at least two reasons. First, there is no voice on the committee for “unorganized” interests--that is, for the median consumer/voter.<sup>ix</sup> Second, those represented on negotiating committee arguably reflect current net benefits of various alternative proposals, so that their consensus is a rough indicator of static efficiency. But there is no representative on the committee for dynamic efficiency--that is, for the future competitiveness of the affected industry (Averch, 1990), or for new industries (or unorganized interests) that might emerge. Prior research has shown that regulations often impose higher marginal costs on smaller firms (e.g., Maloney and McCormick, 1982; Neumann and Nelson, 1982; Pashigian, 1984, 1985; Bartel and Thomas, 1987; Leone, 1986; Wise and Sandler, 1994; Davidson, Davis, and Ekelund, 1995; Teske, Best, and Mintrom, 1994). These firms then exit the industry, resulting in a less competitive and more concentrated industry. Consequently, a spokesperson for dynamic efficiency should be included in a policy dialogue or on a negotiating committee. Both roles--spokesperson for the unorganized consumer and for the long run competitiveness of the economy--could be filled by a policy analyst formally trained in regulatory economics, politics, and cost-benefit analysis. It is possible that this role is performed by subsequent reviews of final rules by staff in the Office of Information and Regulatory Affairs in the Office of Management and Budget. But the general point is that the most effective way to ensure that both static and dynamic net social benefits are considered and addressed in negotiated rulemaking, whether formal or informal, is to place a competent professional advocate for them at the table.

Table 1: Mean and standard deviation of ratings of the rule and the process, by type of rule (-5 to +5 scale)

	Conventional			Negotiated			prob	prob
	$\bar{X}$	s	N	$\bar{X}$	s	N	$(\bar{X}_n - \bar{X}_c)(S_n - S_c)$	
Economic efficiency (general)	-5	3.2	48	1.5	2.6	97	<.0001	<.05
Cost effectiveness (general)	-4	3.1	48	1.5	2.6	97	<.0001	<.10
Rulemaking process (overall)	.3	2.5	48	2.1	2.5	99	<.0001	>.10
Benefits of rule to organization	-.1	2.8	47	2.0	2.6	98	<.0001	>.10
Costs of rule to orgn (high rating => low costs)	-.4	2.4	46	1.1	2.8	94	<.005*	>.10
Net benefits of rule** to R's organization	-.5	4.5	46	3.1	4.4	94	<.0001	>.10
Quality of Scientific Analysis	-.4	2.5	48	1.6	2.2	96	<.0001	>.10
Incorporation of appropriate technology	.6	2.1	44	2.1	2.0	94	<.0001	>.10
Ability of EPA to implement rule	.9	2.7	47	1.6	2.7	97	<.14	>.10
Ability of EPA to implement rule equitably	-.02	3.1	47	2.2	2.5	95	<.0001	<.05
Ability of others to comply with rule	1.3	2.7	46	2.8	1.9	77	<.0008	<.05
Own ability to comply with rule	2.2	2.7	41	3.4	1.9	62	<.02	<.05
Ability of rule to survive legal challenge	1.9	2.7	43	3.3	2.4	96	<.005	>.10
Ability of rule to survive legal challenge after enforcement	1.2	2.8	43	3.4	1.7	90	<.0001	<.05
Personal experience	.8	2.6	48	2.8	2.2	99	<.0001	<.10

\*Sign in wrong direction

\*\*Scale is from -10 to +10

Table 2: Responses to survey, by type of rule (\*includes multiple responses)

	Conventional	Negotiated	
<u>Number of likes</u>			
Mentions per respondent	1.6	2.1	
N	51	101	(p < .011)

Table 3: Responses to survey, by type of rule (\*includes multiple responses)

	Conventional	Negotiated	
<u>Number of dislikes</u>			
Mentions per respondent	1.6	1.8	
N	51	101	(p < .091)

Table 4: Responses to survey, by type of rule (\*=multiple responses)

	Conventional	Negotiated	
<u>Percent of open-ended comments positive, mixed or negative</u>			
Positive	7%	13%	
Mixed \	15% \	34% \	
Reservations*	93%*	87%*	
Negative /	78% /	53% /	
No. of comments	60	70	(p < .001) (*p < .35)

Table 5: Responses to survey, by type of rule (\*includes multiple responses)

	Conventional	Negotiated	
<u>Contribution of formal negotiation sessions/public participation to the proposed rule</u>			
Major	17%	68%	
Moderate	37%	17%	
Minor	26%	14%	
None	20%	1%	
N	35	93	(p < .0001)

Table 6: Responses to survey, by type of rule (\*includes multiple responses)

	Conventional	Negotiated	
<u>Contribution of your participation to the proposed rule</u>			
Major	6%	22%	
Moderate	27%	45%	
Moderate/minor	8%	18%	
Minor	21%	14%	
None	38%	1%	
N	48	97	(p < .0001)

Table 7: Responses to survey, by type of rule (\*includes multiple responses)

	Conventional	Negotiated
--	--------------	------------

Were there major differences between the proposed and final rule?

No major differences	44%	65%
Major differences	56%	35%
N	36	66 (p<.005)

Table 8: Responses to survey, by type of rule (\*includes multiple responses)

What was the contribution of public participation to change between the proposed and final rule?

	Conventional	Negotiated
Major	44%	19%
Moderate	44%	11%
Minor	13%	37%
None	0%	33%
N	16	27 (p<.005)

Table 9: Responses to survey, by type of rule (\*includes multiple responses)

What was the contribution of your participation to change between the proposed and final rule?

	Conventional	Negotiated
Major	25%	11%
Moderate	40%	21%
Minor	25%	14%
None	10%	54%
N	20	28 (p<.04)

Table 10: Responses to survey, by type of rule (\*includes multiple responses)

Total contribution (impact of contribution to proposed + final rule, measured on 2 - 8 scale, where 2 = major, 8 = none) by type of contribution (public or personal)

	Conventional			Negotiated		
Type of participation	Mean	Std. dev.	N	Mean	Std. dev.	N
Public	4.2	1.64	12	4.7	1.41	27
Personal	4.8	1.48	20	5.2	1.41	28

Table 11: Responses to survey, by type of rule (\*includes multiple responses)

Conventional Negotiated

What did you learn that was new?

Technical/scientific info.	4%	21%
Knowledge of issue	7%	11%
Positions of other parties	6%	30%
How to negotiate	0%	18%
Info. about the rule or the law	10%	1%
Nothing	19%	0%
Info. about EPA	23%	5%
Other	30%	14%
N*	69	197 (p<.0001)

Table 12: Responses to survey, by type of rule (\*includes multiple responses)

	Conventional	Negotiated
<u>Likes about the process</u>		
Learned - issue	7% \	9% \
Learned - others	0% \	15% \
Learned - EPA	0% 13%	3% 42%
Learned - future use	0% /	5% /
Learned - process	6% /	10% /
Positive comment-EPA	13%	0%
Willingness of others to be flexible	0%	13%
Nothing	13%	0%
Impact on rule	7%	6%
Better rule	8%	9%
Personal interaction	0%	9%
Influence on key issues	0%	5%
Partic./opportunity to be heard	18%	3%
General positive comment	10%	2%
Other/ miscellaneous	18%	11%
N*	83	211 (p<.0001)

Table 13: Responses to survey, by type of rule (\*includes multiple responses)

	Conventional	Negotiated
<u>Was anyone not there who should have been?</u>		
No	52.0	65.6
Yes	48.0	34.4
N	25	96 (p<.21)

Table 14: Responses to survey, by type of rule (\*=multiple responses)

	Conventional	Negotiated
<u>Dislikes about the process (open-ended responses)</u>		
Too much time	6% \	19% \
Too much resources	3% 9%	6% 30%
Too much travel	0% /	2% /
Too much personally	0% /	3% /
Disproportionate influence	6%	3%
No/little control over outcome	10%	21%
General negative comment about EPA	22%	8%
Didn't settle everything	6%	6%
Bad rule	17%	4%
Other/Miscellaneous	30%	23%
N*	77	178 (p<.01)

Table 15: Responses to survey, by type of rule (\*=includes multiple responses)

	Conventional	Negotiated
<u>Was there any party with disproportionate influence during the development of the rule?</u>		
No	56%	25%
Yes-but it's participation not influence	0%	27%
Yes	44%	48%
N	39	100 (p<.0001)

Table 16: Responses to survey, by type of rule (\*=includes multiple responses)

	Conventional	Negotiated
<u>Who had disproportionate influence?</u>		
Business, big business	22%	27%
Environmental groups	9%	17%
EPA	32%	25%
State/local government	9%	12%
Other	28%	19%
N*	22	95 (p<.85)

Table 17: Responses to survey, by type of rule (\*=includes multiple responses)

Conventional	Negotiated
--------------	------------

What is it about the rule that leads you to believe there was disproportionate influence?

Nothing in the rule itself; it was the process	13%	55%	
The content of the rule itself	87%	45%	
N	15	69	(p<.005)

Table 18: Responses to survey, by type of rule (\*=includes multiple responses)

	Conventional	Negotiated
<u>What was it about the process that enabled disproportionate influence?</u>		
Ingrained bias of EPA	19% \	7% \
Strategic position of EPA	22% 63%	17% 30%
More access to EPA	22% /	6% /
More seats at the table	0%	8%
More \$ resources	15%	3%
More info/experience on the part of the party	15%	19%
Party was noisier/effective negotiator	0%	26%
Other	7%	14%
N*	27	115

Table 19: Responses to survey, by type of rule (\*=includes multiple responses)

	Conventional	Negotiated
<u>Did EPA encourage your participation?</u>		
Yes	32.7	65.9
No	40.8	14.8
Neither	26.5	19.3
N	49	88 (p<.0003)

Table 20: Responses to survey, by type of rule (\*=multiple responses)

Conventional	Negotiated
--------------	------------

Resources spent on participation

	$\bar{X}$	s	N	$\bar{X}$	s	N	
# professional staff hrs.	378	955	45	2224	5812	88	p<.04**
# clerical staff hrs.	97	381	45	385	1345	82	p<.16
\$ spent on research, info collection	47,458	146,268	43	81,748	371,463	83	p<.56
\$ spent on legal counsel, consultants	6,755	29,302	42	55,990	306,941	90	p<.30
\$ spent on "other"	1,353	4,848	49	2,516	5,184	80	p<.21
Relative to available resources (%)	14	24	51	26	29	87	p<.03

\*\*Difference of means = 138, p < .49 when EPA/not EPA dummy held constant.

Table 21: Responses to survey, by type of rule (\*=multiple responses)

Conventional                      Negotiated

Dislikes about the process (open-ended responses)

Too much time	6% \	19% \
Too much resources	3% 9%	6% 30%
Too much travel	0% /	2% /
Too much personally	0% /	3% /
Disproportionate influence	6%	3%
No/little control over outcome	10%	21%
General negative comment about EPA	22%	8%
Didn't settle everything	6%	6%
Bad rule	17%	4%
Other/Miscellaneous	30%	23%
N*	77	178 (p<.01)

Table 22: Responses to survey, by type of rule (\*=multiple responses)

Conventional                      Negotiated

Did the value of the benefits of participation exceed the costs?

Yes	70%	77%	
Equal	6%	7%	
No	23%	15%	
N	47	97	(p<.45)

Table 23: Responses to survey, by type of rule (\*=includes multiple responses)

	Conventional	Negotiated	
<u>Source of new information</u>			
Business or env. groups	2%	20%	
EPA	55%	13%	
Federal Register	12%	0%	
Other participants	0%	45%	
Others in respondent's coalition	10%	0%	
News reports	10%	0%	
Other	11%	22%	
N*	52	143	(p<.0001)

Table 24: Responses to survey, by type of rule (\*=includes multiple responses)

	Conventional	Negotiated	
<u>How did you get the information you needed?</u>			
Own resources	33%	29%	
From EPA	13%	19%	
From other participants	5%	17%	
Consultants/lawyers	3%	7%	
Info. already available	19%	12%	
Groups in own coalition	27%	13%	
Other	0%	3%	
N*	94	217	(p<.0001)

Table 25: Responses to survey, by type of rule (\*=includes multiple responses)

	Conventional	Negotiated	
<u>Type of Information needed</u>			

Technical/scientific info	35%	33%
Knowledge regarding issue	10%	17%
Positions of other parties	7%	18%
Information regarding law, rule	30%	10%
Other	18%	22%
N*	102	164 (p<.0001)

Table 26: Responses to survey, by type of rule (\*=includes multiple responses)

	Conventional	Negotiated
<u>Was there information you needed for the RM but didn't have?</u>		
No - needed no additional info.	47%	54%
Yes	53%	46%
N	45	92 (p<.40)

Table 27: Responses to survey, by type of rule (\*=includes multiple responses)

	Conventional	Negotiated
<u>With whom did you communicate with during the rulemaking process?</u>		
Business	4%	10%
Env. groups	3%	6%
EPA	21%	8%
State/local gov't	4%	11%
Other participants	0%	8%
Others in coalition	25%	16%
Home office	28%	16%
Other	14%	25%
N*	112	214 (p<.05)

Table 28: Responses to survey, by type of rule (\*=includes multiple responses)

	Conventional	Negotiated
<u>Were any of these communications negotiations?</u>		
Yes	24%	47%
No-strategy sessions	2%	7%

No-informational	20%	25%	
No	54%	21%	
N	50	96	(p<.0005)

Table 29: Responses to survey, by type of rule (\*=includes multiple responses)  
 Conventional Negotiated

In these informal negotiations, what constituted consensus?

Majority	18%	8%	
What one party (not EPA) wanted	9%	3%	
What EPA wanted	45%	0%	
Unanimity	9%	38%	
What we could live with	18%	51%	
N	11	39	(p<.0001)

Table 30: Rating of overall process and net benefits to organization of final rule by type of informal negotiation decision rule

	Process			Net benefits		
	Mean	Std.dev.	N	Mean	Std.dev.	N
Majority	3.0	.71	5	1.2	4.0	5
What 1 party (not EPA) wanted	2.5	.71	2	6.5	3.5	2
What EPA wanted	-.2	3.3	5	-1.6	5.3	5
Unanimity	2.3	2.8	16	4.3	5.4	15
What people could live with	2.0	2.9	22	3.1	4.1	22
		p<.40			p < .11	

Table 31: Rating of overall process and net benefits to organization of final rule by type of formal negotiation decision rule (reg neg respondents only)

	Process			Net benefits		
	Mean	Std.dev.	N	Mean	Std.dev.	N
Majority	3.4	1.8	5	8.2	3.0	5
Supramajority	3.3	2.1	3	5.3	3.2	3

What EPA wanted	-1.7	5.8	3	-5.0	8.8	3
Unanimity	2.1	2.3	45	3.4	4.1	42
What we could live with	1.9	2.6	31	2.5	4.0	30
		p < .07			(p < .001)	

Table 32: Responses to survey, by type of rule (\*=multiple responses)

	Conventional	Negotiated
<u>How were the issues established?</u>		
By the legislation	31%	28%
By EPA	31%	24%
By the facilitator	2%	3%
By the participants	2%	44%
By the courts	3%	0%
By the regulated entities	11%	0%
By technology	3%	0%
Unclear	17%	0%
N*	64	133 (p < .0001)

Table 33: Responses to survey, by type of rule (\*=multiple responses)

	Conventional	Negotiated
<u>What were the types of issues to be decided? (open-ended responses)</u>		
Setting the standard-level, timing, measurement	52%	31%
Compliance/implementation issues	39%	58%
Uniformity (of std., compliance)	3%	12%
Other	6%	0%
N*	97	258 (p < .001)

Table 34: Responses to survey, by type of rule (\*=multiple responses)

	Conventional	Negotiated
<u>What issues engendered the greatest conflict?</u>		
The standard (level, timing or measurement)	39%	34%
Compliance issues		

(measurement, who complies, who enforces, evidence, how to comply)	32%	53%	
Uniformity	9%	8%	
Other	20%	5%	
N*	65	182	(p<.05)

Table 35: Responses to survey, by type of rule (\*=multiple responses)

	Conventional	Negotiated	
<u>Were all issues decided?</u>			
No	30%	13.5%	
Yes	55%	50.0%	
Yes, with exceptions	15%	36.5%	
N	46	96	(p<.02)

Table 36: Responses to survey, by type of rule (\*=multiple responses)

	Conventional	Negotiated	
<u>Any surprise issue?</u>			
No	73.9%	43.8%	
Yes	23.9%	47.9%	
Surprised at past RM events	2.2%	8.3%	
N	46	96	(p<.005)

Table 37: Responses to survey, by type of rule (\*=multiple responses)

	Conventional	Negotiated	
<u>Complexity (# issues + # sides) and clarity of rulemaking (# <b>different</b> issues/sides)</u>			
<u>Complexity</u>			
Mean	2.5	4.1	
Std.dev.	.48	.58	
N	51	101	(p<.0001)
<u>Clarity</u>			
Mean	6.0	8.9	
Std.dev.	1.6	2.1	
N	51	101	(p<.0001)

Table 38. List of independent variables in regression of "Rating of rulemaking process overall"

Independent variable	Measurement/expectation
Anyone not there who should have been?	Coded 1 if yes and 0 if no. The expectation is that the rating will be lower if someone is missing. (Not significant in any regres-

	tion; omitted from table.)
Big business	1 if yes, 0 if no
Small business	1 if yes, 0 if no
Business--size unknown	1 if yes, 0 if no
Environmentalist/Public interest	1 if yes, 0 if no
State/local agency	1 if yes, 0 if no
Supplier of compliance goods/services	1 if yes, 0 if no
Other	1 if not otherwise classified, 0 if classified above
EPA	Reference group; group other affiliations is compared to
Everything negotiated/settled?	1-3 scale, where "no, items were left out"=1; "yes, most but not all were negotiated"=2; "yes, all were negotiated"=3. The rating of the process is expected to be higher if everything was negotiated.
Any surprise issues?	1-3 scale, where 1=no, 2 = surprise only at post-rule writing events, and 3 = surprise issue during the process. The expectation is that surprise issues will lower the evaluation of the process. (Not significant in any regression; omitted from table.)
Amount of information learned	No. of mentions of new things learned during course of rulemaking. The expectation is that the rating of the process will be higher if more is learned. (Not significant in any regression; omitted from table.)
Professional staff hours	No. of professional staff hours used to participate in rulemaking process. The expectation is that the rating of the process will be lower if more staff hours are used. (Not significant in any regression; omitted from table.)

(Table 38 continued on next page)

Table38: (continued)

Independent variable	Measurement/expectation
% of available resources used	Relative to resources available to respondent's organization, what % were used during the rule-making. The expectation is that the rating will be lower as the %

Prof. staff hours used*% available resources used	of resources used increases. (Not significant in any regression; omitted from table.)
Complexity/messiness of the rule	Interactive variable used to replace two additive resource variables. (Not significant in any regression; omitted from table.) For each rule, messiness = (# mentions of sides+# mentions of issues)/# respondents. This describes the reg neg, not the respondent. The more sides and the more issues, relative to the number of respondents in each reg neg, the messier, the more difficult the negotiation, the higher the decision costs, and the lower the evaluation.
Clarity of understanding of the rule	For each rule, clarity/understanding = max. number of mentions of different issues + sides. In some rules not one participant could cite > than 2 sides and 1 issue. It was clear there were more; but the respondent could not articulate them. In others, respondents had little difficulty citing subissues and subconflicts. The expectation is that greater understanding results in higher ratings.
Was all info needed during process available?	Coded 1 if all the info the respondent needed during the process was available, and 0 if all the info was not available. The rating of the process is expected to be higher if needed information is available. (Not significant in any regression; omitted from table.)

(Table 38 continued on next page)

Table 38 (continued):

Independent variable	Measurement/expectation
Any party with disproportionate influence?	Coded on a 3-point scale, where 0 = no party with disproportionate influence, 1 = party has disproportionate participation not influence, and 2 = party has

Net benefits of the rule to the respondents' organization	<p>disproportionate influence. The perception of disproportionate influence is expected to reduce the rating of the process.</p> <p>Rating scale where -5 = benefits couldn't be less to +5 = benefits couldn't be more, less rating scale where -5=costs couldn't be worse to +5=costs couldn't be better. When net benefits of the rule to the organization are rated higher, the evaluation of the process as a whole is also expected to increase.</p>
General economic efficiency of the rule	<p>Rating scale where -5 = efficiency couldn't be worse to +5 = efficiency couldn't be better. The expectation is that when rules are perceived to be efficient, the rating of the process will be higher.</p>
Type of process dummy Level of standard issue	<p>1 if negotiated rule, 0 if conventional 1 if standard mentioned as issue to be decided (level, meas., timing); 0 if not.</p>
Compliance issue	<p>1 if compliance mentioned as issue to be decided (measurement, who complies/enforces, evidence, how to comply); 0 if not.</p>
"Other" issue	<p>1 if uniformity or "other" mentioned as issue to be decided; 0 if not.</p>
Contribution of your participation to proposed rule	<p>Scale from 1 to 5, where 1=major, 5=none. The expectation is that having more personal impact (a lower scale score) will increase rating of the process. Not significant in any regression; omitted from table. Responses to total personal participation (contrib. of your partic. to proposed rule + contrib. of your partic. to final rule) too small in number (48) for inclusion in final regression.</p>

Table 39. Robust regression of rating of rulemaking process overall on selected independent variables, including type of rulemaking (errors clustered on individual rulemaking)

<u>Indep. Variable</u>	<u>Coefficient</u>	<u>Robust std.err.</u>	<u>t value</u>	<u>p-value</u>
Big business (v. EPA)	1.18	.52	2.27	.04
Small business (v. EPA)	-.44	.80	-.55	.59
General business (v. EPA)	.17	.03	.29	.78
Env./public interest (v. EPA)	-1.22	1.07	-1.14	.27
State/local agency (v. EPA)	.45	.71	.64	.54
Supplier (v. EPA)	.68	.43	1.59	.14
Other (v. EPA)	.47	.49	.96	.36
All settled?	.43	.24	1.79	.097
Complexity	-2.07	.31	-6.61	.000
Clarity	.42	.10	4.23	.001
Disproportionate influence?	-.41	.27	-1.53	.15
Net benefits	.20	.06	2.99	.01
Efficiency	.25	.09	2.70	.018
Reg-Neg Dummy	2.52	.53	4.74	.000
Level of std. issue	1.02	.53	1.93	.076
Compliance issue	-.11	.34	-.33	.74
Other issue	.73	.40	1.86	.086
Intercept	1.76	1.10	1.60	.13
N	121			
N of clusters	14			
R <sup>2</sup>	.58			
F-value	4.24			
P-value	<.0075			

## List of References

- Averch Harvey A. (1990). Private Markets and Public Intervention: A Primer for Policy Designers. Pittsburgh: Univ. of Pittsburgh Press.
- Bartel Ann and Lacy Glenn Thomas (1987). "Predation Through Regulation. The Wage and Profit Effects of the Occupational Safety and Health Administration and the Environmental Protection Agency." Journal of Law and Economics 30 (2), October. 239-264.
- Bozeman, Barry. (1998). "Organizational Rules and the Bureaucratic Personality." American Journal of Political Science 41: (Jan.): 163-89.
- Buchanan, James and Gordon Tullock (1962). The Calculus of Consent. Ann Arbor: University of Michigan Press.
- Calvert, Randall, Mathew McCubbins, and Barry Wemgast (1989). "A Theory of Political Control of Agency Discretion." American Journal of Political Science (August): 588-611.
- Coglianesi, Cary (1997). "Assessing Consensus: The Promise and Performance of Negotiated Rulemaking." Duke Law Journal, forthcoming.
- Davidson, A. B., E. O. Davis, and R. B. Ekelund, Jr. (1995). "Political Choice and the Child Labor Statute of 1938: Public Interest or Interest Group Legislation?" Public Choice 82: 85-106.
- Fiorina, Morris (1982). "Legislative Choice of Regulatory Forms: Legal Process or Administrative Process?" Public Choice 39: 33-66.
- Greene, William F. (1990). Econometric Analysis. New York: Macmillan.
- Harter, Philip J. (1982). "Negotiating Regulations: A Cure for Malaise." Georgetown Law Review 71 (October): 1-118.
- Kelman Steven (1982). "Adversary and Cooperation! st Institutions for Conflic Resolution in Public Policymaking." Journal of Policy Analysis and Management 11 (2), Spring: 178-206.
- Kelman, Steven. (1992). "Adversary and Cooperationist Institutions for Conflict Resolution in Public Policymaking." Journal of Policy Analysis and Management 11: 2: 178-206.
- Kerwin Cornelius M. (1994). Rulemaking: How Government Agencies Write Law and Make Policy. Washington D.C: Congresson Quarterly Press.
- Kerwin, Cornelius and Laura Langbein (1995). "An Evaluation of Negotiated Rulemaking at the Environmental Protection Agency: Phase I." Prepared for the Administrative Conference of the United States (September).
- Langbein, Laura I., and Lewis, Gregory B. (1998). "Pay, Productivity and the Public Sector: The Case of Electrical Engineers." Journal of Public Administration Research and Theory 8: 3: 391-412.
- Langbein, Laura I. (2002). "Responsive Bureaus, Equity, and Regulatory Negotiation: an Empirical View." Journal of Policy Analysis and Management 21: 3: 449-465.

Leone, Robert (1986). Winners. Losers and Government Regulation. New York: Basic Books.

Lowi, Theodore (1979). The End of Liberalism. 2nd ed. New York: Norton and Co.

Maloney Michael and Robert McCormick (1982). "A Positive Theory of Environmental Quality Regulation." Journal of Law and Economics 25 (April): 99-124.

McCubbins, M. C. R. G. Noll, and B. R. Wemgast (1989). "Administrative Procedures as Instruments of Political Control." Journal of Law, Economics and Organization 3 (2), Fall: 243-277.

McCubbins M. D. and T. Page (1986). "The Congressional Foundations of Agency Performance." Public Choice 51 (2): 173-190.

Mendeloff, John (1986). "Regulatory Reform and OSHA Policy." Journal of Policy Analysis and Management 5 (1), Spring: 440-468.

Moe, Terry (1990). "Political Institutions: The Neglected Side of the Story." Journal of Law, Economics and Organization 6 (Special Issue): 213-253.

Neumann, George and Jon Nelson (1982). "Safety Regulation and Firm Size: Effects of the Coal Mine Health and Safety Act of 1969." Journal of Law and Economics 25 (October): 183-200.

Pashigian, Peter (1984). "The Effect of Environmental Regulation on Optimal Plant Size and Factor Shares." Journal of Law and Economics 27 (April): 1-28.

Pashigian, Peter (1985). "Environmental Regulation: Whose Self-interests Are Being Protected?" Economic Inquiry 28 (October): 551-584.

Pen-it, Jr., Henry (1986). "Negotiated Rulemaking in Practice." Journal of Policy Analysis and Management 5 (Spring): 482-495.

Rose-Ackerman, Susan (1994). "Consensus vs. Incentives: A Skeptical Look at Regulatory Negotiation." Duke Law Journal 43: 1206-????.

Raiff a, Howard (1982). The Art and Science of Negotiation. Cambridge, Mass.: Harvard University Press.

Susskind, Lawrence and Gerard McMahon (1985). "The Theory and Practice of Negotiated Rulemaking." Yale Journal on Regulation 3: 133-165.

Teske, Paul, Samuel Best, and Michael Mintrom (1994). "The Economic Theory of Regulation and Trucking Deregulation: Shifting to the State Level." Public Choice 79: 247-256.

Wise, Sherry Jo and Todd Sandier (1994). "Rent Seeking and Pesticide Legislation." Public Choice 78: 293-350.

## NOTES

---

<sup>i</sup> An alternative approach might have been to locate and interview respondents who had participated in both negotiated and conventional rulemakings. This, however, could be a very biased subset of both groups. Further, there would be no reason that the negotiated rule would be in any way comparable to the conventional rule in which they participated, and so their comments would reflect differences in the scope or substance of the rule itself and not the process.

<sup>ii</sup> Recoding the 5-point scale transforms the original values into the following respective new values: 5=4; 4=3; 3=2.5; 2=2; 1=1. This preserves the ordinality of the original responses, but makes the new response values comparable.

<sup>iii</sup> Removing EPA respondents does not change the results for total contributions of the public, nor does it substantially change the results for total personal contribution. The conventional rulemaking mean personal impact score does not change, since there are no EPA respondents. The reg neg mean personal impact score rises to 5.5 ( $p < .09$ ), which shows that nonEPA respondents feel they have less total personal impact in a reg neg than in a conventional rule, which is not what one would expect if EPA is abrogating its responsibility in reg negs. In fact, nonEPA respondents rate themselves as having less total personal impact (a higher score) in reg negs (score = 5.5) than EPA respondents (score = 3.3), although the latter N is very small (4). Again, this is not what one would expect if EPA was shirking its responsibility for writing rules in reg negs.

<sup>iv</sup> Removing EPA respondents does not alter these findings. Interestingly, all of the EPA respondents viewed the reg neg decision as consensual (unanimity, or “what we could live with”).

<sup>v</sup> The Stata statistical software was used to generate all of the estimates discussed.

<sup>vi</sup> Controlling for the amount learned does not alter this result; also, the amount learned had no significant impact on the overall evaluation of the rulemaking process in any multiple regression.

<sup>vii</sup> In the robust regression, rules are also rated more positively when an “other” type of issue (i.e., not about compliance or the level of the standard) is to be decided. The estimate is not stable, however, is only significant under a 1-tailed test which is not theoretically defensible in this case.

<sup>viii</sup> This estimate is consistent under all forms of the estimating equation.

<sup>ix</sup> If the consensus position was the median point among the preferences of the represented parties, and if that position were that of the median voter, then it would not be necessary to include a voice for the median voter on a negotiating committee. But, while this may be EPA’s wish, it is equivalent to the questionable, Pollyannaish presupposition that pluralist competition among organized interests produces median voter outcomes.