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Published in:
Rationality and Society

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2003

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):
Torenvlied, R., & Thomson, R. (2003). Is Implementation Distinct from Political Bargaining? a Micro-Level Test. *Rationality and Society*, 15, 64.

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Rationality and Society 2003; 15; 64
DOI: 10.1177/1043463103015001071

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IS IMPLEMENTATION DISTINCT FROM POLITICAL BARGAINING?

A MICRO-LEVEL TEST

René Torenvlied and Robert Thomson

ABSTRACT

Two approaches to research on policy implementation are compared in this article. In the first approach, corresponding with the multi-stage view, implementation is understood as a sub-process requiring specific tools of analysis such as principal-agent theory. In the other approach, which we label the political bargaining view, implementation is seen as an integral part of the policy debate that occurs when political decisions are taken. Using data on the implementation of decisions taken in three Dutch local authorities, we show how the different views can be tested using models. We compare the predictions of agency performances made by bargaining models with those made by implementation models. The results show that the models of political bargaining produce significantly less accurate predictions of agency performances than the implementation models, suggesting that implementation is best understood as a distinct stage of the policy process.

KEY WORDS • collective decision-making • implementation • political bargaining • principal-agent theory

1. Introduction

There is a clear, intuitive distinction between making decisions and getting them realized. Individuals incorporate both activities within the same person. For collective actors, a division of labour or a separation of powers drives the distinction between intention and action. In American government, a dichotomy between 'politics' and 'administration' was first introduced by President Woodrow Wilson, who urged that 'the field of administration . . . is removed from the hurry and strive of politics' (1887). Skilled and capable

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implementation agencies would guarantee a successful realization of the will of the people. Nowadays, many scholars of policy implementation view the division made between decision-making and implementation as artificial and misleading. For example, Barrett and Fudge (1981) and O'Toole (2000) show that the relation between policy and action can be regarded as a process of interaction and negotiation in policy networks. Sabatier (1991) argues: 'the stages heuristic . . . has outlived its usefulness and must be replaced, in large part because it is not a causal theory.' He proposes a comprehensive advocacy framework as a heuristic to analyse policy-making and implementation because 'substantive policy information is typically used in an advocacy fashion, i.e. to buttress one's own position or to attack an opponent's'. This all implies a break with the more traditional 'multi-stage' view of implementation as the transmission of policy into consequential actions. The actions of policy implementers are considered to be political, because they have the possibility of altering and influencing political decisions on the basis of their own knowledge, insights and interests (Lindblom and Woodhouse 1993).

Whether the shift toward more complex political and institutional explanations has yielded more insights in implementation is contested among implementation researchers. The debate revolves around three themes. First, implementation theory is too complex. Review articles demonstrate the overwhelming complexity and a slow pace of theoretical progress, if any, in the field (Lester and Goggin 1998). In response to this complexity, several proposals have been made on how to proceed. Meier (1999) suggests that any scholar who adds a variable or interaction to the list of variables on implementation should at least eliminate two other variables. Torenvlied (1996, 2000) proposes parsimonious models which can be elaborated in order to find a balance between model complexity and explanatory power. O'Toole (2000) searches for regularities in theories from different fields of research that cover implementation. A second theme is the improvement of research methodology. The field has moved from single case-study research to more comprehensive studies, being able to test for the effects of more variables at once.

The third and probably most basic theme is the conceptual problem of distinguishing between implementation and other relevant activities in public policy making. Confusion has resulted from the absence of a coherent conceptual and theoretical framework (Lester

and Goggin 1998; DeLeon 1999; Meier 1999). Scientific research on policy implementation, although abundant, is scattered across different specialist fields in the social sciences (O'Toole 2000). Meier (1999) provides ample illustrations: designing public policies is an activity that targets an adequate implementation of appropriate policy instruments; evaluation studies often focus on the (un)successful implementation of public policies; long-term policy changes are triggered by events in the stage of implementation. We add that implementation efforts frequently set the agenda for new policy decisions and sometimes even jeopardize the position of political leaders.

1.1 Two Approaches

In the present article, we compare the 'political bargaining' approach to implementation with the 'multi-stage approach'. In the traditional, 'multi-stage approach', implementation is conceptualized as a *sub-process* of the entire policy process. With the implementation of a public decision a new 'game' starts (Bardach 1979), a conception that is popular in textbooks on public policy making. Three crucial characteristics of policy implementation drive the distinction. First, different players are of central importance during decision-making and during implementation: the focus of attention shifts from the voting power of decision-makers towards the authority of implementation agencies to realize political decisions. Second, the means of influence, with which implementation agencies can realize their own policy preferences during the formation of policy, differ from the 'means' available to implementation agencies with which they can realize their own preferences during implementation. These means are best described by the general term of 'policy discretion', induced by a bilateral information asymmetry between the political principal and the implementer or agency. Third, an important constraint plays a role in policy implementation that was absent during political decision-making: the collective decision as a guideline for action.

The 'political bargaining' approach to policy implementation developed to retrieve implementation from the realm of public administration. After reviewing the public administration literature on implementation, one scholar concluded: 'Implementation is as much a part of the political process as are policy formulation and evaluation' (Palumbo 1987). This much broader conception of

implementation explicitly recognizes (a) that implementation agencies are both participants in the bargaining that precedes the political decision and implementers of those decisions, and (b) that the timing of the political decision does not mark a sharp shift from one mode of behaviour to another. Some authors even claim that implementation is nothing more than the continuation of political conflict (Halperin 1974; Nakamura 1987). Lester and Goggin (1998) contend:

Rarely is it the case that administrators act alone. The President, members of the U.S. House of Representatives and Senate, state legislators, judges, spokespersons for organized interests, community organizations, and members of the public often constrain the choices of administrators during the policy implementation process.

If so, the policy performances delivered by agencies are the expressions of their positions during the process of political bargaining. An agency performance reflects a statement about a policy position rather than being the transmission of directives from political decision-makers.

1.2 A Model-Guided Comparison

We compare the two approaches using a series of rational choice models. Rational choice theory helps the study of policy implementation in at least three different ways. In the first place, the formal deductive modelling approach limits the potential number of relevant variables and offers an explanatory framework for the study of implementation processes (O'Toole 1993; Torenvlied 1996). Second, rational choice theory integrates different perspectives on policy implementation, ranging from economics, political science, sociology, to public administration – under the common denominator of 'agency theory' (Kiser 1999; Torenvlied 2000). Third, a rational choice approach appropriately handles the impact of institutional arrangements at many different levels on the activities of policy implementers. Institutional analysis makes visible the effects of rule sets and norms on many different levels of policy-making (Kiser and Ostrom 1982).

Both approaches claim explanatory power with respect to policy implementation. Using models that represent both approaches we generate predictions on the policy performances delivered by implementation agencies in three Dutch local authorities in the domain of

social welfare policy. The data set includes information on 37 political decisions and 121 agency performances. Of course, the specific context of our empirical data allows for only some degree of external generalization. Dutch local authority policy-making does not represent policy-making on other levels, in other sectors, or in other institutional contexts. Yet, if the mechanisms we propose have some fundamental characteristics, the empirical test of model accuracy provides some insight into the issue of which view of policy implementation is most appropriate to explain the implementation efforts investigated.

2. Theory

The models described in this section aim to represent alternative variants of the two approaches to the study of implementation outlined above. For each approach, we identify three relevant models. First of all, the models used to test the 'political bargaining' approach to implementation are identified. Until now, these models have been restricted to the analysis of political decision-making. This analysis is also performed in the present study, explaining the outcomes of political decisions that were subsequently implemented by agencies. In addition, these models are applied to explain the implementation of these decisions by agencies. Second, three models of policy implementation are used to test the 'multi-stage' approach. These models incorporate various perspectives found in implementation research, ranging from a top-down to a bottom-up view on agency performance.

2.1 Models of Political Bargaining

Three models of collective decision-making are used to represent alternative variants of the political bargaining approach. The first is the *expected utility model* (Bueno de Mesquita 1994), and the second the *exchange model* (Stokman and van Oosten 1994). As described earlier in this special issue, these two models represent alternative conceptions of the nature of the bargaining process. The expected utility model is based on non-cooperative game theory and examines the construction and break-up of coalitions on separate issues. The exchange model, by contrast, is based on cooperative game theory, and examines the possibility of exchanges

of policy positions between actors across linked issues. A third model, the *compromise model*, generates a baseline prediction of the outcome of collective decisions: the average policy position of the actors on an issue, whereby the actors are weighted by their capabilities multiplied by the salience they attach to the issue (van den Bos 1991). The compromise model makes use of exactly the same set of variables as the expected utility model and the exchange model, but contains no explicit propositions about the micro processes through which the predicted decision outcomes are arrived at.

Empirical tests of these models of collective decision-making have been based on the accuracy of the predictions at the collective level: the models' predictions on the outcomes of political decisions. A few published studies have contained a large enough number of cases to warrant statistical testing (Bueno de Mesquita and Stokman 1994; Achterkamp 1999; Rojer 1999). These have not demonstrated consistently that more complex models can improve on the predictions of the simple compromise model. An additional test would be at the level of actor behaviour. With the exception of the compromise model, the decision-making models draw upon assumptions regarding the micro-level bargaining process: actors in the policy domain exercise influence in rounds of negotiation that typically result in actors shifting their initial policy positions. As the main focus of this article is the explanation of policy performances by implementers, the models are applied to the behaviour of implementation agencies. The political bargaining process determines the policy positions finally adopted by implementation agencies and thereby the final policy performances they deliver.

What mechanisms are said to define the influence process? In the most general terms, implementation agencies are members of the policy domain in which influence on relevant other actors is exerted. This influence process determines, among others, the voting behaviour of lawmakers and the policy performances agencies will deliver. Typically, agencies do not have formal authority to take collective decisions themselves. However, given their expertise in the policy area and their possession of other resources, they are able to influence those directly responsible for taking political decisions. Lawmakers have an incentive to listen to implementation agencies, because if they were to take a decision that was not supported by these agencies there would be a danger of policy drift. Lawmakers and other actors in the policy domain also influence agencies. Lawmakers derive their potential to influence implementation agencies

from resources such as their ability to set agencies' budgets and to sanction them if they see fit.

The expected utility model and the exchange model contain clear propositions regarding the nature of political negotiation, and generate specific predictions on shifts in policy positions of the actors involved. Both the expected utility model and the exchange model are iterative models that consist of several rounds of negotiations. During each round, the actors may shift their policy positions as a result of the influence processes posited in each of the models. In the case of the expected utility model, such shifts are a consequence of successful challenges by certain actors towards other actors. In the case of the exchange model, such shifts occur as a result of exchanges of positions between actors across different issues. A new round begins on the basis of the positions taken at the end of the previous round. This procedure is repeated until there are negligible changes in the expected outcome. The shifted policy positions taken by the implementation agencies at the end of these simulated rounds of negotiations are taken as the predictions of the policy performances delivered by those agencies. As mentioned above, the compromise model does not contain propositions regarding the political bargaining process. Given that the collective outcome is the only prediction generated by the model, we take this as the prediction of the agency's policy performance. In other words, it is assumed that agencies shift their policy position to the compromise outcome.

2.2 Models of Policy Implementation

In the multi-stage approach to implementation, the behaviour of implementation agencies is viewed as a task with which agencies are charged by lawmakers. The extent to which agencies carry out this task in accordance with the instructions given to them depends on the implementation structure that exists in the policy domain concerned. The variables that define this implementation structure are distinct from those thought to be of importance at the stage of political decision-making. The variables that define this structure include the ability of decision-makers, judges and hierarchical superiors to monitor and exercise control over the actions of implementation agencies (Simon et al. 1991), and the extent to which agencies are sensitive to such control.

Agencies may face a trade-off between the benefits they receive, in terms of policy, from delivering policies close to their own

preferences and the utility they receive, in terms of reputation, from delivering outcomes that conform to the political decisions they are charged with implementing. Together, the three different implementation models discussed here incorporate these defining elements of the implementation structure in different ways. The first implementation model is the *political decision model*. The prediction of the political decision model is that agencies will deliver policy performances in line with the outcome of the political decision they are charged with implementing. This top-down notion of implementation emphasizes the restrictions implementation agencies encounter when attempting to realize their policy preferences. These restrictions include the political control decision-makers have on the implementation process as a whole. Political control is associated with the sanctions and procedures with which political decision-makers can compel adherence to the norm of bureaucratic loyalty during implementation. Furthermore, classical notions of bureaucracy emphasize the internalization of a norm of adherence to instruction from political masters (Wilson 1887; Weber 1988).

The *agency preference model* is the second implementation model that is applied. This model is also a characterization or an ideal typical model of a view on implementation found in the neo-classical literature. The prediction of this model is that agencies will implement their own policy preference regardless of the content of the political decision they are charged with realizing. This view on implementation points to the importance of agencies' information advantage over political decision-makers (Tullock 1976: 116; Jackson 1982: 254). This information asymmetry provides agencies with the possibility to pursue their own objectives. Lawmakers and politicians are often severely constrained in the time and effort they can allocate to monitoring agencies' behaviour.

The third implementation model applied is the *mixed implementation model* (Torenvlied 2000). This is a more complex model that incorporates elements of the political decision model and the agency preference model. In the mixed model it is assumed that agencies attempt to minimize two types of utility loss: *preference loss* and *reputation loss*. When there is a difference between the implementation agency's policy position and the political decision they are charged with implementing, they are torn between minimizing their preference loss and their reputation loss. If the agency delivers a policy outcome that deviates from that decided on by lawmakers, it will damage its reputation as a loyal implementer.

Likewise, if the agency delivers a policy outcome that deviates from its own preference, it will suffer a loss of utility. The amount of preference loss experienced by an implementation agency increases: (a) the further the agency's policy performance is from its policy position, and (b) the more salience an agency attaches to the issue. The amount of reputation loss experienced by the agency increases: (a) the further its policy performance is from the political decision, and (b) the higher the agency's sensitivity to political control. The sensitivity to control has a value that is characteristic of the implementation agency and that is not dependent on the policy issue concerned.¹

Table 1 provides an overview of the models applied, the variables they require as input, and the nature of their predictions. Because they describe a fundamentally different process, the implementation models require different data than the bargaining models. The political decision model and the agency preference model are the simplest models and require the least amount of information: the outcome of the political decision and the agencies' policy preferences, respectively. The capabilities of the actors, essential for analysing political bargaining, do not feature at all in the implementation model. However, the implementation model does require

Table 1. Overview of Models, Data and Predictions on Agency Behavior

	<i>Model</i>	<i>Predicted performance</i>	<i>Input variables</i>
Political bargaining approach	Expected utility ^a Exchange ^b Compromise	Final position of agency after simulated bargaining rounds Weighted average of all actors' policy position	Capabilities, policy positions, levels of salience of all actors in policy domain
Multi-stage approach	Political decision Agency preference Mixed ^c	Decision outcome Policy position of agency Policy alternative that minimizes the agency's total loss	Decision outcome Policy position of agency Policy position, level of salience, sensitivity to control, outcome of political decision

^a Bueno de Mesquita 1994; ^b Stokman and van Oosten 1994; ^c Torenlvlied 1996, 2000.

additional data on the outcomes of political decisions and agency sensitivity to control.

3. Method

To apply the models we use data on the implementation of Dutch local authority welfare policy (social and administrative renewal). A detailed discussion of the data and method used to collect them is provided elsewhere (Torenvlied 2000). Social renewal is a very broad policy domain and therefore a great variety of policy issues could be studied in connection with each other. Three local authority policy programmes were selected from the multitude of local authority policy programmes in this area. Each local authority policy programme encompasses a large number of policy issues. The policy issues to be included in this research were selected in order to obtain variation in the controversy between implementation agencies and political decision-makers. In total, 37 decisions were selected for analysis.

Key informants were interviewed to establish which organizations were associated in general with the formulation and implementation of each local authority policy programme. Many of these decisions were implemented by several implementation agencies. A large number of diverse organizations are involved in the implementation of the policy. Local authority services, welfare foundations, and even residents' organizations are implementers of social renewal policies. The specific implementation agencies were identified, as well as the policy performances they delivered as the realization of the (selected) policy issues. In total, 121 agency performances were observed.

The data on the model variables are to a large extent based on the judgments of key informants who had deep insight into the course of the decision-making and implementation processes under investigation. These data include (a) issue variables, such as 'policy alternatives', 'policy positions' and 'salience', (b) collective decision variables, 'capabilities', and (c) implementation variables, such as 'sensitivity to control' and 'policy performance'. The time at which the independent model variables were measured (first measurement) was just after the political decision was taken and before it was implemented. The time at which the policy performances delivered by implementation agencies and eventual deviations were

measured was during the actual implementation (second measurement). A time period of not more than two or three years passed between the first and second points of measurement.

4. Results

The combination of two analyses allows us to compare the political bargaining approach to implementation with the multi-stage approach. The comparison of the models is based on the accuracy of their predictions. The first analysis evaluates the accuracy of the expected utility model, the exchange model and the compromise model in terms of their ability to predict the outcome of the political decisions that the agencies were charged with implementing. The second analysis compares the accuracy of these models with that of the three different implementation models in terms of their ability to predict the behaviour of the implementation agencies when delivering policy performances. In particular, validation of the multi-stage approach would require the following: (a) that models designed for the analysis of political decision-making do indeed account for observations from the decision-making stage of the policy process; and (b) that models designed for the analysis of political decision-making cannot account for observations from the implementation stage, while models designed specifically for the implementation stage can.

4.1 Predicting Political Decisions

Table 2 contains information on the accuracy of the expected utility and the exchange models' predictions of the outcomes of political decisions, the implementation of which will be examined in section 4.2. The accuracy of these two models is compared with the accuracy of the compromise baseline model, whose prediction is simply the average of the positions of the actors weighted by their capabilities multiplied by the levels of salience they attach to the issue. To the extent that the bargaining models produce more accurate predictions of the outcomes of the political decisions than the simple compromise model, it can be said that the micro-processes of challenge or exchange add to our understanding of political decision-making.

The mean absolute errors of the three models refer to the absolute distances between their predictions of the decision outcomes and the

Table 2. Decision Outcomes: Accuracy of Model Predictions.

	<i>Weststellingwerf</i> <i>n = 14</i>	<i>Groningen</i> <i>n = 17</i>	<i>Arnhem</i> <i>n = 6</i>
	<i>Mean error</i>	<i>Mean error</i>	<i>Mean error</i>
Compromise model	9.1	16.0	5.8
Expected utility model	14.9	27.1	8.7
Exchange model	13.5	19.5	5.0

actual decision outcomes on a policy scale ranging from 0 to 100. The errors reported here show that the bargaining models are unable to improve consistently on the predictive power of the compromise baseline model for the decisions taken in two local authorities: Weststellingwerf and Groningen. In the case of Arnhem, the exchange model performs best. On the macro-level, the complex bargaining models are unable to improve considerably upon the predictive capacity of the compromise baseline and even perform worse in two out of three domains. The following section provides a test on the micro-level of bargaining, with the implementation models used as a reference group.

4.2 Predicting Policy Implementation

In this section, the three collective decision-making models are compared with the three implementation models with respect to their capacities to predict the behaviour of implementation agencies when delivering policy performances after the political decisions were taken. First, the models' predictions on the policy performances delivered by the implementation agencies were calculated. Figure 1 provides an example of this analysis with regard to the implementation of an issue in the local authority of Arnhem, on the creation of public information centres. On the vertical axis the policy scale is drawn with alternatives varying from 'no information centres' (0), 'information centres for internal bureaucracy' (50), 'information centres for local authority' (70) and 'information centres for the public' (100). The local authority council decided that these centres should take the form of information centres for the public (position 100); this was therefore the prediction of the *political decision model*. On the vertical axis of each of the graphs

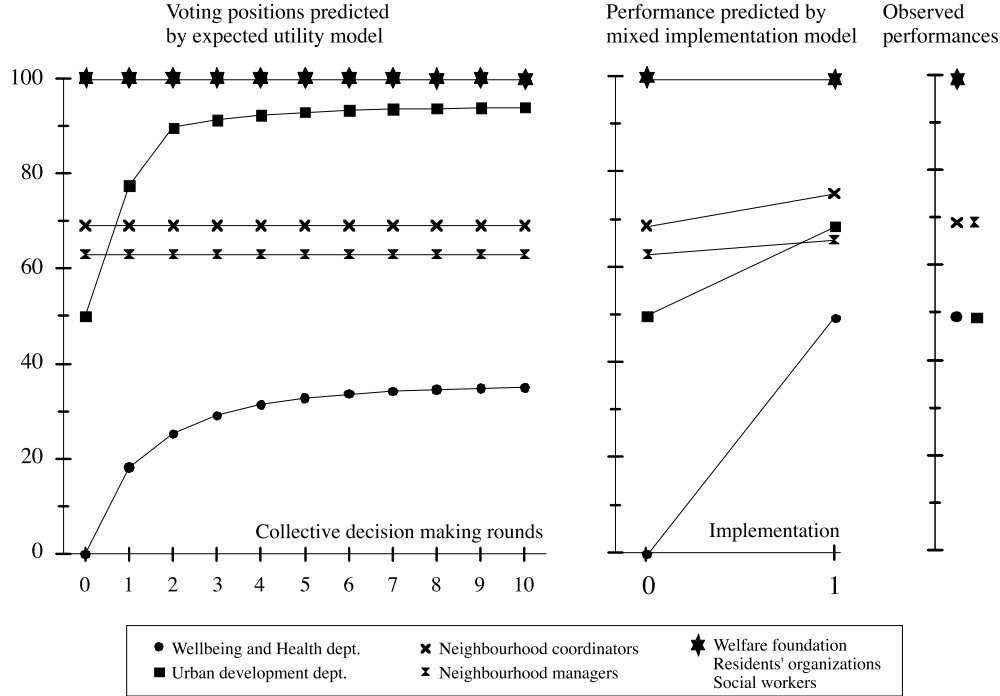


Figure 1. Simulation of shifts in position of seven agencies concerning the creation of public information centres: the expected utility model and the mixed implementation model compared with observed performances.

in Figure 1, the policy positions of all five agencies charged with implementing this decision are drawn. The first graph in Figure 1 displays the behaviour of the implementation agencies predicted by the *expected utility model*. The horizontal axis represents the occurrence of consecutive rounds of bargaining. As the bargaining rounds take place, the agencies' initial policy positions (at t_0) change into a predicted position after three rounds.²

The graph in the middle of Figure 1 displays the behaviour of the implementation agencies predicted by the *mixed implementation model*. As implementation takes place, the initial policy position (at t_0) changes into a predicted performance. The graph furthest to the right displays the observed policy performances. The most striking difference between the expected utility model and the implementation model is the difference in behaviour of the two local authority departments: 'Well-being and Health' and 'Urban Development'. The expected utility model overestimates the shift of 'Urban Development' and underestimates the shift of 'Well-being and Health'. For the other three agencies, the predictions of both models are the same and equally accurate.

We compared each model's predictions of agencies' policy performances with the observed policy performances. The most accurate model is assumed to offer the most appropriate explanation of agency behaviour. Again, the mean (absolute) error of each model is used as a measure of accuracy. The results contained in Table 3 indicate that models representing the political bargaining approach

Table 3. Agency Performances: Accuracy of Model Predictions.

	<i>Weststellingwerf</i> <i>n = 30</i>	<i>Groningen</i> <i>n = 49</i>	<i>Arnhem</i> <i>n = 42</i>
	<i>Mean error</i>	<i>Mean error</i>	<i>Mean error</i>
Political bargaining approach			
Expected utility model	16.0	26.4	12.5
Exchange model	20.1	27.0	19.9
Compromise model	18.7	15.9	14.1
Multi-stage approach			
Agency preference	6.5	22.7	9.4
Political decision	14.8	5.8	14.3
Mixed implementation model	5.2	17.0	10.8

generally produce less accurate predictions of agency performances than the implementation models representing the multi-stage approach. Differences in error among the implementation models are much smaller than differences between the implementation and bargaining models. Only in the case of Arnhem does the expected utility model come close to the best explaining agency preference model. We conclude that models in which implementation is understood to be distinct from political bargaining best explain the activities of implementation agencies in the three local authorities. The mixed implementation model provides the best explanation of observed agency performances for the local authority programme in Weststellingwerf on the basis of the mean error measures. Regarding the local authority programme in Arnhem, the agency preference model has a slightly smaller error than the implementation model. In Groningen, the political decision model predicts most accurately. A comparison of the prediction errors of the different bargaining models with each other reveals that in two local authorities the expected utility model performs better than the compromise baseline. Yet, differences are not large.

To what extent do the errors in the models' predictions differ significantly from each other? We applied a non-parametric test (Wilcoxon's signed-rank test) because the procedure for selecting decisions and agency performances was not random. Table 4 provides information on the significance of differences between the implementation models used to represent the multi-stage approach and the bargaining models used to represent the political bargaining approach to implementation. A total of 27 pairwise comparisons were made between the three models of implementation and the three bargaining models. In 22 of these comparisons, the implementation model's predictions were more accurate than those of the bargaining model. In 15 comparisons, the accuracy was significantly better. Two comparisons revealed no overall differences between the accuracy of the implementation and the bargaining models' predictions. In three comparisons, the bargaining model produced more accurate predictions than the implementation model (one of these significantly). On the whole, therefore, the implementation models have generated more accurate predictions.

The bargaining models that produced the most accurate predictions of the political decisions, examined in section 4.1, deserve particular attention. These are the models that are, on the basis of the evidence, best suited to explaining the decision-making stage

of the policy process. In Weststellingwerf and Groningen, this is the compromise model, while in Arnhem this is the exchange model. How do these models compare with the best implementation model in each of the three local authorities? As the highlighted areas in Table 4 show, in all three local authorities the best predicting model of political decision-making performs significantly worse than the best implementation model. It is noteworthy that in Arnhem the best model of political decision-making, the exchange model (see Table 2), proves to be the least accurate in terms of agency performances (see Table 3).

The post-hoc comparison of errors of the best predicting bargaining models with those of the best predicting implementation models could result in overfitting the best model. A bias in results and interpretation could potentially occur. To test robustness of the differences in prediction error, let us assume that (a) we do not know in advance which decision-making model predicts best; (b) theoretically the mixed implementation model is the most appropriate model. These assumptions prevent us from making any post-hoc comparisons. A comparison of the errors of the mixed implementation with the errors of all bargaining model shows that, with one exception (the compromise model is Groningen), the implementation model predicts significantly better (Table 4). This result reinforces our previous interpretation that implementation and political bargaining are separate processes.

5. Discussion

We have analysed political bargaining models in two ways: first, to predict the outcomes of political decisions and, second, to predict the policy performances delivered by implementation agencies. The first application took place in the context for which the models were explicitly designed. The fact that more complex models of collective decision-making could not consistently improve on the predictive power of a simple compromise model is cause for concern. Adding more complexity to a model, such as assumptions on the strategies used by actors during negotiation, is no guarantee of improvements in predictive accuracy.

The more complex models are, however, also informative on a different level: the behaviour of *individual* policy actors, such as political decision-makers or implementation agencies. We have no pre-

Table 4. Agency Performances: Number of Cases for Which the Implementation Models Predict Better, Worse or Equal to the Bargaining Models.

		<i>Weststellingwerf</i> <i>n = 30</i>			<i>Groningen</i> <i>n = 49</i>			<i>Arnhem</i> <i>n = 42</i>		
		Bargaining models								
Implementation models		EU	XC	COM	EU	XC	COM	EU	XC	COM
Agency preference	Better than	9*	15*	23*	6	22	16	10	24**	25
	Worse than	1	4	6	7	12	28*	3	9	14
	Equal to	20	11	1	36	15	5	29	9	3
Political decision	Better than	9	12	20	36**	42**	40**	17	22	21
	Worse than	9	7	10	9	6	7	17	10	18
	Equal to	12	11	0	4	1	2	8	10	3
Mixed	Better than	13*	16*	24**	33*	37**	19	19*	28**	29*
	Worse than	8	7	6	14	12	30	15	11	10
	Equal to	9	7	0	2	0	0	8	3	3

Note. EU = expected utility model; XC = exchange model; IM = implementation model; COM = compromise model. Wilcoxon's matched-pairs signed-ranks test * $p < .05$; ** $p < .005$. For each local authority, the comparison between the implementation model that best predicts the agency performances and the bargaining model that best predicts the outcome of the political decision are highlighted.

tension whatsoever that our empirical analyses constitute a test of the actor level processes of challenge and exchange posited by these models. Instead, the bargaining models were used to represent a particular approach to policy implementation, one that does not view implementation as a separate stage in the policy process, but rather views agencies' performances as a product of political negotiations and bargaining within the policy domain. If it is assumed that the final policy positions adopted by implementation agencies correspond with their final positions as predicted by the bargaining models, the bargaining approach does not yield accurate predictions. It is conceivable that the bargaining models do predict the actor level dynamics of political negotiation accurately during the stage of political decision-making, but that these shifts do not play a role at the stage of policy implementation.

In any case, the results show that a multi-stage approach to implementation is more appropriate than a political bargaining approach to explaining the performances delivered. First, an implementation model made the most accurate predictions of policy performances delivered by implementation agencies. Second, it was shown that the model that generates the most accurate predictions of the political decisions in each local authority produces significantly less accurate predictions than the best implementation model in the same local authorities. This evidence clearly supports a multi-stage view on implementation.

Two remarks must be made: one with regard to the theoretical approach, and one with regard to the empirical test. Our theoretical approach assumes that bargaining issues do not substantively change after decision-making has been concluded. This assumption is necessarily simplifying, but not always realistic. An alternative way to model implementation from the bargaining approach could be to start the analysis with a new issue, e.g. the decision whether or not to fully implement the collective decision. Obviously, the power vector in implementation and the distributions of implementation positions and salience could differ much from those in decision-making. Another alternative way to model implementation could be the integration of the implementation model with the bargaining model, by taking the voting positions of implementation agencies as a point of departure for the analysis of implementation, instead of the intrinsic policy positions. The implications of these alternative ways to model implementation are an important topic for future research.

With regard to the empirical test, we remark that the data are restricted to a very specific context: local authority policy-making in a small European country. The implementation models applied are also simple and do not, for example, incorporate the extent to which there is a consensus among political leaders regarding the decision outcomes. We should therefore be cautious in generalizing on the basis of the empirical material presented in this article. The results, although preliminary, could have marked implications for implementation research. Apparently, the implementation processes under study were governed by some distinct mechanisms, triggered after lawmakers formally endorsed the political decision. In the cases examined, implementation was a distinct activity in the policy process – notwithstanding its interconnectedness with other relevant policy activities. Policy intention affected policy action in a specific way, depending on the implementation structure rather than on influence relations. We have shown in this article how a model-guided approach helps detect the mechanisms at work.

NOTES

1. The mixed implementation model's prediction of agency i 's policy performance on issue d is that point on the policy scale, x_{di} , where total loss is minimized. A total loss function is specified as the weighted sum of preference loss and reputation loss, where the weight α ($0 \leq \alpha \leq 1$) is a system coefficient that represents the extent of the presence of *political control* over the implementation process in the system. In the version of the implementation model applied in this article, it is assumed that a moderate amount of political control exists, corresponding with an α of 0.5. In effect, therefore, the implementation model assumes that each agency attaches equal weight to its preference loss function and its reputation loss function. Note that at extreme values of α , 0 and 1, the predictions of the mixed model are identical to those of either the political decision model or the agency preference model.
2. In the expected utility model, the discount rule specifies that the negotiations will stop when the challenges result in only small changes to the expected outcome. In the analyses presented in Figure 1, this rule applied after three rounds of negotiations. All analyses with the expected utility model were also applied while disregarding the discount rule and allowing the actors to continue to negotiate even if this resulted in only small changes to the expected outcome. This did not lead to substantially different results. The accuracy of the predictions was slightly higher when the discount rule was not applied, but not significantly so.

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