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PERSONAL INFLUENCE, COLLECTIVE RATIONALITY, AND MASS POLITICAL ACTION

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We propose two models to explain why individuals participate in collective political action—a personal influence model and a collective rationality model. Each model overcomes the free-rider problem posed by conventional rational choice theory and left unresolved in previous research. The models are tested for legal and illegal protest behaviors, using data from a national sample and two samples of protest-prone communities in the Federal Republic of Germany. The personal influence model is supported for both forms of participation, while the collective rationality model is supported for legal protest. We discuss implications of the results for grievance and rational choice theories of collective political action.

Relative deprivation, dissatisfaction with government policies, and alienation from the political system have long been considered principal psychological determinants of individual participation in protest and unconventional political behavior (see Barnes and Kaase 1979; Gurr 1970; Muller 1972, 1979). While there have been frequent debates over the forms of discontent that are most important for particular kinds of protest in particular settings, consensus on the general applicability of the grievance theory of protest remains. As Muller and Jukam (1983, 159) explain, "People who take part in acts of civil disobedience or political violence are discontented about *something*. That is a truism" (emphasis added).

This "truism" has been seriously challenged in recent years by the rational choice approach, which, following Olson's *The Logic of Collective Action* (1965) and Tullock's "The Paradox of Revolution" (1971), argues that grievances are essentially irrelevant to a self-interested individual's decision regarding participation in collective political action such as protest or rebellion. Grievances typically represent desires for outcomes such as a reduction in inequality or a change in government policy that satisfy the definition of a public good.[1] In large groups, such as those involved in collective political protest, the contribution to the action of each ordinary member (i.e., one who is not a leader of the group) has no discernible impact on the group's overall success; therefore, the rational individual will not absorb the costs of participation (such as time, financial resources, or the threat of physical injury),

since he or she will enjoy the public good in any case if others provide it.

The inability to deal with, or even to acknowledge, the free-rider problem is a major flaw of grievance explanations of political protest,[2] which assert that participation in collective political action is simply a monotonic function of the intensity of demand for the public good. However, in assuming that demand for the public good has *no* influence on behavior, the explanatory power of conventional rational choice theory either is limited because it predicts excessive abstention or else reduces participants in collective action to mercenaries whose behavior is motivated solely by private payoffs completely unrelated to the issues, goals, or grievances of social movements.

The theoretical problem is how to incorporate demand for the public good into an individual's utility calculus without violating the logic of free-riding. First, some individuals may believe that they are personally efficacious and that their participation consequently will, in fact, help contribute to the provision of the public good. When such a feeling of personal efficacy is coupled with a perception that the group is likely to succeed, public goods preferences then could interact with individual and group efficacy to produce positive expected utility from participation. Second, public goods preferences could produce expected benefits for individuals through interaction with beliefs that promote what we call "collective rationality." Individuals may realize that if everyone acted according to the logic of free-riding, the result would be a collectively irrational outcome. Therefore, they may adhere to the strategically "useful fiction" that unity is necessary for group success, that is, that public goods can be provided only through contributions from *all* group members. Alternatively, individuals may believe in an ethical norm of duty to participate in the provision of public goods that they strongly desire and may act as "calculating Kantians," willing to do their duty if enough others are doing the same. Belief in either a strategic unity principle or in a moral duty to participate may lead individuals to calculate their expected benefits based on the likelihood of *group* success. Public goods preferences, then, can be a relevant incentive to participate in collective action for those who would not free-ride because they believe that their own actions are efficacious or for those who reject free-riding because they believe in principles that encourage collective, as opposed to individual, rationality.

Public Goods and Collective Action: Alternative Models

What may be termed the simple grievance model of political protest can be expressed in an equation with public goods preferences as the primary explanatory variable as

$$E(A) = V,$$

where $E(A)$ is the expected value of participation in collective political action (A), and V is the value the individual attaches to the public good. Previous work identifies relevant public goods for protest behavior as either dissatisfaction with government policy (Barnes and Kaase 1979; Opp 1986; Walsh and Warland 1983) or more general alienation from the political system (Muller 1979; Muller and Jukam 1983; Muller and Opp 1986). We will focus on general policy dissatisfaction. The most important feature of this model is its treatment of public goods preferences as an autonomous cause of protest, even with the addition of numerous other demographic or social-psychological independent variables in many of the works cited above. Participation in collective political action is assumed to be a function of intensity of

demand for the public good, the effect of which is additive with respect to other variables: the more dissatisfied an individual is, the more likely he or she is to join in collective political protest, no matter what the value of any other variable may be.

The difficulty with the simple grievance model is that it ignores the influence of the individual on provision of the public good and thereby fails to recognize the free-rider problem. According to conventional rational choice theory, individuals participate if their net expected benefit from participation as compared with abstention is greater than zero. If individuals abstain, their expected benefit is

$$E(I) = p_n * V, \quad (1)$$

where $E(I)$ is the expected benefit of inactivity or abstention, and p_n is the probability of success of collective political action without an individual's contribution. If individuals participate, their expected benefit is

$$E(A) = (p_n + p_i) * V \quad (2)$$

where p_i is the probability that the individual's own actions will make a difference in the likelihood of obtaining the public good. If individuals are members of large groups, p_i should be approximately zero, because the participation of a single member is assumed to make no objective difference in the outcome. Subtracting (1) from (2) leads to a net expected benefit of participation of zero; consequently, if there are any costs of participation, the rational choice is to abstain, regardless of the level of V, intensity of demand for the public good.[3] By neglecting to weight demand for the public good by the individual's perceived personal influence on provision of the good, the simple grievance model entails the hidden assumption that p_i is equal to unity (1.0), which is obviously false. Given the more reasonable assumption of conventional rational choice theory (that p_i is approximately equal to zero), as p_n approaches unity, the rational individual with high V will ride free on the efforts of others to provide the public good.

While conventional rational choice theory focuses on the influence that each individual has in bringing about a collective outcome (p_i), many scholars, instead, advance the notion that perceptions of *group* influence are decisive. For example, Pinard and Hamilton (1986, 231) argue that "the lack of any expectancy of [group] success, more than any other mobilization problem, is . . . immediately responsible for the failure of innumerable groups . . . to act, groups which otherwise had the proper configurations of internal motives, particularly grievances, and external incentives." An emphasis on the likelihood of group success as a determinant of an individual's decision to participate in collective action is also found in many other recent conceptual and empirical papers on the collective action problem (e.g., Fireman and Gamson 1979; Klandermans 1984; Muller and Opp 1986; Oberschall 1980).

The free-rider dilemma presents itself most clearly, however, precisely when group success is most probable. If the group as a whole can actually succeed in providing a given public good, there is all the more reason for the given individual to stay at home and enjoy the benefits of the good, which will be provided in any case with virtually equal likelihood. If the group cannot succeed, there is no question that ordinary members will have no motivation to participate; but when the group can succeed, each individual is faced with the free-rider dilemma: Why should I absorb the costs of action to provide a collective good when the group will provide it for me? This is because the likelihood of group success, denoted p_g, will necessarily be closely related to p_n, the likelihood of the success of collective political action given that the individual

abstains. Therefore, regardless of the level of both p_g and V, the rational choice is still to abstain, given that p_i is approximately equal to zero.

The problem is how to link demand for the public good and expectancy of group success to individual participation in collective political action by a theoretically convincing rationale that overcomes the logic of free-riding; that is, why should the individual participate if the likelihood of group success is high? We propose two solutions that can be tested. The first, and most obvious, is to relax the assumption that p_i is approximately equal to zero. The results of much empirical research show that many individuals believe that their own contributions do make a difference to the likelihood of success of collective political action (Moe 1980; Muller and Opp 1986; Opp 1988). In a general sense, the p_i term is similar to an individual's political efficacy, which is a function of resources such as education, income, occupational status, and prior political involvement (Verba and Nie 1972). Thus, those with a strong sense of general political efficacy may believe that they make a difference because of their resources and political expertise. Allowing for the presence of subjectively "resourceful" individuals, then, makes it tenable to assume that p_i can vary between zero and one.

However, individuals should not perceive expected benefits from participation in collective action unless feelings of personal efficacy are coupled with a perception that the group as a whole is likely to succeed. By contrast, if personal influence is low or if the group is expected not to succeed, there is no rational incentive for the individual to participate: in the former instance, free-riding (and hence abstention) is the rational choice; in the latter instance, abstention again is the rational choice, since the cause is hopeless. Thus, the first solution to the collective action problem hinges on a multiplicative interaction between personal influence and likelihood of group success. This personal influence model may be expressed as

$$E(A) = (p_i * p_g) * V,$$

where p_g is the extent to which the actions of the group as a whole are likely to be successful in providing the public good. The logic of the personal influence model is similar to what Klandermans (1984) calls the "collective motive" for willingness to participate in collective action.

The second solution to the collective action problem is provided when individuals act on the basis of general strategic or ethical beliefs that promote what can be termed "collective rationality" (Rapoport 1974). The source of these beliefs is the ubiquitous question in collective action problems, What if everyone did that? (Hardin 1982). If "everyone" acted in accordance with the assumptions of conventional rational choice theory, all would abstain and no public good would be provided. If "everyone" participated, on the other hand, the public good would have a chance to be provided. The individual, faced with this dilemma, may first reason strategically that the participation of everyone is *necessary* to have a chance of obtaining the public good, that is, that the group can succeed only through the contribution of *all* members. If individuals believe in this "unity principle," their actions' utility and that of the group as a whole become indistinguishable, and each individual will participate if the overall potential for group success appears high.

In rational choice terminology, to the extent that the individual believes in the unity principle, the perceived "minimum contribution set" for provision of the public good approaches the set of all group members (Rapoport 1985; Van de Kragt et al. 1983). If *all* group members are necessary for group success, then without the individual's contribution, the minimum

contribution set is less than needed, and the public good will not be provided. In other words, the expected benefit from abstention *diminishes* to the extent that the individual believes in the necessity of group unity. Consequently, the net expected benefit from participation is

$$E(A) = (u * p_g) * V, \quad (3)$$

where u is the individual's belief in the unity principle, namely, that collective action can succeed only if all members contribute. Thus, the likelihood of group success is relevant to the individual's utility calculus only to the extent that he or she believes in the necessity of group unity.

A second source of "collective rationality" hinges on a moral response to the question, What if everyone did that? Individuals may believe not that they need to participate for the group to succeed but that they *should* participate because free-riding is collectively irrational. The moral duty to participate in providing public goods is often understood in terms of Kantian ethics, where we must "do what we can rationally will that everyone should do" (Elster 1985, 142). But unconditional Kantianism is unlikely in collective action situations; unless the action potentially can succeed, moral edicts to participate will have little practical force (Elster 1985; Hardin 1982, 118–22). The individual is more likely to be a "calculating Kantian," who "will do as he would have others do so long as there are enough others who do likewise to produce net benefits for him, but he will not adamantly contribute to a lost cause" (Hardin 1982, 118; see also Godwin and Mitchell 1982). In other words, the calculating Kantian is one who will "play fair" and cooperate if enough others are willing to do the same.[4] Individuals will then "do their duty" so long as the probability of group success appears likely, and the net benefits to the group from all acting morally are greater than the costs. The calculating Kantian then participates according to the following expression:

$$E(A) = (d * p_g) * V, \quad (4)$$

where d represents the sense of duty to contribute to providing a public good. Combining the models in (3) and (4) above leads to a full collective rationality model of

$$E(A) = [(u + d) * p_g] * V, \quad (5)$$

with all terms as defined above.

While the beliefs that promote collective rationality are extrarational from the view of conventional rational choice theory (Hardin 1982, chap. 7), they are nevertheless beliefs that have been long regarded as important for mobilizing groups to action. Schwartz (1976, 167), for example, has pointed out that protest organizations "almost invariably adopt slogans conveying the notion that 'unity is strength' "—like "United we stand, divided we fall"—which serve to instill the principles promoting collective rationality into group members. Roemer (1978, 154) argues that "the success of unions does not depend on coercion or side payments but on workers learning to discard the individualist model and adopting a collective rationality." And Gamson (1975, 60) notes that individuals may recognize that the sum of individually "irrational" contributions makes for collective rationality and thus they may participate "not in spite of, but *because of* the full force of Olson's argument."

In sum, we postulate that there are two ways in which the utility-maximizing individual with a high level of demand for a public good may reject the option of free-riding and participate in collective political action. One way is through the interaction of perceptions of personal influence on provision of the public good, p_i, and the perceived likelihood of overall

group success, p_g. If individuals believe that the group can succeed but that they are not personally efficacious, free-riding is clearly the rational choice; but as perceptions of group success and personal influence increase, individuals believe that the public good can be provided and that their participation contributes significantly to its provision as well. The second way is through two beliefs that promote "collective rationality": the unity principle (u), which leads to the perceived strategic importance of each contribution; and the duty to participate (d), which leads to the perceived ethical importance of each contribution as well. Without these beliefs, grievances and perceptions of the likelihood of group success have little relevance for each individual's decision to participate in collective action. But given a strong belief in the necessity of group unity or a strong sense of duty to participate, the perception that the group can succeed leads to the strategic and moral urgency of each individual contribution.

We test these hypotheses with survey data collected from a national sample and two local samples in West Germany. Previous empirical tests of participation based on the logic of collective action have utilized only specialized samples of protest groups or community samples (Klandermans 1984; Muller and Opp 1986; Opp 1986); the research design here affords the first test of such models in a representative national survey. Since earlier research has shown that political protest encompasses two dimensions, one consisting of legal, and one consisting of illegal, behavior (Muller 1979; Opp 1988), we will conduct separate tests of the hypotheses in regard to participation in legal, as well as illegal, protest.

Research Design

Three surveys were conducted in the Federal Republic of Germany during November 1987 to January 1988. A total of 1,709 persons of age eighteen and older were interviewed. One survey is a representative sample of the national population ($N = 714$). In order to overcome the problem that political protest in general and illegal forms of protest in particular are rare phenomena, representative samples were drawn from two communities where many protesters were expected to live. One community survey includes 501 persons from the county (*Landkreis*) Schwandorf in Bavaria, a rural area where extensive legal and illegal protest has occurred in regard to the issue of nuclear power, focused on the highly controversial nuclear recycling plant under construction in Wackersdorf, a small town in this county. Populations with a high incidence of protest are also likely to be found in so-called counterculture areas, where many young people, particularly students, and adherents of the Green party live. For a second protest-prone area, we selected the district Bockenheim of Frankfurt, where a third sample of 494 persons was drawn. This three-sample design thus affords an opportunity for rigorous testing of the generalizability of the models we have outlined.

The data were collected by the GFM-GETAS survey research institute in Hamburg, a firm with expertise in designing and implementing surveys on protest and political participation. Each survey was a probability sample drawn according to the design of the Working Group of German Market Research Institutes (ADM master sample). In this procedure the first step is to select sample points (voting districts)—for example, there were 210 in the representative national sample. Then the interviewer looks for households according to a random route procedure. Finally, a member of the household is randomly selected to be interviewed.

Measurement

In this section, we describe the construction of the scales to be used in the analyses. The means, standard devia-

Table 1. Means, Standard Deviations and Value Ranges of the Variables

Variable	Possible Range	National Sample Mean	National Sample Standard Deviation	Schwandorf Mean	Schwandorf Standard Deviation	Frankfurt Mean	Frankfurt Standard Deviation
Protest							
Legal	1–15	3.13	2.61	2.58	2.11	3.75	2.92
Illegal	1–15	1.26	.74	1.13	.42	1.52	1.18
Policy dissatisfaction	0–20	10.15	4.49	6.39	4.85	12.24	4.59
Past group success							
Legal	0–1	.64	.21	.58	.17	.65	.21
Illegal	0–1	.24	.22	.22	.21	.30	.24
Willingness of others							
Legal	1–5	2.56	.82	2.45	.74	2.71	.78
Illegal	1–5	1.33	.59	1.17	.36	1.62	.75
Likelihood of group success							
Legal	0–1	.35	.16	.30	.14	.37	.16
Illegal	0–1	.07	.08	.05	.05	.12	.12
Perceived personal influence							
Legal	0–1	.46	.26	.24	.27	.48	.25
Illegal	0–1	.15	.21	.04	.11	.22	.24
Belief in the unity principle	0–1	.67	.24	.56	.27	.71	.22
Duty to participate	0–1	.59	.29	.45	.29	.62	.32
Collective rationality scale	0–1	.63	.21	.50	.24	.66	.20
Number of cases		714		501		494	

tions, and value ranges for all variables for all three samples are shown in Table 1.

Legal and illegal protest. The dependent variables were measured following a procedure developed by Muller (1979). Respondents were questioned about their past performance of a series of legal and illegal behaviors (*never, once, several times*) and about their future intention to perform these behaviors (five categories, from *not at all* to *very likely*). The set of legal items includes signing a petition, taking part in a permitted demonstration, wearing a button or a sticker for a political cause, working with a citizen's action group, and collecting signatures for a petition. The illegal items include taking part in a demonstration that breaks the law; seizing buildings, such as factories or government or university offices; participating in confrontations with police or other governmental authorities; participating in political activities that may result in property damage (e.g., breaking windows or damaging construction sites or vehicles); participating in illegal protest activities at the work place (e.g., wildcat strike, sabotage, slowdown, etc.); participating in confrontations with other political groups or individuals; seizing building sites; and taking part in public disorders (e.g., blocking streets, sit-ins, etc.). To ensure anonymity and therefore enhance the validity of the answers, these questions were asked in the form of a self-administered questionnaire. The respondent placed it in a separate envelope that was then sealed and given to the interviewer.

Each behavior response was multiplied by the respective intention response. The resulting product terms were subjected to a factor analysis (unweighted least squares [ULS], varimax rotation). Two factors were extracted, one exhibiting high loadings only of the legal protest

product terms, the other showing high loadings only of the illegal protest product terms. A legal protest scale and an illegal protest scale were constructed by adding the product terms of the legal and illegal items respectively and dividing each scale by the number of items. Because of the skewed distribution for both the legal and illegal protest, we use the natural logarithm of the scales in the correlational and regression analyses that follow (see Muller 1979, 54). In Table 1, however, we report the raw scores for ease of interpretation.

As the table indicates, legal protest is highest in the Frankfurt sample, the counterculture area; whereas Schwandorf has the lowest level. Protest behavior in that rural and mostly conservative region is generally low, despite the activities in recent years concerning the controversial recycling plant in Wackersdorf. The standard deviation of legal protest is also highest for Frankfurt, suggesting that there are many people there with a relatively high level of protest behavior. Illegal protest shows a similar pattern: Frankfurt is highest (again with the highest standard deviation), and Schwandorf is lowest. In general, the mean of legal protest and its standard deviation are much higher than the mean and standard deviation of illegal protest in every sample.

Policy dissatisfaction. Respondents were asked to what extent they were concerned about (1) extent of crime, (2) extent of unemployment, (3) the differences between rich and poor, (4) the cost of living, (5) problems in the community of the respondent, (6) environmental pollution, (7) nuclear power stations, (8) deployment of missiles, (9) number of foreigners. There were five response categories, from *not at all concerned,* coded zero, to *extremely concerned,* coded four. For each issue the respondent was asked to rate the government's performance, again with five categories, from *excellent,* coded one, to *very poor,* coded five. If the respondent thought that dealing with the issue was not a task of the government, the value zero was assigned.

For each issue, measures of concern and dissatisfaction with government performance were multiplied. A high value of a product term means that a respondent is both concerned about an issue and dissatisfied with the policies of the government for dealing with it. This method of measuring policy dissatisfaction is similar to the procedure used by Barnes and Kaase (1979) and Muller (1979).

The nine product terms were subjected to a factor analysis (ULS with a varimax rotation). Two factors were extracted. On the first factor items 2, 3, 6, 7, and 8 exhibited high loadings; on the second factor items 1 and 9 loaded highly. Items loading highly on the first factor were added to form a policy dissatisfaction scale, and this scale was then divided by the number of items. As expected, Table 1 shows that policy dissatisfaction was highest in the Frankfurt sample.

Perceived likelihood of group success (p_g). The scales for perceptions of the likelihood of group success through legal and illegal protest were constructed by multiplying measures referring to past group success (see Muller 1972, 1979) and present willingness of others to participate in these kinds of activities. To measure *past group success,* respondents were asked to indicate to what extent the following legal and illegal actions of political groups in West Germany had "helped their cause": collecting signatures (legal), taking part in legal demonstrations (legal), seizing buildings (illegal), blocking streets or participating in sit-ins (illegal), and participating in confrontations with police or other government authorities (illegal). There were five response categories, ranging from *hurt a lot* to *helped a lot.* Two scales, past group success by legal protest

and past group success by illegal protest, were constructed by averaging responses to each set of items and were transformed to range from zero to one.

We improved previous measures of group success by including questions designed to measure the *willingness of others to protest.* Respondents were asked to estimate how many people living in their area with political views similar to theirs would be willing to get involved in collecting signatures for a petition (legal), working with a citizen's action committee (legal), seizing buildings (illegal), blocking streets or participating in sit-ins (illegal). The response categories were *none, some, a few, many,* and *almost all.*

We assume that the effect of past group success on protest behavior depends on the number of others presently perceived to be willing to protest. We therefore constructed a general likelihood of group success measure for legal and illegal protest by multiplying the measures of past group success and willingness of others to protest and transforming this index to a scale of 0 to 1. High values refer to higher perceptions of the likelihood of group success.

Personal influence (p_i). The respondents were asked to indicate the extent to which they personally could influence politics if they were to perform the following legal and illegal actions: collecting signatures for a petition (legal), working with a citizen's action committee (legal), seizing buildings (illegal), blocking streets or participating in sit-ins (illegal). Five response categories, ranging from *would have no influence* to *would have great influence* were presented. Two additive scales, influence by legal protest and influence by illegal protest, were constructed from the two items corresponding to legal and illegal behaviors respectively; and each scale index was transformed to a scale of zero to one, so that each can be interpreted as a probability estimate.

Belief in the unity principle (u). Respondents were asked to agree more or agree less (on five-point scales) with the following items: (1) for groups to have a reasonable chance of success by means of political actions everyone must contribute a small part; and (2) every individual member is necessary for the success of a political group, no matter how large it is. The items were added and divided by the number of items, and the index was then transformed to the 0 to 1 scale used for the previous items.

Duty to participate (d). Respondents were asked to agree more or agree less (on a five-point scale) with the following item: if a citizen is dissatisfied with the policy of the government, he or she has a duty to do something about it. The item was also transformed to a zero-to-one scale.

Collective rationality scale. We combined belief in the unity principle and belief in the duty to participate into a single scale for use in testing the full collective rationality model in equation 5. The correlation between belief in group unity and the duty to participate items in the full sample is .33, indicating a moderate relationship between the two components of the scale. The scale was also transformed to range from zero to one.

The distributions of the influence terms and the beliefs promoting collective rationality in Table 1 show a pattern similar to the other variables': Frankfurt has the highest values and Schwandorf the lowest. It is noteworthy in general that the influence terms, the belief-in-the-unity principle, and the duty-to-participate item have means clearly exceeding zero and in particular that the means of the influence terms referring to legal protest are higher than the means of the influence terms referring to illegal protest.[5]

Missing values were substituted by the arithmetic means of the variables. In general there were very few missing values. If

Table 2. Correlations between Protest Participation and Policy Dissatisfaction, Group Success, Personal Influence, and Beliefs in Collective Rationality

Variable	Legal Protest			Illegal Protest		
	National	Schwandorf	Frankfurt	National	Schwandorf	Frankfurt
Policy dissatisfaction	.35	.50	.51	.27	.28	.41
Group success						
Legal	.36	.54	.48	.13	.21	.35
Illegal	.23	.07*	.48	.41	.27	.56
Personal influence						
Legal	.33	.58	.28	.17	.29	.18
Illegal	.29	.26	.39	.44	.38	.45
Belief in the unity principle	.23	.52	.20	.08	.29	.10
Duty to participate	.28	.49	.31	.17	.25	.21
Collective rationality scale	.34	.58	.36	.16	.31	.22
Number of cases	714	501	494	714	501	494

*Not significant at the .05 level.

more than 5% of the cases were missing (which occurred with only one item), correlations with the dependent variables were computed with and without replacements of missing values. Since the results were virtually identical, we decided in favor of replacement.

Results

We present first the bivariate correlations between the logs of legal and illegal protest and all independent variables for the three samples in Table 2. All of them provide evidence that policy dissatisfaction, perceptions of group success, personal influence, and the beliefs promoting collective rationality are significantly related to both forms of protest. Policy dissatisfaction shows moderate bivariate relationships with legal and with illegal protest, although in all samples the correlation with legal protest is larger. These correlations are very similar to those reported in previous surveys of West German and West European publics regarding the relationship between discontent with government policies and political protest (Barnes and Kaase 1979; Muller 1979; Opp 1988), and their size and consistency help explain the popularity of the grievance model in explaining individual protest participation.

The relationships between the natural logs of legal and illegal protest and the personal influence terms are also of moderate magnitude, and, more important, support the assumption of rational choice theory that individuals will choose the kind of action they regard as most effective in achieving their goals. This can be seen most clearly by comparing the magnitude of the correlation of each of the influence terms with legal and illegal protest. For every correlation in Table 2, the personal influence and group success terms for legal protest correlate more strongly with legal, than with illegal, protest; while the opposite is true for every illegal influence term. For example, in the national sample, the individual's perceived influence for legal protest correlates more strongly with legal (.33), than with illegal, protest (.17); and the perceived personal influence term for illegal protest is stronger for illegal (.44) than for

legal (.29). Similarly, looking down the columns in Table 2 shows that legal protest is more strongly related to the personal and group influence terms for legal, than for illegal, protest in all samples but Frankfurt; and illegal protest is more strongly related to the influence terms for illegal, than for legal, protest in all three samples. While the magnitude of the coefficients varies across the three samples, the pattern of personal and group influence variables correlating more strongly with the appropriate kind of protest is consistent.

Finally, the extent of belief in the unity principle and the duty to participate, as well as the combined collective rationality scale, are moderately related to participation in collective political action. The strongest relationships in five of the six samples are seen for the collective rationality scale, which shows higher correlations than either of its two indicators taken separately. The collective rationality scale and the separate items also show higher correlations in all samples with legal, than with illegal, protest. Evidently, those who believe either in the unity principle or a sense of duty to participate are more likely to engage in legal than in illegal protest. This is most likely due to the fact that the measures of belief in the unity principle and the duty to participate did not stipulate a distinction between legal and illegal behavior, and individuals probably responded with legal protest in mind.

The relative merits of the alternative models described previously can be evaluated by a logarithmic procedure commonly used in econometrics to test models with multiplicative or interaction terms (see, e.g., Kelejian and Oates 1981). The procedure uses the logarithm of all variables as opposed to their raw values to obtain the coefficients of interest in a regression model. For example, the personal influence model, which contains an interaction between group influence (p_g), personal influence (p_i), and policy dissatisfaction (V) as the independent variables, can be written as

$$\text{Protest} = a * V^b * p_g^c * p_i^d * e, \qquad (6)$$

where a is a constant and b, c, and d are coefficients representing the effects of policy dissatisfaction, group influence, and personal influence, respectively, and e is the error term. Taking the logarithm of both sides of the equation yields

$$\log(\text{Protest}) = \log(a) + b * \log(V) + c * \log(p_g) + d * \log(p_i) + \log(e),$$

which can be estimated through the normal ordinary least squares (OLS) regression technique.

This procedure has several major advantages. First, the effect of each individual component of the interaction terms can be estimated, unlike the standard regression procedure when the entire product term is treated as a composite measure. Second, the standard regression procedure handles interaction by arbitrarily assuming that b, c, and d are one. The logarithmic procedure allows these coefficients to vary, however, and hence conveys information regarding different possible functional forms of the relationships (Berry and Feldman 1985, 60–63). Because the values b, c, and d are exponents in the multiplicative model in equation 6, they may be interpreted as follows: if the values are greater than one, this indicates a progressively increasing impact on protest as the values of the independent variable become larger, holding other variables constant; if the values are between zero and one, this indicates a decelerating functional form, where the impact increases at first and then levels off; if the value is one, this reduces to a constant marginal effect; and if the value is zero, the variable drops out of the equation completely (as $x^0 = 1$). A more straightforward interpretation of the un-

standardized effects, however, is that each regression coefficient is a measure of elasticity, representing the *percentage* change in Y that is brought about by a *percentage* change in X (Hanushek and Jackson 1977, 98).

The various models of protest are tested by the regression equations shown in Table 3. In all equations for legal protest, we include the relevant perceptions of individual and group influence through *legal* protest; and in all illegal protest equations, we use the corresponding perceptions of influence through *illegal* means. The results for the grievance models show significant effects of policy dissatisfaction on legal and illegal protest in all samples. The effect is greater for legal than for illegal protest. In addition, the coefficients in the majority of the equations are substantially less than one, indicating a decelerating functional form of the relationship between dissatisfaction and protest; the impact of dissatisfaction levels off as its value becomes higher. Only in the equation for legal protest in Frankfurt does the effect of dissatisfaction on protest approach a linear function. In general, though, the accuracy of prediction for these equations (adjusted R-squared) is low in the national sample, is moderate for legal protest only in Schwandorf, and is moderate for both kinds of protest in Frankfurt.

The results for the personal influence model are also shown in Table 3. Here, the interaction of policy dissatisfaction (V), perceived likelihood of group success (p_g), and perceived individual influence (p_i) dramatically improves the fit of the model in every sample, for both forms of protest. The adjusted R-squared for the personal influence equations are all substantially larger than those for the grievance equations, reaching a high value of .49 for legal protest in Schwandorf. In addition, the effects of all variables are statistically significant and of relatively large substantive magnitude. Interestingly, for legal protest, the unstandardized coefficient for group success is always greater than one, indicating that a 1% change in this variable leads to a greater-than-1% change in protest, holding other variables constant. The marginal effect of personal influence on legal protest is closer to one, while the effect of dissatisfaction is again less than one. Group success also shows a stronger relationship than personal influence with illegal protest, although the large accelerating effect is seen only in the Frankfurt sample.

The results from the personal influence model support the hypothesis that demand for public goods motivates individuals to contribute to collective action when both perceptions of individual influence and the overall likelihood of group success are high. If the perceived probability of group success is high, the personally inefficacious individual will be more likely to abstain; while those with higher levels of personal influence will be more likely to participate. Similarly, if perceived personal influence is high, those who believe the group has little chance of success will be more likely to abstain; while those who believe that the group has a higher overall likelihood of success will be more likely to join the collective action. The interaction of these two influence terms is strong and significant for both forms of protest in all three samples tested.

The results for the collective rationality models are also shown in Table 3. For legal protest, these models receive strong support, although accuracy of prediction is not improved over that for the personal influence equations. The distinctive components in these models are u (belief in the unity principle) and d (duty to participate), both of which are significantly related to participation in all three samples. The magnitude of the effects of group unity and duty are slightly smaller than that of personal influence for the national sample and Schwandorf, while

Table 3. Tests of Grievance, Personal Influence, and Collective Rationality Models of Legal and Illegal Protest

Model	Legal Protest (Log)			Illegal Protest (Log)		
	National	Schwandorf	Frankfurt	National	Schwandorf	Frankfurt
Grievance						
Log (V)	.41[a]	.33	.76	.13	.06	.37
	(8.52)[b]	(11.68)	(11.40)	(5.95)	(5.62)	(8.56)
	.30[c]	*.46*	*.46*	*.22*	*.24*	*.36*
Adjusted R^2	.09	.21	.21	.05	.06	.13
Personal influence						
Log (V)	*.27*	.19	.55	.05	.05	.18
	(5.95)	(7.66)	(8.53)	(2.39)	(4.41)	(4.55)
	.21	*.26*	*.33*	*.08*	*.18*	*.17*
Log (p_g)	1.36	1.69	2.05	1.13	.78	1.78
	(6.43)	(7.34)	(8.09)	(6.98)	(3.84)	(9.49)
	.24	*.27*	*.33*	*.26*	*.17*	*.40*
Log(p_i)	.75	1.26	.42	.58	.69	.45
	(5.51)	(10.55)	(2.51)	(8.10)	(6.24)	(4.42)
	.20	*.39*	*.10*	*.30*	*.28*	*.19*
Adjusted R^2	.21	.49	.33	.25	.19	.37
Collective rationality (unity principle)						
Log (V)	.26	.20	.56	.07	.05	.21
	(5.59)	(8.09)	(8.60)	(3.38)	(4.63)	(5.26)
	.20	*.29*	*.33*	*.12*	*.20*	*.20*
Log (p_g)	1.62	2.00	2.17	1.69	1.19	2.17
	(7.99)	(8.52)	(8.96)	(11.06)	(6.21)	(12.70)
	.28	*.32*	*.35*	*.39*	*.25*	*.49*
Log (u)	.68	1.13	.50	.02	.27	−.002
	(4.23)	(8.19)	(2.54)	(.24)	(4.79)	(−.02)
	.15	*.30*	*.09*	*.01*	*.20*	*−.001*
Adjusted R^2	.20	.45	.33	.18	.17	.34
Collective rationality (duty to participate)						
Log (V)	.26	.20	.52	.06	.05	.20
	(5.58)	(7.99)	(7.95)	(2.85)	(4.83)	(4.88)
	.20	*.28*	*.31*	*.10*	*.21*	*.19*
Log (p_g)	1.65	2.13	2.15	1.67	1.22	2.13
	(8.20)	(9.18)	(9.06)	(11.00)	(6.33)	(12.58)
	.29	*.34*	*.35*	*.38*	*.26*	*.49*
Log (d)	.56	.89	.55	.16	.19	.14
	(4.55)	(7.54)	(4.32)	(2.92)	(3.85)	(1.83)
	.16	*.27*	*.16*	*.10*	*.16*	*.07*
Adjusted R^2	.20	.44	.35	.19	.16	.35

TABLE 3 (*continued*)

Model	Legal Protest (Log)			Illegal Protest (Log)		
	National	Schwandorf	Frankfurt	National	Schwandorf	Frankfurt
Full collective rationality						
Log (V)	.24	.19	.51	.06	.05	.20
	(5.04)	(7.65)	(7.91)	(2.83)	(4.26)	(4.92)
	.18	*.27*	*.31*	*.10*	*.18*	*.19*
Log (p_g)	1.54	1.79	2.05	1.67	1.17	2.13
	(7.63)	(7.72)	(8.58)	(10.99)	(6.14)	(12.43)
	.27	*.29*	*.33*	*.38*	*.25*	*.48*
Log ($u + d$)	1.02	1.46	1.09	.17	.31	.21
	(5.72)	(9.68)	(5.01)	(2.09)	(5.10)	(1.58)
	.20	*.36*	*.19*	*.07*	*.22*	*.06*
Adjusted R^2	.22	.48	.36	.19	.17	.35

Note: V = value of public goods (policy dissatisfaction); p_i = index of personal influence through legal or illegal protest; p_g = perceptions of group success through legal or illegal protest; u = belief in the unity principle; d = duty to participate.

[a]Unstandardized coefficients.

[b]t-ratio in parentheses.

[c]Standardized coefficients in italics.

all three effects are of roughly equal magnitude in Frankfurt. The general pattern is clear: given moderate-to-high levels of policy dissatisfaction, the more perceptions of the likelihood of group success are coupled with either the belief in the unity principle or in a duty to participate, the greater the likelihood that the individual will join a collective legal protest.

The equation with the highest accuracy of prediction for legal protest is the full collective rationality model, where the unity principle and the duty to participate are combined into a single collective rationality scale. Here the explained variation is greater than that of models with either indicator taken separately in all samples, and superior to that of the personal influence model in the national sample and in Frankfurt. The effect of the collective rationality scale is also quite large in unstandardized terms, larger than that of personal influence in all three samples, and rivaling in magnitude that of the likelihood of group success in all samples but Frankfurt. For legal protest, then, the beliefs promoting collective rationality are consistently relevant in explaining individual participation.

For the illegal protest equations, however, the collective rationality models receive little support. In Schwandorf, both variables taken separately show significant impact on protest; in the national sample only the duty to participate is significant; and in Frankfurt neither effect is significant. In addition, the magnitude of the effects are all quite small compared to their corresponding effects on legal protest and to the effects of personal influence for illegal protest. Combining the two collective rationality measures into a single scale similarly results in a relatively weaker model than that of personal influence. In Frankfurt, the combined index is not statistically significant; and in the national sample and Schwandorf, the impact of the scale is far weaker than that of either personal influence or the perceptions of the likelihood of group success. We conclude that for illegal protest, support exists primarily for the personal

Table 4. Full Model of Personal Influence, Collective Rationality and Legal and Illegal Protest

Variable	Legal Protest (Log)			Illegal Protest (Log)		
	National	Schwandorf	Frankfurt	National	Schwandorf	Frankfurt
Log (V)	.23[a]	.16	.50	.04	.03	.17
	(4.84)[b]	(7.04)	(7.82)	(1.86)	(3.09)	(4.39)
	.17[c]	*.23*	*.30*	*.06*	*.13*	*.17*
Log (p_g)	1.23	1.24	1.89	1.12	.72	1.77
	(5.83)	(5.42)	(7.82)	(6.94)	(3.61)	(9.44)
	.21	*.20*	*.30*	*.26*	*.16*	*.40*
Log (p_i)	.62	.99	.33	.58	.64	.44
	(4.49)	(8.30)	(2.00)	(8.00)	(5.82)	(4.18)
	.16	*.30*	*.08*	*.30*	*.26*	*.18*
Log ($u + d$)	.85	1.08	1.04	.13	.27	.10
	(4.74)	(7.25)	(4.77)	(1.72)	(4.61)	(.75)
	.17	*.26*	*.18*	*.06*	*.19*	*.03*
Adjusted R^2	.24	.54	.36	.26	.22	.37

Note: V = value of public goods (policy dissatisfaction); p_i = index of personal influence through legal or illegal protest; p_g = perceptions of group success through legal or illegal protest; u = belief in the unity principle; d = duty to participate.

[a]Unstandardized coefficients.

[b]t-ratio in parentheses.

[c]Standardized coefficients in italics.

influence model, while both the personal influence and collective rationality models are supported for legal protest.

The results of a full model combining personal influence and collective rationality are shown in Table 4. These equations include both personal influence and the collective rationality scale in a multiplicative specification. While the effects of the two variables may be additive, it is also plausible to assume that the effects of each may be augmented by the others. We decided on the multiplicative specification so as to maintain consistency with the equations in Table 3 and because additive specifications yielded no better fit to the data and made it almost impossible to interpret the individual effects due to severe multicollinearity.[6]

For legal protest, the full model shows that in each sample all variables have a statistically significant impact on participation. The relative magnitude of the unstandardized and standardized coefficients suggests that the effect of collective rationality is approximately equal to that of personal influence in the national sample and Schwandorf, while in Frankfurt collective rationality has a much greater effect. For illegal protest, however, the results of the full model are almost identical to the personal influence equations in Table 3, as collective rationality again adds little explanatory power.[7] Only in Schwandorf is the collective rationality scale significant, but its unstandardized value is low, once perceptions of personal influence are taken into account. Belief in the unity principle and moral duty, then, appear relevant only for legal protest: for discontented individuals, participation in illegal protest results almost entirely from the interaction between perceived personal influence and perceptions of the likelihood of group success.

Conclusion

Previous research on determinants of individual participation in collective political action has not dealt adequately with the free-rider problem posed by conventional rational choice theory. Grievance explanations ignore utility calculations and the free-rider dilemma completely. Explanations based on the perceived likelihood of group success fail to provide a meaningful linkage between perceptions of group success and the participation of any given individual. In our alternative models, one such linkage is specified by an interaction between the perceived likelihood of group success and perceptions of individual influence on the provision of public goods. We found substantial variation among West German respondents in their perceived personal influence, and a moderate-to-strong impact of this variable in the multiplicative interaction model of legal and illegal protest behavior.

A second linkage between the group and the individual is specified by an interaction between the perceived likelihood of group success and belief in either of two principles that promote collectively rational outcomes: the unity principle, which stipulates that the participation of all members is *necessary* for group success; and the duty to participate, which mandates individual participation on *moral* grounds. Given acceptance of the unity principle, individuals who perceive that a protest group can potentially succeed will participate because group success depends on each individual's contribution. Given acceptance of the duty to participate, individuals who perceive that a protest group can potentially succeed will participate because of the moral obligation to contribute to the provision of public goods if others are doing the same. Empirically, we found substantial variation among respondents in these beliefs as well, and a significant multiplicative effect of them on legal, but not illegal, protest in all three West German samples.

The results reported here have important implications for both grievance and rational choice theories of political participation. Discontent in the form of policy dissatisfaction does matter for protest, but it does not provide strong motivation for participation when considered alone. Participation in collective action results when dissatisfied individuals regard the group as likely to succeed, and when either perceptions of personal influence or belief in collectively rational general principles are high as well.

The implications for rational choice theory are much more complex. In contrast to the assumptions of the conventional rational choice model, many individuals believe that they *are* personally influential in providing public goods. Many individuals, further, believe—and act on—the unity principle, which stipulates illogically that *all* group members are necessary for group success, that is, if the individual does not participate, the group will fail (Hardin 1982, 114). Finally, individuals appear to act on the basis of moral obligations and feelings of duty to contribute if enough others are doing the same, and this motivation typically is interpreted as evidence against rational choice (Hardin 1982; Klosko 1987b).

However, the irrationality of these beliefs, and of acting on the basis of these beliefs, is not so clear. Consider the assumption of rational choice theory that individuals estimate their influence on the provision of public goods as close to zero. On the one hand, individuals who participate in large groups should not believe that their participation is decisive. On the other hand, high levels of perceived influence are found typically among individuals who are highly educated, wealthy, and cognitively sophisticated; while low levels of influence are found among those with fewer objective personal resources. Con-

sequently, "miscalculation of individual influence cannot be assumed to be just an aberration due to lack of knowledge" (Muller and Opp 1987, 562); rather, such estimations appear to reflect perceptions of political influence and resources that can be relevant in stimulating individual and collective political behavior.

More generally, the processes we have outlined above conform to what Simon (1985) calls "procedural rationality," where imperfect information leads individuals to choose alternatives that may be characterized as inefficient according to some objective criterion. In this view, the criterion for assessing rationality is not the content of individuals' beliefs but rather that individuals act upon their beliefs in an efficient manner. Given this criterion, the results reported here are consistent with rational choice. On a basic level, the bivariate correlations in Table 2 show that perceptions of individual and group influence through legal protest are more strongly related to legal, than to illegal, protest participation, and that perceptions of influence through illegal protest correlate more strongly with that form of behavior than with legal protest. Thus, individuals appear to participate in whatever form of behavior promises the greatest chance of success. Moreover, the interaction effects demonstrated in the multivariate models are clearly compatible with procedural rationality. In the personal influence model, individuals who feel personally efficacious are unlikely to participate unless the group as a whole can also succeed, and individuals who believe that the group can succeed but feel personally inefficacious are likely to stay at home and free-ride. Thus, expectations of individual benefits from participation depend, quite reasonably, on the combination of personal influence and the likelihood of group success.

In the collective rationality model, efficiency in individual behavior also is evident. The effects of belief in the unity principle and the duty to participate are conditional on the perception that the group as a whole has the potential to succeed. Individuals who believe in the unity principle will be motivated to participate on strategic grounds, while calculating Kantians will contribute to collective action because the likelihood of group success both activates and augments the moral duty to participate. In both cases, individuals are maximizing utility based on their preferences for public goods and the constraints on realizing their preferences represented by their own perceptions of personal influence, acceptance or rejection of the beliefs promoting collective rationality, and the opportunities for successful collective action afforded by the environment.

Rational choice explanations of collective political action have always fared better in explaining why individuals do not participate rather than in explaining why they do. The processes described in the personal influence and collective rationality models show how procedurally rational individuals may calculate a positive expected utility for participation that outweighs the incentive to free-ride. Given these findings, the approach outlined here provides a useful explanatory framework for future research on the psychological determinants of participation in, and not simply abstention from, collective political action.

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1. Technically, the outcomes are *nonexcludable*, i.e., they cannot feasibly be withheld from any individual, regardless of his or her contribution toward its provision; and they have *jointness of sup-*

ply in that the good's supply does not change, regardless of how many people consume or enjoy it (Olson 1965; Oliver and Marwell 1988). The criteria of nonexcludability is the more important of the two for the purposes here.

2. Other conceptual and empirical critiques of grievance theory can be found in Finkel and Rule (1986), McCarthy and Zald (1977), and Tilly (1978).

3. It should also be mentioned that another solution to the collective action problem frequently mentioned by rational choice theorists is the provision of "selective benefits" to individuals—such as money, status, or "entertainment"—that can be obtained only through participation. While such selective benefits may be important, we focus here on the expected benefits associated with the collective good. We do not deny the importance of selective incentives but restrict our attention to the prediction of conventional rational choice theory that benefits associated with public goods are irrelevant for the individual's decision calculus.

4. On the role of fairness and moral obligations in collective action problems, see also Klosko 1987a and Marwell and Ames 1979.

5. It is also important to note that the intercorrelations between perceptions of individual influence, perceptions of the likelihood of group success, and beliefs promoting collective rationality are only of moderate magnitude, indicating that these variables represent distinct perceptions and attitudes that may influence participation.

6. That is, the interaction term $(p_i * p_g * V)$ is quite strongly related to $[(u + d) * p_g * V]$. In addition, using OLS in an additive model makes the unreasonable assumption, given our prior results, that the exponents of all variables in the interaction term are one.

7. Taking either of the two collective rationality terms separately yields the same conclusion.

References

Barnes, Samuel H., and Max Kaase, eds. 1979. *Political Action: Mass Participation in Five Western Democracies.* Beverly Hills: Sage.

Berry, William D., and Stanley Feldman. 1985. *Multiple Regression in Practice.* Beverly Hills: Sage.

Elster, Jon. 1985. "Rationality, Morality, and Collective Action." *Ethics* 96:136–55.

Finkel, Steven E., and James B. Rule. 1986. "Relative Deprivation and Related Psychological Theories of Civil Violence: A Critical Review." In *Research in Social Movements, Conflicts, and Change,* vol. 9, ed. Kurt and Gladys Lang. Greenwich, CT: JAI.

Fireman, Bruce, and William A. Gamson. 1979. "Utilitarian Logic in the Resource Mobilization Perspective." In *The Dynamics of Social Movements,* ed. Mayer N. Zald and John D. McCarthy. Cambridge, MA: Winthrop.

Gamson, William A. 1975. *The Strategy of Social Protest.* Homewood, IL: Dorsey.

Godwin, Kenneth, and Robert Cameron Mitchell. 1982. "Rational Models, Collective Goods, and Nonelectoral Political Behavior." *Western Political Quarterly* 35:161–81.

Gurr, Ted Robert. 1970. *Why Men Rebel.* Princeton: Princeton University Press.

Hanushek, Eric A., and John E. Jackson. 1977. *Statistical Methods for Social Scientists.* New York: Academic.

Hardin, Russell. 1982. *Collective Action.* Baltimore: Johns Hopkins University Press.

Kelejian, Harry H., and Wallace E. Oates. 1981. *Introduction to Econometrics.* New York: Harper & Row.

Klandermans, Bert. 1984. "Mobilization and Participation: Social-Psychological Expansions of Resource Mobilization Theory." *American Sociological Review* 49:583–600.

Klosko, George. 1987a. "The Principle of Fairness and Political Obligation." *Ethics* 97:353–62.

Klosko, George. 1987b. "The Rationality of Collective Action." *American Political Science Review* 81:557–61.

McCarthy, John D., and Mayer N. Zald. 1977. "Resource Mobilization and Social Movements: A Partial Theory." *American Journal of Sociology* 82:1212–41.

Marwell, Gerald, and Ruth E. Ames. 1979. "Experiments on the Provision of Public Goods." Pt. 1, "Resources, Interest, Group Size, and the Free-Rider Problem." *American Journal of Sociology* 84:1335–60.

Moe, Terry M. 1980. *The Organization of Interests.* Chicago: University of Chicago Press.

Muller, Edward N. 1972. "A Test of a Partial Theory of Potential for Political Violence." *American Political Science Review* 66:928–59.

Muller, Edward N. 1979. *Aggressive Political Participation.* Princeton: Princeton University Press.

Muller, Edward N., and Thomas O. Jukam. 1983. "Discontent and Aggressive Political Participation." *British Journal of Political Science* 13: 159–79.

Muller, Edward N., and Karl-Dieter Opp. 1986. "Rational Choice and Rebellious Collective Action." *American Political Science Review* 80: 471–89.

Muller, Edward N., and Karl-Dieter Opp. 1987. "Rebellious Collective Action Revisited." *American Political Science Review* 81:561–64.

Oberschall, Anthony. 1980. "Loosely Structured Collective Conflict: A Theory and an Application." In *Research in Social Movements, Conflicts, and Change,* vol. 3, ed. Louis Kriesberg.

Greenwich, CT: JAI.
Oliver, Pamela E., and Gerald Marwell. 1988. "The Paradox of Group Size in Collective Action." *American Sociological Review* 88:1–8.
Olson, Mancur. 1965. *The Logic of Collective Action.* Cambridge: Harvard University Press.
Opp, Karl-Dieter. 1986. "Soft Incentives and Collective Action: Participation in the Anti-Nuclear Movement." *British Journal of Political Science* 16:87–112.
Opp. Karl-Dieter. 1988. "Grievances and Social Movement Participation." *American Sociological Review* 53:853–64.
Pinard, Maurice, and Richard Hamilton. 1986. "Motivational Dimensions in the Quebec Independence Movement: A Test of a New Model." In *Research in Social Movements, Conflicts, and Change,* vol. 9, ed. Kurt and Gladys Lang. Greenwich, CT: JAI.
Rapoport, Anatol. 1974. "Prisoner's Dilemma—Recollections and Observations." In *Game Theory As a Theory,* ed. Anatol Rapoport. Dordrecht, Holland: D. Reidel.
Rapoport, Ammon. 1985. "Provision of Public Goods and the MCS Experimental Paradigm." *American Political Science Review* 79:148–55.
Roemer, John E. 1978. "Neoclassicism, Marxism, and Collective Action." *Journal of Economic Issues* 12:147–61.
Schwartz, Michael. 1976. *Radical Protest and Social Structure.* New York: Academic.
Simon, Herbert A. 1985. "Human Nature in Politics: The Dialogue of Psychology with Political Science." *American Political Science Review* 79: 293–304.
Tilly, Charles. 1978. *From Mobilization to Revolution.* Reading, MA: Addison-Wesley.
Tullock, Gordon. 1971. "The Paradox of Revolution." *Public Choice* 11:89–99.
Van de Kragt, Alphons J. C., John M. Orbell, and Robyn Dawes. 1983. "The Minimal Contributing Set As a Solution to Public Goods Problems." *American Political Science Review* 77:112–22.
Verba, Sidney, and Norman Nie. 1972. *Participation in America.* New York: Harper & Row.
Walsh, Edward J., and Rex H. Warland. 1983. "Social Movement Involvement in the Wake of a Nuclear Accident: Activists and Free Riders in the Three Mile Island Area." *American Sociological Review* 48:764–81.

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Greenwich, CT: JAI.
Oliver, Pamela E., and Gerald Marwell. 1988. "The Paradox of Group Size in Collective Action." *American Sociological Review* 88:1–8.
Olson, Mancur. 1965. *The Logic of Collective Action.* Cambridge: Harvard University Press.
Opp, Karl-Dieter. 1986. "Soft Incentives and Collective Action: Participation in the Anti-Nuclear Movement." *British Journal of Political Science* 16:87–112.
Opp. Karl-Dieter. 1988. "Grievances and Social Movement Participation." *American Sociological Review* 53:853–64.
Pinard, Maurice, and Richard Hamilton. 1986. "Motivational Dimensions in the Quebec Independence Movement: A Test of a New Model." In *Research in Social Movements, Conflicts, and Change,* vol. 9, ed. Kurt and Gladys Lang. Greenwich, CT: JAI.
Rapoport, Anatol. 1974. "Prisoner's Dilemma—Recollections and Observations." In *Game Theory As a Theory,* ed. Anatol Rapoport. Dordrecht, Holland: D. Reidel.
Rapoport, Ammon. 1985. "Provision of Public Goods and the MCS Experimental Paradigm." *American Political Science Review* 79:148–55.
Roemer, John E. 1978. "Neoclassicism, Marxism, and Collective Action." *Journal of Economic Issues* 12:147–61.
Schwartz, Michael. 1976. *Radical Protest and Social Structure.* New York: Academic.
Simon, Herbert A. 1985. "Human Nature in Politics: The Dialogue of Psychology with Political Science." *American Political Science Review* 79: 293–304.
Tilly, Charles. 1978. *From Mobilization to Revolution.* Reading, MA: Addison-Wesley.
Tullock, Gordon. 1971. "The Paradox of Revolution." *Public Choice* 11:89–99.
Van de Kragt, Alphons J. C., John M. Orbell, and Robyn Dawes. 1983. "The Minimal Contributing Set As a Solution to Public Goods Problems." *American Political Science Review* 77:112–22.
Verba, Sidney, and Norman Nie. 1972. *Participation in America.* New York: Harper & Row.
Walsh, Edward J., and Rex H. Warland. 1983. "Social Movement Involvement in the Wake of a Nuclear Accident: Activists and Free Riders in the Three Mile Island Area." *American Sociological Review* 48:764–81.

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