DISSIDENT GROUPS, PERSONAL NETWORKS, AND SPONTANEOUS COOPERATION: THE EAST GERMAN REVOLUTION OF 1989*

KARL-DIETER OPP
Universität Hamburg

CHRISTIANE GERN
Universität Hamburg

We focus on the roles of groups and personal networks in demonstrations in the repressive setting of East Germany between May and October 1989. We first propose a micromodel specifying a broad set of individual incentives to participate; then we contend that political events and changes in the social context together with existing coordinating mechanisms produced the large-scale demonstrations in 1989. Most of our hypotheses are tested using a representative survey of Leipzig's population in the fall of 1990 that focuses on the 1989 protests. Among the incentives, only political discontent, weighted by perceived personal political influence, has a major impact on participation in the demonstrations. The expectation of repression was irrelevant. Opposition groups were unable to shape the incentives of the population, and incentives for their members to participate were weak, whereas negative incentives prevailed for members of the Socialist Party. Incentives to participate were concentrated in personal networks of friends. Thus, personal networks were the most important contexts for mobilizing citizens. A "spontaneous coordination model" explains how discontented citizens met at particular times and places, and why few incentives were necessary to prompt participation in the demonstrations.

Social networks are of central importance in explaining social movements and political protest. These networks are, first of all, social groups or organizations (Curtis and Zurcher 1973; McAdam and Paulsen 1991; Opp 1989; Snow, Zurcher, and Ekland-Olson 1980). Personal networks are also relevant for mobilizing citizens to protest (Finifter 1974; Isaac, Mutran, and Stryker 1980; Opp 1988; McAdam and Paulsen 1991). Oliver (1984) argued that social integration of a neighborhood "is an important element in a neighborhood's ability to act collectively in response to some threat" (p. 604).

Empirical research and much of the theory on the effects of social integration assume societies like the Western democracies. In these societies, ample opportunities exist for forming groups, for mobilizing new members or personal networks, and for cooperation with other groups. Consequently, communication critical of the incumbent government or political system can be exchanged without fear of severe repression.

These conditions are not met in authoritarian societies. Attempts to establish opposition networks are blocked by government agencies and are severely sanctioned. Communicating critical opinions to friends and acquaintances is also risky. Mobilization is difficult under a threat of strong repression, and the emergence of protest is unlikely (Jenkins and Perrow 1977; Tilly 1978).

Nevertheless, extensive protest and revolutionary changes have occurred in authoritarian societies. The nonviolent 1989 rebellion in the former German Democratic Republic (GDR, i.e., East Germany) is a well-known example. Although opposition forces were suppressed by a well-developed system of state repression, protests erupted. The regime's breakdown began on October 9 when about 70,000 people demonstrated on Leipzig's Karl Marx Platz (Karl Marx Square) to demand reforms, even though government forces would probably use violent means to end the demonstration. The

* Direct all correspondence to the authors, Universität Hamburg, Institut für Soziologie, Allende-Platz 1, 20146 Hamburg, Germany. We gratefully acknowledge support provided by the Deutsche Forschungsgemeinschaft. We are indebted to Jeffrey Goldfarb and Andrew Arato (New School for Social Research, New York), Peter Voß (Leipzig), Mark Lichbach (University of Colorado, Boulder),and to the *ASR* editor and anonymous reviewers for valuable suggestions.

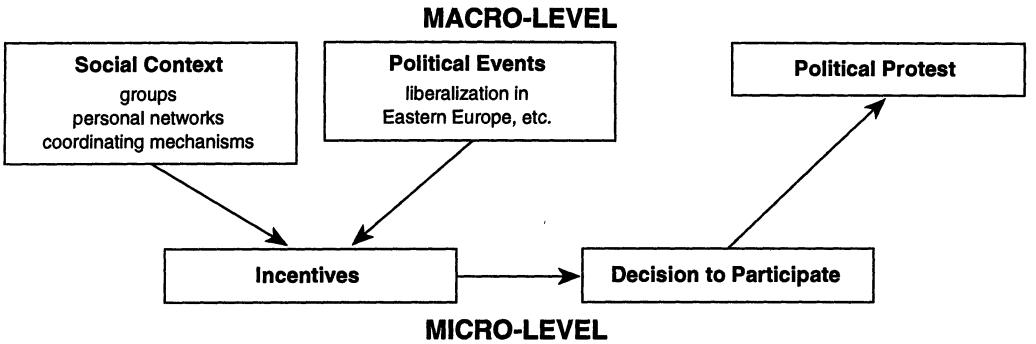

Figure 1. Theoretical Model for Explaining the Emergence of Large-Scale Political Protests

security police did not interfere, however, and the demonstrators were peaceful. From then on, political protest was no longer suppressed by state agencies. Protests increased and eventually led to the resignation of the government and the dissolution of the GDR. However, demonstrations in Leipzig and elsewhere in the GDR before October 9 were not organized — in contrast to most demonstrations in Western democracies, they emerged *spontaneously* (Döhnert and Rummel 1990; Neues Forum Leipzig 1990; Schneider 1990; Tetzner 1990).

If contemporary social movement theory is not to be confined to Western democratic political systems, it should account for the roles of organized groups and interpersonal ties in the emergence of protests in a societal context characterized by extensive state repression.

Previous theory and research imply that factors other than networks also promote political protest. To determine the role of social networks, a theory must provide a general specification of the factors that launch political protest in authoritarian regimes. Such a theory must also explain the spontaneous emergence of large-scale protests. We propose such a theory and use it to explain increasing participation in the 1989 demonstrations in East Germany. Most of the resulting hypotheses are tested using a representative survey of Leipzig's population that focuses on the 1989 protests.

THEORY

The Basic Model

Our theoretical scheme, portrayed in Figure 1, first specifies a broad set of incentives within authoritarian settings that promote participation in political protests on a micro-level. We draw on a broadly conceived rational-actor model that includes four types of incentives that previous research has found to be important determinants of political action: public goods motivation, moral incentives, social incentives, and repression. In addition, we use demographic variables as controls. According to the rational-actor model, age, gender and other demographic variables should correlate with political action only if these variables are related to the incentives for political action. Introducing demographic variables as controls indicate the importance of incentives in the model. Two macro-factors affect the incentives: (1) The social context, which includes social groups, personal networks, and institutional incentives ("coordinating mechanisms"), such as the regular Monday prayers in Leipzig; and (2) political events, like the liberalization in Eastern Europe. Political protests may increase if new groups, personal networks, or coordinating mechanisms emerge that increase the incentives for protest, or if political events shape the incentives for specific political actions. A protest event, e.g., a demonstration, is the result of individual decisions to participate.[1]

Particular macro-factors are commonly labelled "political opportunities." Tarrow (1991a) posited that the "onset of a wave of mobilization can be seen as a collective response to generally expanding political oppor-

[1] Coleman (1990) proposed a similar schema connecting macro-level and micro-level propositions. The specified *macro-factors* are actually located at different levels: Memberships in groups are at a more "meso-level" than are political events. For our purposes, however, distinguishing various macro-levels is unnecessary.

tunities in which the costs and risks of collective action are lowered and the potential gains increase" (p. 15, see also 1991b). Accordingly, changes in the macro-factors may be said to increase or decrease political opportunities. Because of the lack of a clear definition of "political opportunities," we focus instead on the two macro-factors shown.

Our theoretical approach implies that a pure macro-model provides an incomplete explanation of the large-scale protests in East Germany (and Eastern Europe in general). One of the essential tasks of a full-fledged explanation is to point out how the free rider problem is overcome, and to do this individual incentives to participate must be specified. Nevertheless, our theoretical approach is not in complete disagreement with a structural framework: It integrates hypotheses derived from a structural approach by linking macro-factors (e.g., group resources) to individual incentives to protest. However, in our model only individual incentives have a direct effect on political protest, and macro-events, like demonstrations, are the result of individual decisions. A similar approach has been used by other authors to explain the changes in Eastern Europe (see Hirschman 1993; Karklins and Peterson forthcoming; Kuran 1991; Tietzel, Weber, and Bode 1991; Prosch and Abraham 1991).

Incentives to Participate

Empirical research has shown that political discontent, i.e., dissatisfaction with the provision of public goods, promotes political action in large groups if actors believe that their participation will make a difference (Finkel, Muller, and Opp 1989; Klandermans 1984; Muller and Opp 1986; Opp 1986, 1989). Therefore, we assume that in East Germany *public goods motivation* (i.e., political discontent and the perceived political influence of protest) had a positive effect on participation in the political protests.

Several studies indicate that *moral incentives* promote participation in political action (Marwell and Ames 1979; Muller 1979; Opp 1986, 1989; Riker and Ordeshook 1968, 1973). For GDR citizens, moral obligations to protest may have been particularly salient because discontent with the political and economic situations was high. Therefore, moral incentives may have had a particularly strong positive effect on participation in the protests. On the other hand, because protest was severely sanctioned, moral incentives may not have operated, and as a result, they may not have affected participation in protests. The overall effect of moral incentives depends on the extent to which repression and discontent obtain.

Social incentives, such as encouragement by important others to participate, prompt individuals to participate in protest actions (Klandermans 1984; Knoke 1988; Opp 1986, 1989; Muller and Opp 1986). In East Germany, social incentives may have been particularly salient in opposition groups.

In authoritarian regimes, an expectation of *repression* is a central variable explaining participation in protests: The high risk and potential severity of state sanctions probably deterred many citizens from protesting.

The Social Context: Social Groups and Personal Networks

Social groups in the GDR. In 1989 and earlier, all voluntary associations in the GDR were controlled by the United Socialist Party of Germany (SED). Associations that disagreed with party goals were forbidden. The SED had built up several mass organizations and parties, such as the Free Federation of German Trade Unions (FDGB), the Free German Youth (FDJ), and the so-called "block-parties," which were formally independent of the SED but supported its goals. These parties and mass organizations were united in a kind of superstructure, the National Front. All organizations enforced the SED politics. The Protestant and Catholic churches retained a somewhat limited autonomy (Pollack 1990; Rein 1989, 1990; Swoboda 1990), and they neither openly opposed the SED regime nor supported its politics in all respects.

Beginning in the early 1980s, several groups emerged that took a critical stance toward the political system, focusing mainly on issues of peace, human rights, and the environment. Some of these groups were founded by church members, although most groups were not primarily composed of church members. Beginning in August 1989, several opposition groups not connected to a church were founded, including the New Forum (*Neues Forum*), Democracy Now (*Demokratie Jetzt*), Democratic Uprising (*Demokratischer Aufbruch*), and the

Social Democratic Party (SDP) (Müller-Enbergs, Schulz, and Wielgohs 1991; Musiolek and Wuttke 1991; Rein 1989; Pollack 1990).

The impact of groups. Opposition groups may have contributed to the rise of protests in several ways. First, the fact that their members were political entrepreneurs may have increased incentives for collective action (1) through direct attempts at mobilization, e.g., face-to-face interactions or mailings; or (2) by becoming reference groups for a large number of citizens. Second, opposition groups may have organized demonstrations and other joint political actions, i.e., they may have created coordinating mechanisms that reduced the costs of specific actions.

The resource mobilization perspective stresses a third effect that focuses on the impact of group membership on the members: Group integration "furnishes individuals with a communication network, a set of common values and symbols around which members can be mobilized, a tradition of participation in group activity, and an authority structure" (Useem 1980, p. 357). Applying this proposition to the situation in East Germany in 1989, we expect members of opposition groups to participate in protests relatively frequently. A "communication network" in which incentives to protest prevailed may have developed in these groups. For members of leisure groups, protest activity should be less common, and members of the SED and related organizations should refrain from protest. Because of the high risk of repression and agitation during the 40 years of its existence, the SED regime may have established loyal groups in which criticism and the exchange of rewards for participation in protests was impossible. Thus, we expect a negative or zero correlation between membership in conventional political groups and participation in protests.

An alternative hypothesis is that *any* group — including political organizations closely linked to the regime — has a potential for mobilization, which would promote protest activity. The willingness to protest in the fall of 1989 may have increased interactions among group members and increased encouragement to engage in joint actions against the regime. Thus, membership in any group may correlate positively with participation in protest activities.

The increasing participation in the demonstrations during 1989 may be explained, at least in part, by the groups that were founded in the fall of 1989 — foundings may have increased the incentives to participate.

Personal networks. Networks of friends, colleagues, or neighbors constitute micro-contexts for mobilizing citizens. Members of these networks can communicate relatively easily and argue and exchange rewards that promote participation in political action. In a repressive society the extent to which personal networks critical of the regime can function at all as micro-mobilization contexts is largely unknown. In the GDR, communication was restrained by the regime: Only about 13 percent of households had a telephone, and there were few restaurants or pubs as compared to Western countries. This situation and the expected sanctions against the exchange of opinions critical of the regime may have constrained conversations with political themes. Therefore, citizens may not have known the political attitudes of their friends, and mobilization would have been severely thwarted.

On the other hand, even in societies ruled by authoritarian regimes, ways of establishing independent public expression emerge (Goldfarb 1978, 1982), and politically homogeneous personal networks may develop. In everyday communication, subtle signals indicating a partner's political views may be exchanged. Reactions to such signals provide an impression of the partner's political attitudes. If the initial interactions convey similar political views, step-by-step communication may begin that results in the recognition of the partner's critical views and may lead to the establishment of a personal relationship. A partner's political views may also be inferred from the partner's political activities, e.g., involvement in party-controlled organizations. Thus, even in authoritarian regimes, politically homogeneous networks whose members trust each other and communicate in a relatively uninhibited manner may be established.

We assume that important networks for the mobilization of protest consist of co-workers and friends. A relatively large number of co-workers or friends with attitudes critical of regime politics who participate in protest actions constitute an effective micro-context for mobilization. In a politically homogeneous critical network, communication is easy, and members expect approval for participation in protests, particularly if members have close ties. The

contribution of critical personal networks to the increase in demonstrations may be twofold: Positive incentives in existing networks may have increased during 1989, and an increase in critical networks may have increased the incentives to participate.

Political Events

Political events, including political decisions made by the incumbent regime or by other countries, were among the causes of the collapse of the GDR. Examples are the GDR's approval of the crackdown on the democracy movement in China in June 1989 and political liberalization in Poland and Hungary. Perestroika and glasnost are regarded as major political developments that triggered the downfall of the Communist regimes in Eastern Europe. Why did these events contribute to the collapse of communism? We argue that these political events increased public goods motivation, moral incentives, and social incentives, and that these increases were so large that repression became an irrelevant deterrent to participation in demonstrations.

Coordinating Mechanisms: Spontaneous Cooperation

If the demonstrations were not organized, how did individuals coordinate their actions to produce the demonstrations? We argue that the positive incentives for protest in general increased during 1989. Citizens were thus faced with a dilemma: They had strong desires to engage in action against the government, but the costs of doing so were high. A possible solution to this dilemma was for citizens to congregate at a recognized meeting place. The regime would regard such a conglomeration of citizens as an expression of the people's discontent and effect political reforms. The costs of participating in such gatherings would be lower than participation in more visible actions, e.g., working for an opposition group or refusing to vote.

A citizen considering participation in such spontaneous gatherings is faced with the *coordination problem* (Schelling 1960, pp. 54–58; Lewis 1969; Hardin 1982, chap. 10): Where and when will a sufficient number of people gather? A common expectation that citizens will gather at a particular time and place solves this problem. In Leipzig, the institution of Monday prayers shaped this expectation.[2]

RESEARCH DESIGN

Sample

We analyze data from a representative survey that focused exclusively on the events of fall 1989. From a population of about 450,000, 1,300 Leipzig residents were interviewed in November and December of 1990.

Although we interviewed citizens of Leipzig, we believe our data are relevant for testing hypotheses about the revolution in East Germany. The protests in Leipzig were in the vanguard: The demonstration on October 9, which attracted the largest number of participants since June 17, 1953, set the pace for protests at other sites. The situation for Leipzig's population resembled that for other East Germans, despite regional differences in the problems facing citizens, e.g., the extreme pollution in areas with many chemical industries. Basically, all citizens were members of the same society and were exposed to the same political events.

The data were collected by a newly established professional survey institute.[3] A random sample of 2,000 addresses was drawn from records of the municipal registration office. However, only 696 interviews (34.8 percent) were obtained. Therefore, a procedure common among professional survey institutes in Ger-

[2] Citizens are also faced with the *critical mass problem*: Will there be enough other participants so that the public good will be provided, and how will the number of participants affect the costs of participation? It is often assumed that the number of participants (who are part of the social context) affects the costs and benefits of the action for each actor (Schelling 1978; DeNardo 1985; Marwell and Oliver 1993). For East Germany and Eastern Europe in general see Karklins and Petersen forthcoming; Opp forthcoming; Prosch and Abraham 1991; Tietzel, Weber, and Bode 1991). Our data do not permit rigorous test of this proposition.

[3] The USUMA in East Berlin was founded in February 1990 with the help of two established West German survey institutes (Emnid and Forschungsgruppe Wahlen) with experience with political surveys. According to the ZUMA, a nonprofit social science institute in Mannheim that evaluated the quality of former East German survey institutes, the quality of surveys administered by the USUMA meets Western standards.

many was also employed: The city of Leipzig was divided into 60 similar-sized so-called sample points. Interviewers were assigned to randomly selected starting points within these areas and instructed to follow a certain random route to select a household. If the household consisted of more than one person, the interviewer selected the respondent (age 14 or older) according to a predetermined schedule that assured randomness. This procedure yielded 608 interviews out of 1,260 trials for a response rate of 48.2 percent. Interviews from the two procedures were pooled (N = 1300 after four incomplete questionnaires were eliminated). The survey institute reported that response rates of about 40 percent were common at that time, and we have no reason to suspect that our low response rate is a result of the subject of our study.[4]

Although individuals were selected by chance in both samples, there may be systematic differences between the samples because of the low response rates. However, the means of selected demographic variables and the incentive variables were very similar in both samples (most etas were below .08 and not significant).

The official estimate of participants in the demonstrations of September 25, October 2, October 7, and October 9 is 105,000 or 23.9 percent of the 440,156 citizens of Leipzig ages 15 and older at the time. In our combined sample, 39 percent of the respondents reported participating in these demonstrations. The difference between 23.9 percent and 39 percent is too large to be ignored. We found no evidence of overreporting or biased selection. Of course, the official estimate of the number of participants may be wrong — no information was available on the way this estimate was obtained. Photos of the demonstration on Karl Marx Square on October 9, 1989 showed that people stood close together, with approximately four persons per square meter. Karl Marx Square in Leipzig, including the adjacent street of Grimmaische Straße where demonstrators also gathered, covers an area of approximately 41,500 square meters, yielding an estimate of approximately $4 \times 41{,}500 = 166{,}000$ participants. Assuming 3 persons per square meter, which is certainly underestimating, yields 124,500 participants. Thus, the estimate of 70,000 participants, which is reported in all publications, is most certainly false. Published numbers of participants should be viewed with skepticism. The official figures probably reflect only the relative sizes of the demonstrations.

To examine the effects of possible overrepresentation of participants, we weighted our 1,300 respondents (participants were weighted by .607, nonparticipants by 1.255) to produce the official estimate of the proportion participating. This yielded 311 participants (instead of 512) and 989 nonparticipants (instead of 788). For the unweighted and the weighted data, we regressed "participation in demonstrations" on the incentive variables. Differences in the regression coefficients were small — the largest difference (for public goods motivation) was .05. Differences in the means of the incentive variables for the weighted and unweighted data were also small. Thus, even if participants are overrepresented in our sample, the results of our analyses are not affected.

Finally, that the survey is representative of the Leipzig population is supported by the following facts: The age structure of the Leipzig population — for women as well as for men — was reproduced in the sample. Also, church and SED membership in the sample resembled comparable figures for the Leipzig population.[5]

Although a representative sample may be preferred, a representative sample is not necessary for testing *theoretical* propositions. A hypothesis should be valid for nonrepresentative samples (Zetterberg 1965, pp. 118–20). For example, when testing hypotheses about the ef-

[4] Response rates between 60 and 65 percent are regarded as "normal." The institute informed us that the relatively low response rates were a result of the special situation in East Germany at the time: In the wake of the opening of the borders on November 9, 1989, dubious traders invaded East Germany, and thefts and frauds increased dramatically. As a result, people often refused to let strangers into their apartments. Finally, many addresses in the address sample were incorrect. This explains the lower response rate of the address sample.

[5] Figures for the gender and age structure of Leipzig were provided by the Leipzig registration office. Dr. D. Pollack from the theology department of the University of Leipzig provided us with figures for church membership; the president of the municipal chapter of the *Partei des Demokratischen Sozialismus* (Party of Democratic Socialism, the legal successor of the SED) provided the SED membership figures. All figures refer to 1989.

fects of incentives on participation in political actions, results should not be invalidated if older people or women or activists are under- or overrepresented in a given sample.

Measurement

Asking questions about past attitudes, behaviors, or circumstances may yield problems of validity. In this case, having ousted an authoritarian regime may distort memories, resulting in socially desirable answers, or interviewees may lie because they do not want to reveal behaviors, opinions, or attitudes that are now regarded as undesirable. For example, because the protests were successful, individuals may believe or say that they anticipated the success of the demonstrations. Respondents also may overstate their participation in the demonstrations or deny membership in the SED. Although we cannot rule out such distortions, we believe the data are generally reliable.

To facilitate recall of the events and their circumstances, the questionnaire began with an open question: "What comes to your mind spontaneously when you think of the period between May 1st and October 9th, 1989?" In general, the events of 1989 should be easily remembered because they were unique, highly consequential, unexpected, and emotion-provoking. Psychological research has found that such characteristics "lead to well-recalled personal memories" (Brewer 1986, p. 44). This agrees with what many citizens of the former GDR told us in personal conversations as we prepared the questionnaire. Typically, citizens told us that they would never forget what happened in the fall of 1989 and what their hopes, fears, and grievances were after 40 years under a repressive Communist regime. Thus, memory failures should be less of a problem than is usually the case in retrospective research.

Nevertheless, answers to some of our interview questions referring to specific incentive variables and the dependent variable "participation in demonstrations" may be fraught with distortions. We distinguish two types of retrospective bias. An *outcome effect* refers to the tendency for respondents to adjust their cognition of an event to its outcome — in this case, the protests' immense success. The *hero effect* refers to the tendency for citizens to overstate their roles in the revolution, particularly their participation and the risks, because of the celebration accorded the population — Leipzig was termed a "city of heroes."

On the one hand, people may be unwilling or unable to admit that they did not anticipate the outcome of the large-scale protests. On the other hand, respondents, particularly participants in the demonstrations, appear heroic by reporting that they did not believe the protests would be effective. Thus, the outcome effect would lead to an overstatement of the respondents' *perceived personal influence*, whereas the hero effect would prompt respondents to understate their perceived influence. These countervailing effects probably yield roughly correct answers to items about respondents' perceived influence in 1989. Furthermore, many published personal reports about the revolution indicate that in the fall of 1989 the success of the protests was unexpected, and it is now socially acceptable to say so. However, many citizens say they expected the protests to lead to reforms, not to an overthrow of the system. Thus, it is unlikely that respondents' reports of their influence are grossly distorted.

For respondents' reports of *repression*, an outcome effect implies that respondents would report a low likelihood of repression and a low fear of repression, because after October 9 the regime no longer repressed the demonstrations. The hero effect may lead respondents to say that they thought bloodshed was likely and that all who attended the demonstrations were courageous. In public discourse about the revolution, people often admit to a fear of possible repression, whereas others say they did not anticipate severe sanctions. In our interviews, both views were clearly expressed. The high average values on our repression measures indicate that an outcome effect can be safely ruled out in this case. The hero effect is not relevant either, because respondents' answers to the various items on repression probably reflect the high level of repression that in fact existed in the GDR.

For respondents' opinions on *moral incentives*, a hero effect probably did not operate. An outcome effect may be indicated if participants in a successful event are led to believe they *should* have participated. However, pressure to rationalize behavior according to a norm obtains only if the behavior is considered morally wrong. Some nonparticipants may have had a bad conscience, but these individuals should have developed some sort of anti-pro-

test norms. Those who participated in the protests think they did the "right thing," so they need not invoke a normative justification. Because the majority of our respondents were nonparticipants and moral incentives are relatively high, a significant amount of rationalization probably did not occur. Also, the framing of the questions referring to norms is not conducive to rationalizations. We did not simply ask respondents whether they felt an obligation to participate. Respondents were presented with descriptions of situations and asked to indicate the extent to which one should participate in such situations. These questions were asked before the items referring to protest actions were presented. It is implausible that respondents would develop such complex rationalizations after the fact. In public discourse about the revolution, there is no general conception that citizens had or didn't have a duty to participate. In our qualitative interviews (see below) respondents expressed quite different views regarding the duty to participate.

In summary, these arguments do not support a consistent distortion or bias regarding specific incentive variables.

The *dependent variable* — participation in demonstrations before and on October 9, 1989 — is unequivocally susceptible to a hero effect: The 1989 demonstrations are viewed positively, and therefore respondents may overstate their participation. To circumvent this problem, respondents' reports on participation in the protests were part of a self-administered questionnaire that was handed to the interviewer in a closed envelope. This avoided any social incentives to over-report participation in the demonstrations to the interviewer.

The most important test for bias in the direction of social desirability occurs with regard to membership in the SED. Because membership was strongly stigmatized after the collapse of the regime, respondents may not have wanted to admit membership. However, the percentage reporting SED membership in our sample corresponds closely to the percentage in Leipzig as a whole. This result seems especially important because this question was not included in the self-administered questionnaire. Although we cannot rule out the possibility of systematic measurement errors, analyses of residuals suggest that this is not the case.[6] To guard against the outcome effect and the hero effect, interview questions were carefully phrased so that diverse answers would appear acceptable to the respondent.

Interviewers were asked to evaluate each interviewee. With regard to the willingness to answer the questions, 1,073 of the 1,300 interviewees (83 percent) received the highest rating out of five possible ratings; 115 (9 percent) received the second highest value. Furthermore, 1,173 (90 percent) of the interviewees were rated as generally reliable, while only 88 (7 percent) were rated as generally less reliable. Results of regression analyses for respondents who received the highest ratings on willingness to answer and reliability responses were almost identical to results of analyses that included all respondents.

Qualitative Interviews

In addition to the survey, mostly unstructured interviews were conducted with 19 citizens of Leipzig who were involved in the revolutionary events in different ways — members of opposition groups, theologians, a former military prosecutor, students, and "ordinary" citizens who participated in the demonstrations.[7]

VARIABLES

Table 1 contains the ranges, means, and standard deviations of all variables used in the analyses. Our dependent variable, *participation in demonstrations*, was measured by asking respondents whether they participated in each of the demonstrations that took place on September 25, October 2, 7, and 9. The demonstration on September 25 was much larger than earlier demonstrations and thus was a natural starting point for this research. The variable is the number of demonstrations — 0 to 4 — in which a respondent participated.

[6] Based on Model 3, Table 2, the predicted value of participating in demonstrations correlates with its residual at –.0013. The highest correlation of the 20 independent variables with the residual of the dependent variable is .02 (membership in the Catholic or Protestant church); two coefficients were .01; all others were smaller.

[7] Prof. Peter Voß (Leipzig), a participant in the present study, compiled a list of interviewees who to his personal knowledge had played an active role in the demonstrations.

Table 1. Possible Value Ranges, Means, Standard Deviations, and Number of Cases

Variable	Possible Range	Mean	Standard Deviation	N
Participation in demonstrations	0-4	.85	1.27	1300
Incentives				
Public goods motivation	1–25	14.61	6.57	1300
Moral incentives	1–5	3.68	.76	1300
Group encouragement of protest	0–1	.09	.29	1300
Expected rewards of reference persons	1–5	3.80	.90	1300
Probability of repression	0–.8	.59	.15	1300
Severity of repression	0–3	2.26	.56	1300
Experienced repression	0–4	.20	.63	1300
Group Membership				
Opposition group member	0–2	.08	.28	1300
SED member	0–1	.20	.40	1300
Member of SED-related group	0–3	.25	.49	1300
Sports group member	0–1	.27	.44	1300
Member of Protestant or Catholic church	0–4	.54	1.08	1300
Personal Networks				
Critical co-workers	1–16	7.22	3.80	1300
Critical friends	1–4	2.68	.82	1300
Demographics				
Age	14–87	43.70	16.37	1300
Gender	1–2	1.52	.50	1289
General education	1–4	2.67	.93	1262
Has university degree	0–1	.13	.34	1255
Married	0–1	.62	.49	1267
Number of children	0–5	.63	.91	1300

Incentive Variables

At the beginning of the questionnaire we asked respondents to relate their answers to the time between May 1 and October 9, 1989. Respondents were reminded of this reference period several times.

Public goods motivation. This scale is based on a measure of *political discontent* and a measure of respondents' perceptions of *influence* their participation had. We formed an interaction term by multiplying the political discontent measure by the influence measure.[8]

The political discontent measure is the mean of responses to five items about conditions in the GDR: the environment; the degree to which the SED prescribed what to do; the freedom to express opinions; the degree of control exercised by the Stasi (state security forces); the

[8] Respondents' perceptions of the success of collective protests is another theoretically relevant variable in this context (Finkel et al. 1989). However, the present study measured "perceived group success" only imperfectly. Although a bivariate correlation of this measure with participation in demonstrations (r = .17) obtained, its inclusion in the interaction term only had a negligible effect because of the intercorrelation between the group success measure and the personal influence measure. Therefore, the group success measure is not used.

The following analysis confirmed the existence of an interaction effect of discontent and influence: We dichotomized the influence measure. Then we regressed participation on the discontent measure for low and high influence. The unstandardized regression coefficient for low influence is .06 (not statistically significant), and for high influence is .57 ($p < .01$).

expected chances of a fair political trial on a political charge. Response categories ranged form "very satisfied" (coded 1) to "very dissatisfied" (coded 5).

To measure perceived personal influence, respondents were asked to think of two events: (1) the many GDR citizens who left the country illegally to enter West Germany via third countries, and (2) the liberalization in Eastern Europe. For each of these two events, respondents were presented with the following statement: "I thought that if I participate in demonstrations and similar actions now, I can personally change something." Response categories ranged from "not at all true" (coded 1) to "completely true" (coded 5). The measure is the mean of the responses to these two items.

Moral incentives. This measure, which captures the extent to which respondents feel an obligation to protest in various situations, is the mean of responses to five items to which a respondent could more or less agree (five categories): (1) Politics should be left to elected representatives; (2) if a citizen is very discontented with government policy, he or she should do something about it, for instance, take part in a demonstration; (3) nobody can be expected to take part in political actions which might send her or him to jail; (4) if one is sure that something can be gained through a demonstration, one should not be deterred by high risk; (5) if discontent is very high among the people, one has to take part in political actions, even if personal disadvantages are involved. Each item was coded so that high values denote a high obligation to protest.[9] A reliability analysis yielded a standardized alpha of .56, and elimination of items did not increase reliability. These items were included because they capture the most important conditions for which an obligation to protest may obtain.

Expected rewards from reference persons. Respondents were asked to predict the reactions of reference persons ("people whose opinion is particularly important to you") if the respondent had participated in a "political action like a demonstration." Responses ranged from 1 ("very negative") to 5 ("very positive").

[9] The items were coded in the following way: Item 1 (strong agreement = low values, i.e. low obligation); item 2 (strong agreement = high values, i.e. strong obligation); item 3 (strong agreement = low values); item 4 (strong agreement = high values); item 5 (strong agreement = high values).

Group encouragement of protest. Respondents who reported membership in at least one group were asked whether the group encouraged participation in the protests. (Respondents who were members of more than one group were asked to report for the group that encouraged them the most). "Group encourages protest" was coded 1; 0 otherwise.

Probability of repression. Respondents were asked to estimate the probability that participation in protests would result in (1) being arrested, (2) being hurt by security forces, (3) having problems on the job, and (4) creating problems for close family members. These were the most common sanctions facing GDR citizens in 1989. Response categories ranged from "very unlikely" (coded .2) to "very likely" (coded .8). Respondents who had not been employed or had no family were coded 0 for the relevant item. Responses to the four items were averaged. A reliability analysis yielded a standardized alpha of .68 and elimination of any item did not improve reliability.

Severity of repression. Respondents were asked their perceptions of the severity of each of the four repressive sanctions mentioned in the previous paragraph. Response categories ranged from "not very bad" (coded 1) to "bad," or "very bad" (coded 3). Responses to the four items were averaged. Reliability analysis yielded an alpha of .56, and elimination of any item did not improve reliability.

Experienced repression. Respondents were asked whether prior to October 9, 1989, they had had contact with the police or security forces for political reasons. Respondents who had had contact were then asked whether they had been (1) watched, (2) questioned, (3) instructed, or (4) taken to the police station for participating in a protest. This often meant continued everyday harassment and it became dangerous for other citizens to get in contact with these persons. These forms of repression are not included in the two other repression variables. Answers to each item were "yes" or "no." The variable "experience repression" refers to the number of "yes" answers to the four items.

Demographic Variables

Age. The variable measures age of respondents in years.

Gender. Males were coded 1; females were coded 2.

General education. This variable measures schooling accomplished in the general education system. "Did not finish 8th grade" was coded 1; "did not finish 10th grade" was coded 2; "finished 10th grade" was coded 3; and "finished Abitur" was coded 4.

University degree. Professional education refers to occupational training, e.g., no vocational schooling, apprenticeship. Participation in demonstrations basically differed for those holding a university degree. We therefore dichotomized this variable: "Holds university degree" was coded 1; 0 otherwise.

Marital status. Respondents who are married living with their spouse were coded 1; otherwise 0.

Number of children. The variable refers to the number of children aged 17 or younger living with respondents in the same household.

Missing Values

Missing values for incentive items with less than 5 percent missing values were assigned the arithmetic mean.

RESULTS

Table 2 presents regression analyses of participation in the demonstrations on the independent variables. Model 1 includes only the incentive variables and the demographic variables. Public goods motivation is the most important variable. We expected the three repression variables to have strong deterrent effects. However, the probability of repression and the severity of repression have no significant effects on participation in the demonstrations. Having experienced repression in the past has a significant positive effect on participation.[10] A regression of participation on the three repression variables alone produced unstandardized regression coefficients of .25 (t-ratio = 4.4) for experienced repression, .63 (t-ratio = 2.39) for probability of repression, and –.06 (t-ratio = –.86) for severity of repression. The explanation for the two positive effects in this simple model is that repression increased group encouragement of protest, public goods moti-

[10] We did not include a multiplicative term for probability of repression and severity of repression in the regression analyses because the effect of such a term is zero.

Table 2. The Effects of Group Membership, Personal Networks, Incentive Variables, and Demographic Variables on Participation in Demonstrations

Independent Variable	Model 1	Model 2	Model 3
Incentives			
Public goods motivation	.07** (12.01)	—	.06** (10.23)
Moral incentives	.09 (1.87)	—	.07 (1.54)
Group encouragement of protest	.22 (1.95)	—	.16 (1.26)
Expected rewards of reference persons	.08* (2.22)	—	.02 (.60)
Probability of repression	–.18 (–.73)	—	–.15 (–.59)
Severity of repression	.07 (1.05)	—	.06 (.84)
Experienced repression	.15** (2.79)	—	.12* (2.28)
Group Membership			
Opposition group member	—	.15 (1.16)	.03 (.22)
SED member	—	–.28** (–3.11)	-.07 (–.78)
Member of SED-related group	—	–.24** (–3.47)	–.19** (–2.87)
Sports group member	—	.14 (1.78)	.12 (1.51)
Member of Protestant or Catholic church	—	.00 (.03)	–.04 (–1.08)
Personal Networks			
Critical co-workers	—	.02* (2.26)	.01 (.82)
Critical friends	—	.43** (9.45)	.23** (4.91)
Demographics			
Age	–.01** (–2.61)	–.01* (–2.08)	–.00 (–1.47)
Gender	–.24** (–3.58)	–.28** (–3.93)	–.22** (–3.28)
General education	–.04 (–.89)	–.07 (–1.60)	–.06 (–1.49)
Has university degree	–.17 (–1.57)	–.26* (–2.21)	–.18 (–1.62)
Married	–.15* (–2.03)	–.11 (–1.47)	–.17* (–2.27)
Number of children	–.10** (–2.61)	–.08 (–1.92)	–.09* (–2.34)
Adjusted R^2	.22	.14	.23
Number of Respondents	1229	1229	1229

* $p < .05$ ** $p < .01$

Note: Unstandardized coefficients; t-ratios are in parentheses.

vation, and moral incentives. The fact that the two measures of repression correlate positively with the incentive variables (analyses not presented here) confirms this explanation. Our explanation implies that regressing participation in demonstrations on *all* variables (Model 3) should result in negative effects for the repression variables if all incentive variables are measured without error. Because most such variables in survey research are not without error, we expect that the coefficients of the repression variables will be strongly reduced. The results for Model 3 confirm this expectation.

In sum, then, the positive coefficient for "experienced repression" in Model 1 indicates an indirect radicalization effect.[11] The direct effects of the repression variables on participation in the demonstrations are not negative because the incentive variables explain only part of the variance in the dependent variable. Repression thus had an unexpected and undesirable effect from the point of view of the regime. Participation in the demonstrations was not deterred.[12]

The effects of the demographic variables are weak, although four of the six coefficients are statistically significant. Most effects are in the expected direction: Young respondents, unmarried respondents, and males participate relatively frequently. Although the two education variables are not significant, the negative signs may indicate that educational opportunities were offered to people loyal to the regime, or they may reflect the fact that highly educated individuals had more to lose if they protested against the regime.

[11] Opp and Roehl (1990) also found a positive effect of repression on political action. White (1989) found that state repression was a condition for violent involvement of Irish Republican Army activists. For the GDR, see Opp forthcoming.

[12] The effect of having experienced repression on participation in demonstrations might be a result of misspecification of causality, i.e., participation may result in the experience of repression. Our questionnaire also asked about participation in demonstrations *after* October 9. We regressed this variable on the incentive variables, which refer to the time *before* October 9. Again, the analysis shows a small positive effect of having experienced repression on participation in demonstrations after October 9. This indicates that experience of repression has a causal effect on participation.

The Role of Social Groups in the East German Revolution

Opposition groups and mobilization. The extent to which opposition groups engage in direct attempts at mobilization depends in part on the size of their membership. Estimates of the number of such groups and their sizes in the GDR vary widely. Pollack (1990, p.47) estimated that opposition groups comprised 10,000 to 15,000 members out of a population of about 16 million.[13] Even using this high estimate, only a small fraction of the population belonged to opposition groups, so their direct effect on mobilization was small. Even if membership had been much larger, direct attempts to mobilize the population were not possible because the police and the *Stasi* (State Security Department) would have nipped such activities in the bud. Furthermore, material resources like telephones and copying machines were so scarce that only a small fraction of the population could have been reached.

Mobilization efforts were also impeded by the structure and composition of the opposition groups. Within groups, opinions differed concerning appropriate actions (Elvers and Findeis 1990, p. 100). Consequently, many members did not participate in mobilization attempts. Our data show that only 13 percent of those holding membership in an opposition group participated in the planning of political actions.[14] Furthermore, contacts between groups were not extensive (Elvers and Findeis 1990, pp. 102–103).

[13] Poppe (1990, p. 68) estimated about 325 groups, another high estimate. Assuming a membership of 15 per group, total membership is 4,875. Elvers and Findeis (1990) interviewed 31 "former leading group representatives in Leipzig and Berlin" and found that group membership averaged 15. Mitter and Wolle (1990, pp. 46–71) reported internal State Security Department (the *Stasi*) estimates that "hostile, oppositional, and other negative forces" had formed 160 groups nationwide with memberships varying from 3 to 39. Including "peripherally affiliated forces," the total membership of these groups is estimated at 2,500 people.

[14] Of all members of opposition groups, 56.6 percent were members of groups that encouraged protest. Many groups were discussion groups, e.g., for environmental and human rights issues. The question referring to the planning of protest actions was only presented to members who reported encouragement.

The success of *indirect* efforts by opposition groups to mobilize the population depends on the extent to which the groups are known. Although GDR citizens were informed about such groups through Western media and by word of mouth, they probably knew little about the opposition groups' goals. For instance, one respondent stated, "Now and then, the notion 'Neues Forum' came up in the Western media, but nobody really knew what that was." In contrast to Czechoslovakian citizens, East German citizens did not consider these groups to be a serious opposition. Heinze and Pollack (1990) found that most citizens regarded members of opposition groups as "unrealistic dreamers and anarcho-situationists who do not make a difference," (p. 85). Although this view changed in the fall of 1989 when protests were increasing, the protests were not a result of the mobilization activities of opposition groups.

In sum, there is no evidence that opposition groups mobilized the population directly or were widely accepted reference groups that helped shape incentives to protest. In addition, there is no evidence that a group planned any of the demonstrations.

Effects of opposition groups on incentives. Respondents were presented with a list of groups (which could be supplemented) and asked to indicate the groups to which they belonged prior to October 9, 1989. Membership in sports groups was mentioned most frequently (27 percent of respondents); 20 percent of respondents indicated they had been members of the SED. The Free Federation of German Trade Unions, one of the mass organizations closely connected with the SED, was indicated by 16 percent of respondents. Few respondents were affiliated with an opposition group: 2.5 percent declared a New Forum membership and 4.5 percent held membership in church groups that dealt with environmental, peace, or women's issues. In all, 43 percent of respondents belonged to no group, 31 percent belonged to one group and 25 percent belonged to more than one group.[15] In principle, then, group membership offered an extensive potential for mobilization.

[15] Compared to Western countries, the percentage belonging to a group is high (Curtis, Grabb, and Baer 1992). In the GDR, citizens were pressured to join the SED or other political groups. Thus, the high level of group membership in the GDR is not an indication of *voluntary* memberships.

To analyze the effects of affiliation with a group, dummy variables were used to indicate membership in (1) an opposition group, (2) the SED, (3) a political organization closely linked with the SED (e.g., the block parties), or (4) a sports group.

The role of the Protestant church in the rise of protest in the GDR was more subdued. Although churches provided some opposition groups with resources that enabled them to survive, church leaders wanted to mediate the conflict between the state and the opposition groups working in the church. Because church leaders were primarily interested in maintaining a dialogue with the state, the church exercised a mitigating impact on the groups. Although church leaders did not openly encourage protests, the church may have provided members with a context for mobilization efforts. For example, a church member might expect support if faced with sanctions as a result of participation in protests. To examine the effects of church membership, we constructed a dichotomous variable coded 1 for membership in the Protestant church (N = 232) or Catholic church (N = 63), and coded 0 otherwise. This variable was then multiplied by the respondent's closeness to the church. Closeness to the church was coded in four categories, ranging from "not at all" (coded 1), to "very much" (coded 4).

Table 3 presents bivariate correlations between group membership variables and the incentive variables. Although membership in an opposition group and membership in a group that encouraged protest are strongly related (r = .47), membership in an opposition group correlates weakly with the other incentive variables. Membership in the SED or a group closely related to the SED correlates negatively with most incentive variables. Members of sports groups are more likely to report group encouragement of protest than are nonmembers (r = .15). Catholic or Protestant church membership is positively related to the incentives variables, but the correlations are not strong. None of the memberships is related to the perceived likelihood of repression or the severity of repression..

In our basic model (Figure 1), the social context, which includes group memberships, affects the incentives to protest. Respondents who reported being members of groups that encouraged protest were asked their reasons for

Table 3. Bivariate Pearsonian Correlation Coefficients Between Incentive Variables, Group Membership, and Personal Network Variables

	Group Membership					Personal Networks	
Incentive Variable	Opposition Group Member	SED-Member	SED-Related Member	Sports Group Member	Church Member	Critical Friends	Critical Co-Workers
Public goods motivation	.09**	−.25**	−.05	−.00	.16**	.39**	.21**
Moral incentives	.07*	−.05	.04	−.01	.04	.31**	.22**
Group encouragement of protest	.47**	−.00	.06*	.15**	.18**	.19**	.11**
Expected rewards of reference persons	.08**	−.18**	−.05	−.05*	.13**	.38**	.17**
Probability of repression	−.05	−.02	.03	.05	−.02	.10**	−.20**
Severity of repression	−.05	.04	.02	.04	−.05	.03	−.16**
Experienced repression	.09**	−.00	−.02	.05	.08**	.14**	−.04

* $p < .05$ ** $p < .01$

having joined the group. Sixty-one percent indicated they joined "because it was important to me to be with people who have similar political views." Among members of opposition groups, 80 percent agreed with this item. This similarity among group members produces incentives to protest or not protest in the interaction process. Thus, not all groups provide contexts for mobilizing members to political protest — groups provide contexts for mobilizing their members to the extent that members have similar views critical of a regime.

Group membership and participation in demonstrations. In our basic model, group membership has no *direct* effect on participation in demonstrations (Figure 1). If the incentive variables are not included, however, the group membership variables may correlate with participation in demonstrations corresponding to the distribution of incentives across these groups. Thus, we expect small positive effects of membership in opposition groups, sports groups, and Protestant or Catholic churches; we expect negative effects of membership in the SED or groups close to the SED on participation in the demonstrations.

We further expect that any direct effects of group membership on participation in the demonstrations will disappear when incentive variables are introduced. However, this will occur only if the incentive variables are measured without error. Because measurement errors occur in every survey, our expectations are more modest: (1) Any direct effects of group membership will be reduced when incentive variables are introduced, and (2) coefficients for the incentive variables will be similar in a comparison of regression coefficients from a model including only the incentive variables and demographic variables with coefficients from a model that includes group membership variables as well as incentive variables and demographic variables.

Model 2 in Table 2 includes the group membership variables and the demographic variables which are controls. Overall, the expected effects obtain, although the coefficients are small. Clearly, the relationship between group membership and political action differs depending on the group.

Model 3 in Table 3 adds the incentive variables to Model 2. Regarding our prediction that the coefficients for the group membership variables will be reduced when the incentive variables are introduced, coefficients are so small that there is not much to be reduced. The largest reduction occurs for SED membership, which is no longer significant.

Comparing the coefficients for the incentive variables in Model 1 and Model 3, we find that decreases are small. It is important to note that the large coefficient for public goods motivation remains about the same.

In assessing the explanatory power of the group membership and incentive variables, we find that including the group membership variables contributes relatively little to the explained variance — the adjusted R^2 increases from .22 to .23. However, incorporating the incentive variables into the group membership model increases the explained variance by .09 (from .14 to .23). Excluding the personal net-

work variables — critical co-workers and friends — from the analyses, the explained variances are .06 for Model 2, and .22 for Model 3. In other words, group memberships do not add to the explained variance of Model 1.

Personal Networks in the East German Revolution

To test our hypotheses about the relationship of personal networks, incentive variables, and participation in the demonstrations, we measured *ties at the workplace.* Referring to the time prior to October 9, 1989, respondents were asked:

(1) How close were your ties to your colleagues?

(2) How many of your colleagues criticized the situation in the GDR?

(3) How many of your colleagues attended peace prayers, demonstrations, and similar activities?

Responses for the first question ranged from "very weak" (coded 1) to "very close" (coded 4); for the other two questions, responses ranged from "nobody" (coded 1) to "almost everybody" (coded 4). Respondents had fairly close ties with their co-workers (mean = 3.06). Respondents also reported that many co-workers were critical of the situation in the country (mean = 3.19), whereas fewer co-workers were known to have acted against the regime (mean = 2.30).

Questions 2 and 3 were also asked in reference to the respondents' *friends.* Respondents' friends were more critical of the situation in the country (mean = 3.27) than were the respondents' colleagues, and they were somewhat more likely to act against the regime (mean = 2.46) than were the respondents' fellow workers.

Mobilization is easier when networks overlap, i.e., when weak ties exist between networks (Granovetter 1973, 1978, 1983). For example, if individuals have friends at their workplace as well as in other firms, information can flow much more easily than if workers in a firm spend their free time only with each other. To ascertain the overlap of networks, respondents were asked the number of friends who were also co-workers. Possible responses were: nobody, some, many, and almost all. Thirty-five percent of respondents reported no friends among co-workers, and 52 percent indicated that some of their friends were co-workers. This suggests that there were many weak ties between friends and co-workers.

These findings suggest that personal networks in the GDR before October 9 provided a favorable context for mobilization. Many ties with critical friends and co-workers existed so that rewards for participation in demonstrations could be exchanged. To examine the extent to which these opportunities for mobilization affected the incentives to participate and actual participation in the demonstrations, we constructed two scales. *Critical co-workers* is the average of responses to the two questions regarding the number of co-workers critical of the situation in the GDR and the number of co-workers who acted against the regime. Values were then multiplied by the response to the question regarding closeness of ties to co-workers. Because close relations per se are not conducive to protest, an effect should occur only if network members dispense rewards for participation in protest actions. *Critical friends* is the average of responses to the two questions regarding the number of friends critical of the situation in the GDR and the number of friends who acted against the regime.[16]

Our theoretical model predicts that incentives to protest are concentrated in these critical personal networks. Table 3 partially confirms this hypothesis. Having critical friends is relatively strongly correlated with most of the incentive variables. However, having critical co-workers is less strongly correlated with the incentive variables. Thus, positive incentives to protest are concentrated in networks of friends critical of the regime.

Why was the workplace less important than friends as a context for mobilization? We believe that in authoritarian regimes trust is

[16] Respondents who were not employed, and therefore had no co-workers (N = 163), and respondents who had no friends (N = 80) were assigned the lowest value possible for each item. This is justified by our theory: Respondents having no colleagues or friends faced fewer positive incentives to participate. Therefore, we predict that they participate less often than respondents who had co-workers or friends. The data show that this prediction is correct. The results are basically the same when respondents who are unemployed or have no friends are assigned missing values.

mainly placed on friends, and criticisms of the regime take place mainly with friends. The workplace is a context for mobilization only in so far as colleagues are also friends. In the GDR, this was the case only to a limited extent: The correlation between "critical friends" and "critical co-workers" is .25.

We expect a smaller direct effect for "critical co-workers" on participation in demonstrations than for "critical friends" because having critical co-workers is only weakly correlated with incentives to protest. Having critical friends, however, should have a relatively strong positive effect. Model 2 in Table 2 confirms these expectations. The results are almost the same when we omit the group membership variables.[17]

We expect that the coefficients for the personal network variables in the model that includes group memberships, personal network variables, and incentive variables, will be considerably lower than those in the model that omits the incentive variables. This expectation is borne out by the data: The coefficients for critical co-workers in Model 3 of Table 2 is no longer significant, while the unstandardized coefficient for critical friends declines from B = .43 in Model 2 to B = .23.

Political Events

Two political changes increased positive incentives to protest: the liberalization in Eastern Europe and the Soviet Union, and the dramatic emigration from East Germany to West Germany that resulted from opening the borders between Hungary and Austria. Citizens of the GDR could travel to Hungary and then on to West Germany where they were legally entitled to stay. These events increased *political discontent* because the East German government had declared that no reforms were intended. Our data confirm this: 41 percent of our respondents agreed or fully agreed that because of the emigration, "matters will get worse" in the GDR. In fact, the increase in emigration over the years caused severe problems in health care and the educational system.

Apparently, GDR citizens assumed that emigration and liberalization of Eastern Europe would pressure the East German regime to introduce reforms. Citizens believed that their participation would speed up reforms. Our data confirm an increase in *perceived influence*: Respondents were asked about their reactions to emigration and liberalization in Eastern Europe. Fifty-four percent of respondents agreed with a statement referring to the emigration wave: "I thought that if I participate in demonstrations and similar actions now, I can personally change something." Forty-seven percent of respondents agreed to a similar statement referring to the liberalization in Eastern Europe.

Citizens also thought that these events imposed an obligation on them to do something to promote change in the GDR, i.e., *moral incentives* increased. With regard to emigration and liberalization in Eastern Europe, we presented respondents with a statement: "I thought: now it is my duty to do something for changes in the GDR." Forty-eight percent of respondents agreed or fully agreed with the statement in regard to emigration, while 45 percent agreed or fully agreed with the statement in regard to the liberalization in Eastern Europe. Perhaps citizens thought that if a government is under pressure and there are opportunities for change, citizens have a duty to engage in political action to support changes.

We speculate that increasing political discontent, perceived personal influence, and moral incentives also increased the social incentives, i.e. rewards by others to participate in protests against the regime.

The most important event in the final phase of the protests was the visit by Gorbachev and the celebration of the 40th anniversary of the GDR on October 7, 1989. To many citizens in the GDR, the situation had become absurd, but the regime refused to acknowledge the

[17] It may be argued that responses to the questions referring to friends and colleagues are simply attributions of respondents' own attitudes to friends, which would account for the strong relationship between having critical friends and participation in the demonstrations. We do not agree with this assertion. Theory and research on social exchange indicate that personal networks develop on the basis of similarity. Thus, critical respondents are likely to have critical friends. Conversations with GDR citizens also indicate that communication with friends — and to a limited extent with colleagues too — was relatively free and that trust developed. Furthermore, respondents' *perceptions* of the social environment are important influences on political action. Thus, our explanation remains valid even if the respondents' perceptions do not reflect real phenomena.

widespread discontent and went through the celebration praising the achievements of socialism while many citizens were fleeing the country. As leader of the Eastern bloc and the initiator of glasnost and perestroika, Gorbachev symbolized change and hope. His famous remark, that "life punishes those who are late," was understood by the East German citizens. His presence at the celebrations in Berlin clearly increased citizens' perceptions of the probability of success of collective protests, raised feelings of personal efficacy, and made people feel the legitimacy of their desires for change more strongly. In this situation, people may have felt that the time for action had come. In general, this event probably also increased political discontent and the moral incentives to protest.

The GDR government explicitly endorsed the violent termination of the democracy movement in China in June 1989. This led citizens to expect more severe sanctions for participating in protests: 69 percent of respondents thought East German security forces would resort to more drastic measures, and 34 percent expected that troops of the Warsaw Treaty would enter the GDR if unrest increased. The behavior of the police forces supported their expectations: All demonstrations before October 9 had been dissolved; participants and bystanders were arrested, and some were injured. The situation could have escalated, especially in Leipzig on October 9 when security and police forces had a strong presence. There were rumors about increasing the blood reserves in hospitals in anticipation of injured demonstrators. Citizens were warned by authorities against travelling to the center of the city (Tetzner 1990). Although repression had no direct effect on participation in demonstrations, repression was relevant because it increased positive incentives to protest. However, repression was so strong that this increase was probably small.

In general, then, political events increased the positive incentives to protest. These events also increased the expectation of repression for participation in the demonstrations. However, the increased expectation of repression did not have the desired effect of deterring the population from protesting. Instead, changes in political discontent, perceived influence, and social incentives brought about an increase in participation in the demonstrations.

Spontaneous Coordination

The coordination problem — where and when will a sufficient number of people gather? — was easily solved in Leipzig. The Karl Marx Platz and adjacent streets form a clearly defined downtown area. To meet others, Leipzig citizens need only to go downtown.

What time would citizens choose? Leipzig residents knew that every Monday between 5:00 and 6:00 P.M. peace services, the Monday prayers, took place in the Nikolai church near the Karl Marx Platz. These services began in 1982 as a forum for discussion (Feydt, Heinze, and Schanz 1990). Between 1982 and 1989, attendance varied from 10 to 1,000. The first confrontations with the police occurred on May 7 and 8, 1989, after local — forged — elections had been held. After that, police forces were present at the services. Sometimes small-scale demonstrations occurred and people were arrested. Bystanders were also attracted to these gatherings. On September 4, services resumed after the summer vacation, and approximately 1,200 people attended. Police stopped them from marching through the downtown area. For the first time the slogan "We are staying" replaced "We want out," i.e., we want to leave the country. Police threatened to disrupt the next meeting, but did not. Many arrests were made on September 18. On September 25, Leipzig experienced the first major demonstration after the services. On October 2, another church held peace prayers as well, and on October 9 two more churches joined in.

Most people who attended the peace prayers crossed the Karl Marx Platz after leaving the church. To meet like-minded people, citizens would go to the square around 6:00 P.M.

The institution of the peace prayers provided what could be termed an *institutional incentive.* Monday services were a regular event that followed rules established by representatives of the Protestant church. The Monday prayers provided an incentive for people to convene because people knew that others would assemble at certain places at certain times. These incentives created the necessary conditions for the emergence of joint action.

The Monday prayers, together with the demonstrations, contributed to the emergence of protests in other East German cities. People were informed, primarily on West German television, about the events in Leipzig, and the ex-

pectation formed that citizens in each city would meet spontaneously on the city square for Monday demonstrations. Events like the celebration of the 40th anniversary of the GDR, which created discontent, also led citizens to expect that they would meet others at the city's "meeting place." However, the expectations that such one-time events generate are not as strong as those precipitated by recurrent events that are widely known.

Because the peace prayers had been held since 1982, they cannot explain the dynamics of the demonstrations in the fall of 1989. Additional incentives to protest were necessary for the Monday prayers to become effective coordinating mechanisms.

DISCUSSION

Public goods motivation and critical friends are the main variables explaining participation in demonstrations. Regressing "participation in demonstrations" on those two measures alone yields an adjusted explained variance of .21, whereas the full model, Model 3 in Table 2, yields an adjusted explained variance of .23. Also, coefficients for the two measures are similar in the model including only the two variables and in Model 3 of Table 2. Why is this so?

If other incentives, such as moral incentives or membership in a group that encourages protest, had no direct effects on participation, then citizens with high or low moral incentives or high or low encouragement to protest participated in the demonstrations. In other words, only a few incentives were needed to trigger participation in demonstrations. Thus, the costs of participating in the demonstrations must have been relatively low. The following arguments support this proposition. First, because of the Monday prayers, joining a demonstration had a low cost compared to the cost of other protest actions, e.g., joining an opposition group.

Second, numerous documents and reports about the Monday demonstrations suggest that situational incentives to participate were relatively strong, certainly stronger than incentives to participate in other protest actions. For example, 67 percent of our respondents reported they joined others when they first participated in a demonstration.

Third, participants in the demonstrations certainly faced severe repression. Although a citizen who went to the center of Leipzig on Monday evenings and was arrested could always claim noninvolvement in the protest, he or she could not be sure the security forces would believe this and could be subjected to police brutality during the demonstrations. Nevertheless, the risk of repression was higher for participation in other more individualized protest actions, e.g., refusing to vote, joining a state organization, or working in an opposition group. Thus, participants in riskier actions were more concerned about repression than participants in the Monday demonstrations. The relatively high benefits and low costs of participation in the Monday demonstrations may have led citizens to ignore the possibility of repression to a certain extent. In sum, then, high public goods motivation and having friends critical of the regime were the main factors inducing participation in the demonstrations, given the relatively low cost of demonstrating and the situational incentives.

Our analyses shed light on the general question of when do spontaneous large-scale demonstrations with increasing numbers of participants emerge. A theory explaining the emergence of such demonstrations should include the following conditions: (1) Rapidly increasing positive incentives will develop, including increased political discontent and increased perception of personal influence. Close relations with friends who are critical of the regime provide increasing social incentives. (2) Repression will not exceed a certain threshold. The GDR was not a repressive regime as was the Soviet Union under Stalin. Large-scale protests probably will not emerge if participants face death or life-long imprisonment under extreme conditions. However, how severe repression must be in order to deter participation in protests is an open question. (3) Political entrepreneurs will be unlikely to organize joint political actions, possibly because an effective system of repression prevents the emergence of a well-organized opposition and hinders the mobilization process. (4) Institutional incentives or events may produce an expectation that a "critical mass" will convene at certain times and places, e.g., the Monday prayers in Leipzig or the anniversaries of historical events. Such incentives are necessary, but not sufficient, conditions for the emergence of spontaneous gatherings, as exemplified in East Germany. Whether spontaneous protests are short-lived

or instigate revolutionary changes depends on other conditions.

This theoretical account may explain why unorganized uprisings are rare in Western countries. First, situations are rarely so pressing that people come together spontaneously to express their concerns. Second, political entrepreneurs are available and usually organize protests before spontaneous gatherings develop. Third, institutional or other incentives to meet at certain times and places are usually lacking. Although there are "natural" meeting places in European cities, expectations of finding a "critical" number of people there at a particular time may be lacking. Fourth, the number of participants needed to reach a "critical" threshold is probably much larger in the West than it was in East Germany and is often not attainable. Little research has been done on the coordination mechanisms leading to different collective political actions.

Why did the protests remain nonviolent? We propose three explanations. (1) Violence was regarded as detrimental to the success of the protests; 73 percent of our respondents indicated that "violent actions (e.g., in demonstrations)" would have been "very unlikely" to be successful, and 21 percent responded "unlikely." (2) Violence was avoided for moral reasons; for example, 89 percent of the respondents fully disagreed with the statement "violence against persons to reach certain political goals can be morally justifiable." (3) There were situational incentives against violence; for example, shouts of "no violence" and the protection of official buildings from damage were common during the demonstrations.

Our concern was the situation in the GDR before October 9, 1989. Generalization of our findings to other East European countries is problematic. In Poland, opposition groups played a much more important role in the emergence of protests than they did in East Germany. In East Germany, opposition groups were too weak to directly pressure the regime — they were seen as "peripheral" and were not regarded as a threat (Schabowski 1990, p. 57). In most other European countries, large scale protests have often arisen spontaneously. Future research should apply and extend our theoretical approach to explain the protests in other East European countries as well.

Our findings are in line with McAdam's (1986) recommendation: "If the complexity of the recruitment process is to be recognized, it cannot be assumed that there is a single dynamic that determines entrance into all forms of activism" (p. 88). Indeed, the conditions for the emergence of spontaneous demonstrations and the course of their development that we found in the GDR, and which probably existed in other Communist countries at the time, differ sharply from the development of demonstrations in Western democracies. However, one common factor helps trigger activism in such different settings as the Freedom Summer Project in Mississippi (McAdam 1986, 1988) and the Irish Republican Army (White 1989): membership in groups or personal networks that encourage protest. The theoretical account and the data presented here indicate, however, that this is only one factor in a complex dynamic process. A weakness of contemporary theory and research on political protest and social movements is the lack of theoretical models and data that systematically elaborate the different dynamics that lead to various political actions.

*KARL-DIETER OPP is Professor of Sociology at the University of Hamburg. His research focuses on rational choice theory, philosophy of the social sciences, and collective political action. He recently co-authored a book with Peter Voß and Christiane Gern on the East German revolution (*Origins of a Spontaneous Revolution, *University of Michigan Press, forthcoming). He is currently conducting a panel study of the effects of protest participation on participants in the Leipzig protests of 1989 and the subsequent changes in participants' political attitudes and political activities.*

CHRISTIANE GERN is a research assistant at the University of Hamburg. Her Ph.D. dissertation assessed changes in personal advertisements in newspapers to analyze gender role changes. She is currently working with Karl-Dieter Opp on a panel study of the effects of protest participation on participants in the Leipzig protests of 1989.

REFERENCES

Brewer, William F. 1986. "What Is Autobiographical Memory?" Pp. 25–49 in *Autobiographical Memory: Addresses, Essays, Lectures*, edited by D. C. Rubin. Cambridge, England: Cambridge University Press.

Coleman, James S. 1990. *Foundations of Social Theory*. Cambridge, MA: Harvard University Press.

Curtis, Russell L. and Louis A. Zurcher. 1973. "Stable Resources of Protest Movements: The Multi-Organizational Field." *Social Forces* 52:53–61.

Curtis, James E., Edward G. Grabb, and Douglas E. Baer. 1992. "Voluntary Association Membership in Fifteen Countries: A Comparative Analysis." *American Sociological Review* 57:139–52.

DeNardo, James. 1985. *Power in Numbers: The Political Strategy of Protest and Rebellion.* Princeton, NJ: Princeton University Press.

Döhnert, Albrecht and Paulus Rummel. 1990. "Die Leipziger Montagsdemonstrationen" (The Monday Demonstrations in Leipzig). Pp. 147–58 in *Leipzig im Oktober: Kirchen und alternative Gruppen im Umbruch der DDR. Analysen zur Wende.* See Grabner, Heinze, and Pollack 1990.

Elvers, Wolfgang and Hagen Findeis. 1990. "Die politisch alternativen Gruppen im gesellschaftlichen Wandel: Eine empirische Studie zu ihrem Selbstverständnis" (The Alternative Political Groups in a Changing Society: An Empirical Study on Their Self-Image). Pp. 97–111 in *Leipzig im Oktober: Kirchen und alternative Gruppen im Umbruch der DDR. Analysen zur Wende.* See Grabner, Heinze, and Pollack 1990.

Feydt, Sebastian, Christiane Heinze, and Martin Schanz. 1990. "Die Leipziger Friedensgebete (The Peace Prayers in Leipzig)." Pp. 123–35 in *Leipzig im Oktober. Kirchen und alternative Gruppen im Umbruch der DDR. Analysen zur Wende.* See Grabner, Heinze, and Pollack 1990.

Finifter, Ada W. 1974. "The Friendship Group as a Protective Environment for Political Deviants." *American Political Science Review* 68:607–25.

Finkel, Steven S., Edward N. Muller, and Karl-Dieter Opp. 1989. "Personal Influence, Collective Rationality, and Mass Political Action." *American Political Science Review* 83:885–903.

Goldfarb, Jeffrey C. 1978. "Social Bases of Independent Public Expression in Communist Societies." *American Journal of Sociology* 83:920–39.

———. 1982. *On Cultural Freedom: An Exploration of Public Life in Poland and America.* Chicago, IL: University of Chicago Press.

Grabner, Wolf-Jürgen, Christiane Heinze, and Detlef Pollack, eds. 1990. *Leipzig im Oktober: Kirchen und alternative Gruppen im Umbruch der DDR. Analysen zur Wende* (Leipzig in October: Churches and Alternative Groups during the Upheaval of the GDR. Analyses of the Collapse of the GDR). Berlin, Germany: Wichern-Verlag.

Granovetter, Mark. 1973. "The Strength of Weak Ties." *American Journal of Sociology* 78:1360–80.

———. 1978. "Threshold Models of Collective Behavior." *American Journal of Sociology* 83:1420–43.

———. 1983. "The Strength of Weak Ties: A Network Theory Revisited." Pp. 201–33 in *Sociological Theory,* edited by R. Collins. San Francisco, CA: Jossey Bass.

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

Heinze, Christiane and Detlef Pollack. 1990. "Zur Funktion der politisch alternativen Gruppen im Prozeß des gesellschaftlichen Umbruchs in der DDR (On the Function of Alternative Political Groups in the Process of Social Change in the GDR)." Pp. 82–90 in *Leipzig im Oktober: Kirchen und alternative Gruppen im Umbruch der DDR. Analysen zur Wende.* See Grabner, Heinze, and Pollack 1990.

Hirschman, Albert O. 1993. "Exit, Voice, and the Fate of the German Democratic Republic: An Essay in Conceptual History." *World Politics* 45:173–203.

Isaac, Larry, Elizabeth Mutran, and Sheldon Stryker. 1980. "Political Protest Orientations Among Black and White Adults." *American Sociological Review* 45:191–213.

Jenkins, J. Craig and Charles Perrow. 1977. "Insurgency of the Powerless: Farm Worker Movements (1946–1972)." *American Sociological Review* 42:249–68.

Karklins, Rasma and Roger Petersen. Forthcoming. "Decision Calculus of Protesters and Regimes: Eastern Europe 1989." *Journal of Politics.*

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

Knoke, David. 1988. "Incentives in Collective Action Organizations." *American Sociological Review* 53:311–29.

Kuran, Timur. 1991. "The Element of Surprise in the East European Revolution of 1989." *World Politics* 44:7–48.

Lewis, David K. 1969. *Convention: A Philosophical Study.* Cambridge, MA: Harvard University Press.

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

Marwell, Gerald and Pamela Oliver. 1993. *The Critical Mass in Collective Action: A Micro-Social Theory.* New York, NY: Cambridge.

McAdam, Doug. 1986. "Recruitment to High-Risk Activism: The Case of Freedom Summer." *American Journal of Sociology* 92:64–90.

———. 1988. *Freedom Summer.* Milton Keynes, England: Open University Press.

McAdam, Doug and Ronnelle Paulsen. 1991. "Social Ties and Activism: Towards a Specification of the Relationship." Paper presented at the annual meeting of the American Sociological Association, Aug., Cincinnati, OH.

Mitter, Armin and Stefan Wolle, eds. 1990. *Ich*

liebe euch doch alle! Befehle und Lageberichte des MfS Januar–November 1989 (I Love You All! Orders and Reports of the MfS, January to November 1989). Berlin, Germany: BasisDruck.

Müller-Enbergs, Helmut, Marianne Schulz, and Jan Wielgohs, eds. 1991. *Von der Illegalität ins Parlament. Werdegang und Konzept der neuen Bürgerbewegungen* (From Illegality Into the Parliament: Development and Program of the New Civic Movements). Berlin, Germany: LinksDruck Verlag.

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

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

Musiolek, Berndt and Carola Wuttke, eds. 1991. *Parteien und politische Bewegungen im letzten Jahr der DDR* (Parties and Political Movements in the Last Year of the GDR). Berlin, Germany: BasisDruck.

Neues Forum Leipzig, ed. 1990. *Jetzt oder nie — Demokratie. Leipziger Herbst '89*. (Now or Never — Democracy. Leipzig in the Fall of 1989). Leipzig and München, Germany: Bertelsmann.

Oliver, Pamela. 1984. "'If you don't do it, nobody else will': Active and Token Contributors to Local Collective Action." *American Sociological Review* 49:601-10.

Opp, Karl-Dieter. 1986. "Soft Incentives and Collective Action: Participation in the Anti-Nuclear Movement." *British Journal of Political Science* 16:87–112.

———. 1988. "Grievances and Participation in Social Movements." *American Sociological Review* 53:853–64.

———. 1993. "Spontaneous Revolutions. The Case of East Germany in 1989." Forthcoming. Pp. 11–30 in *United Germany and the New Europe*, edited by H. D. Kurz. Cheltenham, England: Elgar.

———. Forthcoming. "Repression and Revolutionary Action: East Germany in 1989." *Rationality and Society*.

Opp, Karl-Dieter, with Peter Hartmann and Petra Hartmann. 1989. *The Rationality of Political Protest: A Comparative Analysis of Rational Choice Theory*. Boulder, CO: Westview Press.

Opp, Karl-Dieter and Wolfgang Roehl. 1990. "Repression, Micromobilization, and Political Protest." *Social Forces* 69:521–48.

Pollack, Detlef. 1990. "Ursachen des gesellschaftlichen Umbruchs in der DDR aus systemtheoretischer Perspektive (Causes of the Upheaval in the GDR From a System Theory Perspective)." Pp. 12–25 in *Leipzig im Oktober: Kirchen und alternative Gruppen im Umbruch der DDR. Analysen zur Wende*. See Grabner, Heinze, and Pollack 1990.

Poppe, Ulrike. 1990. "Das kritische Potential der Gruppen in Kirche und Gesellschaft" (The Critical Power of Groups in Church and Sociey). Pp. 63–79 in: *Die Legitimität der Freiheit* (The Legitimacy of Freedom), edited by D. Pollack. Frankfurt am Main, Germany: Peter Lang.

Prosch, Bernhard and Martin Abraham. 1991. "Die Revolution in der DDR: Eine strukturell-individualistische Erklärungsskizze" (The Revolution in the GDR: A Structural Individualistic Explanation). *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 43:291-301.

Rein, Gerhard, ed. 1989. *Die Opposition in der DDR* (The Opposition in the GDR). Berlin, Germany: Wichern-Verlag.

———, ed. 1990. *Die protestantische Revolution 1987–1990: Entwürfe für einen anderen Sozialismus* (Designs for Another Socialism). Berlin, Germany: Wichern-Verlag.

Riker, William H. and Peter C. Ordeshook. 1968. "A Theory of the Calculus of Voting." *American Political Science Review* 65:25–42.

———. 1973. *An Introduction to Positive Political Theory*. Englewood Cliffs, NJ: Prentice Hall.

Schabowski, Günter. 1990. *Das Politbüro: Ende eines Mythos* (The Politbureau: The End of a Myth). Reinbek, Germany: Rowohlt.

Schelling, Thomas C. 1960. *The Strategy of Conflict*. Cambridge, MA: Harvard University Press.

———. 1978. *Micromotives and Macrobehavior*. New York, NY: W. W. Norton.

Schneider, Wolfgang, ed. 1990. *Leipziger Demontagebuch* (The Book of the Leipzig Demonstrations). Leipzig and Weimar, Germany: Gustav Kiepenheuer Verlag.

Snow, David A., Louis A. Zurcher, and Sheldon Ekland-Olson. 1980. "Social Networks and Social Movements: A Microstructural Approach to Differential Recruitment." *American Sociological Review* 46:787–801.

Swoboda, Jörg, ed. 1990. *Die Revolution der Kerzen* (The Revolution of the Candles). Wuppertal und Kassel, Germany: Onckenverlag.

Tarrow, Sidney. 1991a. *Struggle, Politics, and Reform: Collective Action, Social Movements, and Cycles of Protest*. Ithaca, NY: Cornell University Press.

———. 1991b. "Understanding Political Change in Eastern Europe." *PS: Political Science and Politics* Mar.:12–20.

Tetzner, Reiner. 1990. *Leipziger Ring: Aufzeichnungen eines Montagsdemonstranten. Oktober 1989 bis 1. Mai 1990* (The Leipzig Ring: Diary of a Participant in the Monday Demonstrations, October 1989 to May 1, 1990). Frankfurt, Germany: Luchterhand.

Tietzel, Manfred, Marion Weber, and Otto F. Bode. 1991. *Die Logik der sanften Revolution* (The

Logic of the Velvet Revolution). Tübingen, Germany: Mohr-Siebeck.
Tilly, Charles. 1978. *From Mobilization to Revolution*. New York, NY: Random House.
Useem, Bert. 1980. "Solidarity Model, Breakdown Model, and the Boston Anti-Busing Movement." *American Sociological Review* 45:357–69.
White, Robert W. 1989. "From Peaceful Protest to Guerilla War: Micromobilization of the Provisional Irish Republican Army." *American Journal of Sociology* 94:1277–1302.
Zetterberg, Hans L. 1965. *On Theory and Verification in Sociology*. New York, NY: Bedminster Press.