REPLY

Explaining Revolutions from Below

East Germany in 1989

KARL-DIETER OPP

Explaining the revolutions of 1989 and 1990 in East Germany and other East European countries presents a challenge to social scientists. Despite the likelihood of severe repression, hundreds of thousands of ordinary citizens took to the streets and succeeded in overturning incumbent regimes. The theory of collective action, based on Mancur Olson's seminal work (1965), holds that unless strong positive selective incentives exist and costs of participation are low, an individual in a large group has no incentive to participate in collective action, because an individual has no significant influence on the provision of a public good such as more political freedom. In the former communist countries, a single ordinary citizen did not have any influence to bring about change, and it is highly unlikely that there were positive selective incentives that could match the high costs of repression facing individuals. Yet the prediction of very low participation rates turned out to be false. How can this outcome be explained?

My associates and I have provided a detailed theoretical model to explain the protests and government reactions in 1989 in East Germany (Opp and Gern 1993; Opp 1994; Opp, Voss, and Gern 1995). In regard to the emerging protests, we tested the basic theoretical argument with survey data collected in 1990 about the situation in Leipzig in 1989. That city was the scene of the first demonstration in East Germany—with more than 70,000 participants—that was not crushed by the regime. The Leipzig demonstration

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set the pace for the demise of the communist state. Susanne Lohmann has argued in this journal (1997) that our theory is flawed, and she provides an alternative explanation (see also Lohmann 1993, 1994, 1995). In what follows I first briefly summarize the theory Lohmann criticizes and her critique, then discuss her arguments. Finally I conclude that the existing evidence does not support her model.[1]

Explaining the East German Protests of 1989: The Theoretical Model

The theoretical model proposed by my associates and me explains various aspects of the East German revolution, such as how the large-scale protests originated, why no violence occurred, and why the government resigned and did not try to terminate the protests. To be brief, I shall sketch only the elements of our explanation that pertain to the following discussion. The explanation starts with a general model specifying the individual incentives that increase the likelihood of an individual's participation in revolutionary action (more specifically, in protest behavior). This model rests on the theory of collective action and comports with prior empirical research. One factor prompting participation in protests is the intensity of political discontent (more generally, the intensity of preferences for the provision of certain public goods) weighted by the extent to which the individual thinks his contribution makes a difference (perceived influence). Citizens often share a feeling that they have an obligation to participate under certain conditions (Jasso and Opp 1997). Those moral incentives instigate protest, as do social incentives. The latter are rewards from friends, members of groups, or colleagues at the workplace that individuals obtain when they participate. In the East German revolution, the major cost of participating was repression. Participation becomes unlikely if the severity and probability of repression are high. The model can be summarized as follows:

$$\text{Protest} = a + b_1\,(\text{Discontent} \times \text{Perceived Influence}) + b_2\,(\text{Moral Incentives})$$

$$+ b_3\,(\text{Social Incentives}) - b_4\,(\text{Severity} \times \text{Probability of Repression}).$$

Using this micro-model, my associates and I explained the mounting protests in East Germany as follows. Events during 1989 changed the incentives in particular ways. For example, both the liberalization in Poland and Hungary and the immobility and intransigence of the East German regime increased discontent and perceived influence. In regard to the latter, our data indicate that East German citizens thought their protests would increase the likelihood that the regime would effect changes and that

1. Lohmann also charges that the book by Opp, Voss, and Gern (1995), first published in German in 1993, ignores more recent work on the East German revolution published between 1993 and 1995. To be sure, there is an enormous and still growing literature on the GDR revolution, but that literature is pertinent only if it provides new data inconsistent with the theory in question. My associates and I are not aware of such literature, and Lohmann makes no specific reference.

their *personal* participation could make a difference. On average, perceived personal influence was relatively high. In other words, a perception bias existed; individuals overestimated their actual influence. Events during 1989 further increased moral indignation; that is, moral incentives rose: citizens were upset that their government, in contrast to other East European regimes, did not react to widespread discontent. The events increasing the incentives to participate cumulated during 1989, which explains the increasing size of the protests. Later, after the revolution was successfully completed, the incentives decreased.

Another important assumption in this model is that the incentives are interdependent. For example, the felt obligation to participate in protests (moral incentives) holds under certain conditions. Many respondents in our interviews believed that one has a duty to participate if one feels that protesting makes a difference. Thus, an increase in perceived influence further increases moral incentives.

The expected number of participants is another factor in the explanation. The events occurring in 1989 caused the number of participants to increase, thereby creating another incentive to participate, because a high expected number of participants increases moral incentives (Jasso and Opp 1997 presents empirical evidence) and decreases the costs of participation, on account of safety in numbers.

An Alternative Model

Lohmann's model[2] assumes that an individual assigns a certain utility to the status quo and to an alternative regime. An individual knows her costs, C_i, of participating in a revolt against the incumbent regime. If those costs are below a certain threshold, $\hat{C}$, the individual participates; otherwise she abstains. The individual "calculates the probability that her action is decisive" (Lohmann 1997, 305), which is, roughly speaking, equivalent to the proportion of others whose costs are below the threshold $\hat{C}$. This threshold "is not only the cut point of the individual's decision rule; $\hat{C}$ is also equal to the ex ante probability that a given individual participates in the revolt, as well as the probability that this individual's action is decisive" (306). If this probability is greater than her cost C_i, the individual will participate—provided that a change of the regime is preferred to the status quo. The assumption is that there is no perception bias, that is, ε (the perception bias) is 1.

Lohmann shows how a perception bias changes the probabilities in her model. First of all, it turns out that even if no perception bias (i.e., no overestimation of influence) is assumed, so that $\varepsilon = 1$, participation may occur. Thus, perception bias is not a necessary condition for an individual's participation in a revolt. Second, if the threshold is low and positive, increasing perception bias *decreases* the probability of one's action being decisive. Third, only if the threshold is high and positive does increasing percep-

2. The following account is based on Lohmann 1997. It is beyond the scope of this reply to compare and contrast this model and the models presented in her articles of 1993 and 1994.

tion bias *increase* the probability of one's action being decisive.

Lohmann argues that these results contradict the theory proposed by me and my associates. First, she asserts, we wrongly assume that in the case of no perception bias ($\varepsilon = 1$) there is no positive turnout (political participation), which is inconsistent with Lohmann's model, as just indicated. Second, if ε is greater than 1 (i.e., if perception bias exists) there is not necessarily a strictly positive turnout. In a calculation (see Lohmann 1997, table 1), Lohmann shows that turnout is zero if the threshold is low. Third, we assume that an increasing overestimation of influence increases participation. However, as I have mentioned, this is true only under certain conditions.

When Are Alternative Models Wrong?

Lohmann argues that "Opp's theory is wrong" because it is inconsistent with her own model. But if a model L is inconsistent with another model O, it does not follow that O is wrong. Even if neither model has implications fully consistent with the empirical evidence, the implications of L may be so implausible in contrast to the implications of O that they lend credibility to O. Indeed, if one subscribes to the assumption that an individual's (biased or unbiased) influence on the provision of a public good provides an incentive to participate, one expects that increasing influence—assuming that other incentives are constant—will never diminish the likelihood of participation, as implied by the Lohmann model. Thus, inconsistent implications of two models should lead not to an out-of-hand rejection of one of the models but to a careful discussion and test of both models.

To What Extent Are the Models Inconsistent?

Lohmann incorrectly claims that our model predicts a zero turnout if perception bias is absent, as shown in the equation above. "Correct perception" in our model means "no influence" for the ordinary member of a large group. When we assign a value of zero to this situation, the product of discontent (or public-goods preferences) and influence becomes zero as well. Nevertheless, positive selective incentives and low costs of participation will lead to a non-zero turnout.

According to Lohmann, our model further implies that an increasing perception bias leads to an increasing likelihood of participation. In contrast, as already noted, the Lohmann model implies this prediction only for a certain range of thresholds. Again, if "increasing perception bias" means increasing overestimation of perceived influence, then our model indeed implies that rising perceived influence increases the likelihood of participation (see the interaction term, Discontent × Perceived Influence), assuming other incentives are constant. The question then is, Which of these conflicting implications fits the empirical evidence?

Inconclusive Evidence: Are Surveys "Cheap Talk"?

Lohmann claims that survey data are not adequate to test our propositions because they are unreliable: they are merely cheap talk, and people surveyed have "no incentives to respond truthfully or accurately" (308). This argument is flawed because it assumes that lying or giving inaccurate information is the normal behavior, and that therefore people need incentives to deter them from lying or giving inaccurate information. In everyday life, however, people normally tell the truth and give accurate information. One ought to ask, What incentives do respondents have to lie or give inaccurate information when they have agreed to be interviewed? Giving wrong information is costly because inconsistent responses to interview questions could lead to sanctions by the interviewer. Furthermore, lying often engenders a bad conscience, and it is cognitively inconsistent with attitudes and beliefs such as "I am an honest person." Thus, it is least costly for a respondent in an interview situation to answer the questions according to the expectations of the interviewer or researcher and "to his best knowledge."[3]

Experts in the methods of social research know very well that much can go wrong in survey research. They also know that the validity of surveys depends on the particular research. Certainly in some surveys one has to struggle with socially desirable (but untrue) answers, misunderstandings by respondents, or non-attitudes. A skilled survey researcher tries to identify these problems in careful pretests and to minimize them by various strategies (see any textbook on the methods of social research). In the study Lohmann criticizes, we provided a detailed discussion of biases that might be present in the data (Opp and Gern 1993; Opp, Voss, and Gern 1995, 2–6). A convincing argument that our data are invalid would require a detailed analysis of our arguments rather than sweeping general claims about the problems of survey research and of our research in particular.[4]

It is ironic that Lohmann's theoretical argument in her 1994 article, wherein she provides a detailed explanation of the East German revolution, draws heavily on survey data, including our own survey of 1990. We do not understand why she dismisses these data in her 1997 article.

Scholars who are skeptical about surveys are often blind to the problems of more "objective" data. In this particular case, the numbers of participants in the demonstrations are by no means unproblematic. To illustrate, it is striking that no publication provides any information about how these numbers are estimated. We checked the famous number of 70,000 participants in Leipzig on October 9, 1989, a datum reported time and again, by looking at photographs to identify the area in which the demonstrators stood and calculating the number of demonstrators per square meter. According to our estimates, the number of participants was much higher than 70,000

3. Esser (1993) provides a sophisticated and detailed discussion of the effective incentives for respondent behavior in an interview.

4. For a general discussion of the possibilities of testing rational-choice propositions about collective political action by survey research, see Opp 1998.

(Opp and Gern 1993; Opp, Voss, and Gern 1995). Why is Lohmann more skeptical about survey data than about so-called objective data?

Do Individuals Overestimate Their Influence?

Lohmann claims that our data are not indicative of a perception bias. To be sure, it is difficult to ascertain the influence of an individual who participates in a collective action. Researchers have not yet developed a general measurement procedure for calculating actual influence. Instead, they make assumptions; for example, that a protester's influence is 1 divided by the number of protesters in a demonstration. But this measurement presupposes that participants do not differ in regard to resources or previous engagement. For example, one participant may have brought a hundred participants to the demonstration by various mobilization attempts. How great is his influence?

Surveys may provide some rough information about a discrepancy between actual and perceived influence and about the direction of such a discrepancy (i.e., whether it is over- or underestimation of actual influence). The respondents of our surveys are mostly ordinary citizens. Our questions about perceived influence refer to efficacy in a large group. Thus, if they perceive their actual influence correctly, we expect the overwhelming majority of the respondents to consider themselves rather uninfluential. Otherwise, there is misperception: influence is under- or overestimated.

Table 1 shows how a sample of Leipzig citizens assessed their personal influence at three points in time. The question asked in 1990 refers to the perceived potential to "change the political and economic situation in the GDR" (German Democratic Republic) under communist rule by means of organizing or participating in demonstrations. In the studies conducted in 1993 and 1996, in which the same respondents were interviewed, the "new states" (*neue Bundesländer,* which consist of the former GDR) are mentioned instead of the GDR. If the respondents assessed their personal influence correctly, we would expect them to have marked the category "very unlikely" most of the time. Furthermore, we would expect that only a few individuals of high status had chosen the answer category "likely." However, the actual distributions were completely different, as table 1 shows. When the communist regime was still in power, 32 percent and 9 percent (together 41 percent) thought they could "likely" or "very likely" change the situation by organizing or participating in demonstrations. In 1993 and 1996, fully 63 percent and 55 percent, respectively, of the respondents thought they could "likely" or "very likely" change the situation. These distributions indicate a gross overestimation of actual personal influence. How large the overestimation is, we cannot say because no rigorous procedure exists to measure actual influence. Clearly, however, some degree of overestimation occurred.

Problems with the Lohmann Model: The Process of Becoming a Protester

Lohmann claims that under certain conditions a preference for collective goods and the correct perception of personal influence lead to participation in large-group collective action—without positive selective incentives *and* with costly participation. The assumptions she makes may hold empirically in some situations, but it is highly implausible that they hold in general and highly questionable that they held in East Germany in 1989. The central assumptions in Lohmann's model concern how individuals calculate the probability that their action is decisive. Lohmann assumes (1) that individuals know the number of participants; and (2) that the number of participants is central

Table 1
Perceived Personal Influence
by Participating in or Organizing Demonstrations

Interview question for 1989: At the time before October 9, 1989, how did you assess *your personal possibilities* to change the political and economic situation in the GDR, regardless of whether you have taken advantage of these possibilities?
Interview question 1993 and 1996: How do you assess *your personal possibilities* to change the political or economic situation in the new states, regardless of whether you have taken advantage of these possibilities?

I could have changed something by organizing or participating in demonstrations	**Percentage (*N*) of respondents 1989**	**1993**	**1996**
Very unlikely	25% (80)	12% (40)	9% (29)
Unlikely	34% (108)	25% (81)	36% (115)
Likely	32% (104)	50% (161)	50% (162)
Very likely	9% (30)	13% (41)	5% (16)
Sum	100% (322)	100%(323)	100% (322)

Source: Three-wave panel from a representative sample of Leipzig, administered in 1990 (referring to the situation in 1989), 1993 and 1996. $N = 323$. Author's data (for details see Opp, Voss, and Gern 1995). This table is taken from Opp 1998.

for the individual's estimation of the probability that his action is decisive. In general, the larger the number of participants, the higher is that probability.

In her 1997 article, Lohmann does not consider why the number of participants is decisive for an individual's decision to participate. Elsewhere (Lohmann 1994) she argues that an individual's action may have a multiplier effect: a single individual's act becomes a signal for others and "can affect the regime preferences of a large number of people and may thus have a critical effect on the outcome" (51). This effect arises because the regime's policy change depends on the number of protesters. Thus, the number of participants is a measure of personal influence. Lohmann's explanation of the equation in her 1997 article in which she introduces ε suggests this relation. We would therefore expect influence to be high if the expected number of participants is high.

It is striking that Lohmann provides no empirical evidence for these assumptions. Three questions arise especially: (1) Do individuals calculate the number of participants before they decide to participate? (2) If individuals calculate the number of participants, do they calculate correctly? (3) If individuals calculate the number of participants, what effects do their estimates have on their decision to participate? In what follows I will concentrate on these questions, because our data provide evidence to answer them.

Do Individuals Calculate the Number of Participants?

The Leipzig study of 1990 was the first wave of a panel study. The data of waves 2 and 3 were collected in 1993 and 1996, respectively. We asked those respondents of the third wave who had already participated in a demonstration whether they had thought about the number of participants before their participation.[5] About a third (30.6 percent) of the 124 respondents who said they had participated in a demonstration reported that they had considered the number of participants, the implication being that two-thirds did *not* think about the number of participants. In other words, for two-thirds of the respondents the expected or real number of participants could not have been important in their decision to participate. These results must be interpreted cautiously. They do not imply that *in general* the expected number of participants is irrelevant. Only part of the full sample of 438 respondents answered the interview question, because only those respondents who had participated in a demonstration could be asked whether they considered the number of participants when they participated. We do not know the percentage of the other respondents for whom the number of participants was decisive. Even if we assume that all nonparticipants calculated the number of participants, however, many individuals remain who did not consider that number.

5. The following analyses are based on a pooled data set from respondents who participated in the third wave of 1996 ($N = 438$). This data set consists of a representative survey and a survey of members of opposition groups in Leipzig. Both studies were first conducted in 1990. The pooled data set further includes a new representative study that was also a panel and was first conducted in 1993.

Do Individuals Calculate the Number of Participants Correctly?

If individuals calculate, how accurate is their calculation? The data of the first wave of the Leipzig study indicate a gross *under*estimation of the number of participants (Opp, Voss, and Gern 1995, 199). Only 22 percent of those respondents who had participated in at least one demonstration said they had correctly estimated the number of participants when they first participated, whereas 61 percent underestimated and only 17 percent overestimated the number of participants. This result may not hold for every demonstration, but it indicates that one makes a heroic assumption by supposing that individuals can correctly assess the number of participants in a collective-action event.

It would be interesting to know *how* individuals arrive at their estimates of the number of participants. There are a few speculations about this process (Opp, Voss, and Gern 1995, 198–99) but no data. Do individuals simply extrapolate the number of participants from previous events? It is more plausible that they use the number of participants of previous collective-action events as a baseline and correct that estimate. If so, how do they make the corrections? Do individuals generalize from the proportion of their acquaintances who are ready to participate? It would be interesting in further research to probe how individuals arrive at their estimates—if they estimate the number of participants at all.

What Are the Effects of the Expected Number of Participants?

We asked respondents to imagine that they were considering participation in a demonstration and that they expected a large number of participants. The respondents could indicate three reactions, which are listed in table 2.

About 80 percent of the 226 respondents who gave a valid answer indicated that the number of participants *in general* does not matter for whether they participate or not. Obviously, for a sizable proportion of the respondents the number of prospective participants is irrelevant for their decision to participate.

Under what conditions do individuals care about how many others will participate? One might suspect that those who do not care about the number of participants in a demonstration think they are personally influential anyway, and that the incentives to participate are so strong that the number of participants does not matter to them. Thus, if the incentives to participate are great, there is no point in assessing the number of participants, because such an additional incentive would not change the decision to participate.

To test this proposition, we divided the respondents into two categories. One includes all respondents who do *not* subscribe to the third item of table 2, that is, who do not claim that the number of prospective participants is irrelevant. These include 259 respondents who either agree with item 1 or item 2 of table 2 or who did not answer the interview question. The second category includes the respondents who

Table 2
How Respondents React
to a Large Number of Participants in a Demonstration
(Leipzig Study, third wave 1996)

Assume you consider participating in a demonstration. You expect that there will be a large number of participants. What do you think?	**% (*N*)**
1. When so many people participate I do not see any point to participate as well	2.2% (5)
2. When so many people participate I cannot refuse to participate as well	18.6% (42)
3. Whether I participate in a demonstration or not has nothing to do with the number of participants	79.2% (179)

explicitly enunciate that the number of participants is irrelevant for them. We thus construct a dichotomous variable, *irrelevance of other participants,* which has code 1 for those who regard the number of other participants as irrelevant ($N = 179$; see item three of table 2) and code 0 for all others ($N = 259$). Next we computed the bivariate correlations between this variable on the one hand and various incentive variables on the other. These incentive variables are scales consisting mostly of several items. Given present limitations of space, I cannot go into the details of the measurement and scale construction. I will mention only what kinds of incentives we have measured: perceived personal influence, political/economic/social discontent, the respondents' perceived obligation to protest (i.e., moral incentives), and various social incentives (reference persons' positive valuation of protest, number of friends and colleagues critical of the situation in East Germany, encouragement by protest-promoting groups). Only the correlations of the discontent variables with "irrelevance of other participants" are close to zero. All other incentive variables have statistically highly significant (at the .01 level) correlations. In other words, *if the incentives to protest are strong, individuals do not care about the number of participants.* In this context, it is important that the correlation with perceived influence is .23. Thus, if, among other things, perceived influence is high, individuals do not care about the number of participants in a protest event.

These results suggest that the effect of the number of participants (and thus of group size) on perceived influence depends on the incentives to participate. If those incentives are strong, size is largely irrelevant. This finding is plausible: if the incentives to participate are strong, no additional incentives are needed to influence the decision

to participate.

The results of these analyses suggest that some central assumptions of Lohmann's model are incorrect. The number of other participants is just one factor that affects participation in revolutionary action, but often it is irrelevant or other incentives are much more important.

Conclusions

I conclude that our model provides a much more realistic (that is, valid) explanation of the East German protests than does the Lohmann model. Furthermore, in contrast to Lohmann, we provide survey data that support our explanatory argument. We do not agree with Lohmann that surveys are just cheap talk.

Perhaps the Lohmann model and our own model exemplify different strategies of model building in the social sciences. Lohmann's model is a complicated formal exercise based on rather restrictive assumptions. That those assumptions probably hold empirically in only a few cases might not be regarded as important so long as the behavioral predictions are correct—à la Milton Friedman's methodology. The merit of the model is that it shows that even in large groups, some persons *may* make costly contributions to producing public goods even without positive selective incentives and perception bias. But such situations are empirically rare. In concrete situations such as the East German revolution in 1989, misperception existed, and positive as well as negative selective incentives were important. Furthermore, it is important to specify such incentives in detail—and it is necessary if an effort is made to measure them.

I have focused on points where our model is inconsistent with that of Lohmann. However, there are major points of agreement as well. One is that both explanations assume that revolutionary action is governed by the costs and benefits actors perceive. Explanations of revolutions rarely use this theoretical approach. We further agree with Lohmann that the number of expected participants may be an incentive for participation, and that perceived influence and public-goods preferences matter. We hope that further research will produce new data to shed light on the question of which model best explains the East German revolution and revolutions in general.

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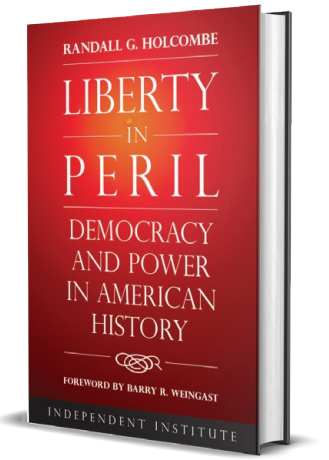

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