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COLLECTIVE VIOLENCE, POLITICAL CONTENTION,
AND REPRESSION IN FRANCE, 1866-1965

William G. Roy
University of Michigan
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University of Michigan
330 Packard Street #214
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This paper has benefitted from the helpful criticism of an earlier draft by Ronald Aminzade, Bruce Fireman, Michael Polen, and Charles Tilly.

The explanation of collective violence in recent social science has fallen into two broad groups. One explanation has focused on the individual and the kinds of hardship driving him toward violence. The other explanation has focused on group processes and the operation of political processes.

The most well-known proponents of the first perspective are the relative deprivation theorists, such as Ted Gurr (1967, 1969a, 1969b) and James Davies (1962, 1969, 1971). They identify conditions of relative hardship as the cause of collective violence: people perceive a difference between their own conditions and what they consider their legitimate expectation. The gap can be either the difference between what they have at some point in time and what they had been experiencing or what they have and what they perceive as being held by others. When they feel deprived, they make demands for better conditions, and failing, turn to violence.

A second perspective currently found in the literature emphasizes group processes and the contention for political power. Collective violence in this perspective is an outgrowth of the ordinary course of political competition--contention for power by organized social groups who have mobilized resources to achieve their purposes (Gamson, 1968; Tilly, 1970; Oberschall, 1973; Olson, 1968; Stinchcombe, 1965). It is the result of the failure to keep contention within the non-violent institutional arena. Neither those

contenders who hold power, nor those contending for power are assumed to initiate the violence. Oberschall (1973) has called this perspective the resource management theory.

In the past, it has been difficult to compare the results presented by the proponents of the relative deprivation theories with results of the proponents of the resource management theories. Gurr (1967) has explicitly excluded violence used by authorities to maintain social control from his study of civil strife. Feierabend and Feierabend (1966, 1969) include political violence as part of a continuum of political strife. This assumes that violence is an outgrowth of normal conflict, a proposition we want to test.

Snyder and Tilly (1972) have tested relative deprivation theory on a set of data of collective violence in France from 1830-1960 and found that over time in a single country, there was no consistent relationship between collective violence and conditions of relative hardship, as predicted by the theory. Their results pose a serious empirical challenge to a theory which once enjoyed nearly consensual support. This paper uses the same set of data to see if indications of political contention predict collective violence over time in one country any better than the economic condition variables. We find that they do. Collective violence in the resource management perspective is a reflection of political action by groups which have mobilized sufficient resources to seriously contend for power, challenging either the government or other powerful groups. Within

this approach there is no specific reference to the actions or orientations of individuals, but only the process of mobilizing resources and making demands on the state by groups. A group may push its means beyond legitimacy or the government may move to raise the cost of contending for power by political, administrative, or military (violent) means, or the government may intervene as a third party to a conflict.

Thus we would expect there to be unusual amounts of collective violence during times of rapid change in the structure or personnel of a political system or times of effective challenge to a ruling coalition. Such a challenge may materialize either because of events which weaken the government or the mobilization of new groups in the society which can make effective demands for a share of the power. While it is fairly difficult to construct measures of the level of mobilization by groups in a country and of the challenges to power, there are ways to measure political change. Political change frequently involves challenges to a government, which result in either (1) changes in the structure or membership of the government if the challenge is effective or (2) an increase in repressive activities in order to repel the challenge. While we do not propose that all political change is accompanied by collective violence, this paper hypothesizes that there is a strong relationship over time between the magnitude of collective violence and rapid changes in government structure and

increases in the mobilization of groups that do not have routine access to and influence in the government.

One reason a serious challenge may not lead directly to change in government is that it has been effectively contained by repressive measures. The government responds by making itself less accessible to the citizenry and/or by taking actions against the groups that are challenging, raising the cost of collective action by those groups. There is considerable evidence that government repression is effective in reducing collective violence (Hibbs, 1973; Synder and Tilly, 1972). We hypothesize that repressive actions by the government follow political challenges and collective violence. However, a consequence of such repression is a decrease in the level of collective violence.

This work is based on two premises:

(1) The primary difference between the relative deprivation theory and the resource management theory is that the relative deprivation theory focuses on individual-level processes and economic conditions, while the resource management theory focuses on group-level processes and political processes.

(2) There are so far no direct measures of such concepts as mobilization, contention, or repression for an entire nation over a long period of time. But there are data on related variables of the sort that we can say: If mobilization is taking place we expect to find X; if contention is taking place, we expect

to find Y; if there is repression we expect to find Z. If we find X and Y during a certain period, we expect that there is mobilization and contention. We therefore expect a high level of collective violence. However, if, at any time, we find a high level of Z, we expect that there is considerable repression and we should find that a period of little collective violence follows. The independent variables identified below are of the X, Y, and Z variety.

The Variables

The data are taken from two sets of data, both of which cover France from 1866 to 1965. One set was collected by Tilly on a yearly basis. The other, a data set on political system performance collected by Peters, is taken at five year intervals.

The dependent variable V_t is the number of participants in collective violence events, that is, continuous interactions involving at least one group of 50 or more participants and the destruction of property or harm to persons. The value of the variable for a particular t is the total number of participants over the previous five years, e.g. 1880 includes 1876-1880. The data are taken from accounts in two national French newspapers. Until 1929, newspapers were read for each day of a randomly selected three-month period each year. Thereafter, each day of the entire year was read. Once the events were listed, a wide range of secondary sources were consulted for more complete information.

The independent variables are: $|\Delta PDI_t|$: Change in the Cutright Index of Political Development over the five year period. Cutright (1963) defines his index as a measure of the degree of complexity and specialization of political institutions. It is heavily oriented toward the role of political parties, which in France are the primary organizations that formally contend for power. The index measures (1) the degree to which there is an active parliament and the extent to which party competition is involved in the selection of members and (2) whether or not the chief executive is elected by direct vote and the extent to which party competition is involved in his selection. Obviously there is going to be little change over any particular period of time, but when there are changes we can be confident that such change is politically significant. Regarding its relationship with collective violence, the direction of change is unimportant. For example, either disbanding or recalling a legislative body can be a step taken by a government during a political crisis involving collective violence. Therefore, the variable as we use it is the absolute value of change:

$$(1) \quad |\Delta PDI_t| = |PDI_t - PDI_{t-1}|$$

The values of the index were computed by Peters (1971). The value of the index for a five-year period can range from 0 to 15 with 0 as the least 'developed' and 15 as the most 'developed.'

$|\Delta PP_t|$: Change in the ideological stance of the party

in power. This is change between parties--from liberal to conservative, etc. These changes include routine constitutional succession as well as change by force. We do not expect collective violence to be associated with very many of these changes, although we expect that it is more likely that there will be collective violence in times of change than in times of stability. Parties were scored by Peters (1971) from conservative to liberal on a 1 to 4 scale. Since we consider the direction of change unimportant, the absolute value of change is taken as the value on the variable.

$\Delta U M_t$: Change in union membership. Data on union membership is from Peters (1971). The value of the variable is the membership at t minus membership at time $t-1$. We expect violence to follow a large increase in union membership. Large increases in union membership indicate substantial mobilization in one sector of society. It is likely that conditions facilitating mobilization of the working class facilitates mobilization of other challengers to the government. Tilly and Shorter (1973) find a strong relationship between increases in union membership and strike activity in France from 1890 to 1968. They also find that strikes are concentrated in times of political conflict.

CC_t : Number of cabinet changes. This information was collected by Tilly. The value for a particular time t is the sum of cabinet changes over the five year period ending in the year t . A large number of cabinet changes is indicative of political upheaval, which we expect to

occur concomitant with collective violence.

D_t : The percent of the total public expenditures spent on defense. This is an indication of the concern of the government to national security, both external and internal. The variable used here is the proportion at $t-1$, the year preceding the five year period over which violence is measured. We expect that concern with national security is associated with suppression of challenging groups. Such periods should be followed by a demise of collective action and collective violence.

DI_t : The Flanigan-Fogelman Index of Democratization. The index is constructed with some of the same type of parliamentary information as Cutright's Index of Political Development, but also includes measures of political suppression. The value of the variable is the Index over the five year period ending at time t . Since it is conceptually and empirically related to the Cutright Index, it is not included in the primary model. It is used for supplementary discussion of the relationship between collective violence and repression as an indicator of repressive actions by the government.

Thus change in the index of political development, change in the party in power, and number of cabinet changes are reflections of political contention. Change in union membership is a reflection of mobilization. Defense expenditures and the Index of Democratization are seen as indications of the level of government repression.

The period covered is 1870 to 1965 in five year periods, yielding 21 time points. One period was lost in differencing the variables, leaving an n of 20.

Results

The statistical technique of time series regression is used to see how much of the total variation in collective violence is explained by the independent variables and to estimate parameters of the effect of each independent variable on variation in violence (Johnston, 1972; Anderson, 1971; Hibbs, 1973b).

Univariate analysis of the variables showed that there were substantial linear trends in the 'number of participants' variable and the 'cabinet changes' variable. In order to eliminate the danger of spurious positive findings, the dependent variable was detrended by computing the residual of each time point from the linear trend line. All analysis using the number of participants as the dependent variable is based on the use of this detrended variable.

The results show that the independent variables explain a substantial portion of the total variation in collective violence over the period, lending strong empirical support to the validity of the resource management perspective. 34% of the variance in collective violence is explained by the independent variables. The variables that were hypothesized to lead to high levels of collective violence all have regression coefficients in the expected direction,

although not all can be called substantial.* **

*We are dispensing with statistical tests of significance for two reasons: (1) There are only 20 cases. Inordinately high levels of relationships would have to be found to be statistically significant. (2) The data subsume one entire universe that we would be inferring to, while the specification of other universes to which we might infer is a matter of conjecture and debate.

**The zero-order correlation matrix of the unlagged variables is:

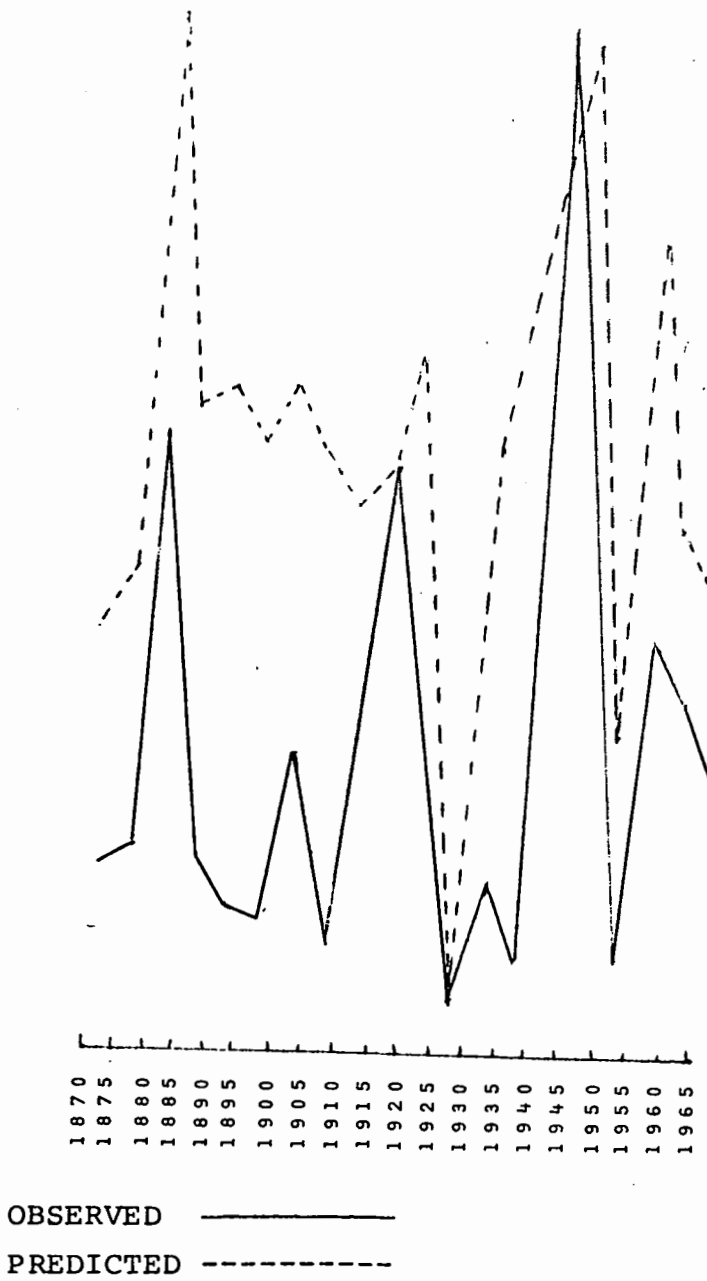
D	.2346						
Δ PDI	.0822	-.1205					
Δ PP	.3514	.1391	.3517				
Δ UM	.0413	.0299	.1094	.1234			
CC	.4866	.0916	.4651	.5028	.6687		
DI	.2975	-.1922	.3248	-.0928	.4700	.3238	
V	.1909	.8318	.1299	.1918	-.1116	.0067	-.2613
	t	D	Δ PDI	Δ PP	Δ UM	CC	DI

The zero-order correlation matrix at the lagged variables is:

D_{t-1}	-.0220	-.0918	.2889	.2931	.4070	-.0660	.1474
Δ PDI $_{t-1}$	-.0863	.2536	-.1213	-.5240	-.0761	-.1034	-.0558
Δ PP $_{t-1}$.1787	.0769	.0840	-.2443	.1756	-.1838	.0901
Δ UM $_{t-1}$	-.0175	.3286	.6187	-.0923	.3077	.1874	-.0162
CC $_{t-1}$.0064	.4103	.4953	-.2642	.4677	.0738	-.0076
DI $_{t-1}$	-.1305	.5432	.0806	-.4667	-.1911	.3016	.1477
V $_{t-1}$	-.0618	.0119	.0513	.3956	.4553	.0961	-.0230
	D_t	Δ PDI $_t$	Δ PP $_t$	Δ UM $_t$	CC $_{t-1}$	DI $_t$	V $_t$

FIGURE I.

OBSERVED AND PREDICTED NUMBER OF PARTICIPANTS IN COLLECTIVE VIOLENCE IN FRANCE, BY FIVE-YEAR PERIODS.



The basic equation which expresses the hypothesized relationships is:

$$(2) \quad V_t = \beta_1 |\Delta PDI_t| + \beta_2 |\Delta PP_t| + \beta_3 \Delta UM_t + \beta_4 CC_t + \beta_5 D_{t-1}$$

The coefficient β_5 for the proportion of expenditures going to defense is expected to be negative. The other coefficients are expected to be positive.

Ordinary least squares estimation yielded the following standardized regression estimates:*

$$(3) \quad V_t = .25|\Delta PDI_t| + .13|\Delta PP_t| - .01\Delta UM_t + .33CC_t - .74D_{t-1}$$

$$R^2 = .34 \quad n = 20$$

Figure I is presented for illustrative purposes showing the levels predicted by equation (3) and the observed values for the five-year periods. Note that the four peaks in collective violence are predicted fairly well by the model.

 FIGURE I

*The magnitude of collective violence from the beginning of the period until 1929 has been found to be undercounted. The figure showing predicted and observed levels of violence demonstrates that over that period the levels are consistently higher than predicted, implying that estimation using the revised collective violence levels for that period will yield a better fit of the model.

Autocorrelation with multiple leads and lags among the residuals from this estimation was minute. This means that OLS procedure produces unbiased estimates for the R^2 , as well as for the regression coefficients (Hibbs, 1973).

The variable that has the most effect on collective violence is the proportion of public expenditures that went to defense at the beginning of the period. There is a strong relationship such that a high proportion of funds spent for defense tends to strongly reduce the amount of collective violence in the following year.

The number of cabinet changes, which is one of the clearest indicators of shifting forces in the formal means of power, has a substantial effect on collective violence. The more cabinet changes there are during the five year periods, the more collective violence there is.

Change in the ideological stance of the party in power has a negligible effect. The small magnitude of this relationship is probably due to the fact that these changes in party include routine, constitutional succession of the governing party. Changes in union membership have virtually no effect when holding constant the other variables.

These results indicate that a crude representation of the model does display some empirical validity. Even though the variables represent no more than a shadow of the process of contention for power, we do find predicted relationships between political contention and collective violence.

Repression and Collective Violence

Further support for the model is found in the relationship between repression and collective violence. In its most general form, the resource management theory states that collective action, including collective violence is (1) a positive function of the ability of groups to mobilize resources in order to make demands on the government, and (2) a negative function of the cost of collective action (Oberschall, 1973). A major determinant of the cost of collective action involves activity by the government which increases the cost of such actions, most notably repressive activities.

The relationship between repressive actions and collective action is two-fold. Small increases in the repressive facility of the government are likely to increase the volume of collective action since it incites groups in society to protest such actions. But repressive activities, if sustained enough and severe enough, increase the cost of collective action beyond the point which most groups are willing or able to continue. When leaders are put in jail, meetings disrupted, and members penalized for participation, groups find it much more difficult to continue mounting sustained action. Thus we can expect to find periods of collective action, including collective violence, to be followed by periods of repression and subsiding collective action.

Two of our variables are associated with repressive capability. One is the proportion of public expenditures spent on defense. The other is change in the index of democratization. We hypothesize that both are related to change in violence and the mobilization variables.

Equation 4 expresses the index of democratization as a function of change in the party in power, change in union membership, cabinet changes, and the detrended level of collective violence at t-1.

$$(4) \quad DI_t = \beta_1 |\Delta PP_t| + \beta_2 \Delta UM_t + \beta_3 CC_t + \beta_4 V_{t-1}$$

Regression estimation yields these results:*

$$(5) \quad DI_t = .19|\Delta PP_t| - .32\Delta UM_t - .52CC_t + .25V_{t-1}$$

$$R^2 = .405 \quad n=20$$

It is apparent that the sign of the coefficient for collective violence, although moderate in magnitude, is in the wrong direction. However, it has been suggested that the relationship between collective violence and repression might be curvilinear. So the following equation was estimated, incorporating a variable which is the level of violence squared and then detrended by taking the residual from the linear trend line :

*The results in this section must be interpreted with extreme caution. The index of democratization is a very crude measure of the concept of repression as used in the resource management perspective. Moreover, the empirical distribution and pattern of the variable, which shows little variation over most of the period under consideration, but large deviations at a few points, pushes the robustness of the regression estimation with so few cases to its limits. These results are presented for suggestive purposes only, as a matter warranting further research.

$$(6) \quad DI_t = \beta_1 |\Delta PP_t| + \beta_2 \Delta UM_t + \beta_3 CC_t + \beta_4 V_{t-1} + \beta_5 V_{t-1}^2$$

This equation was estimated to yield:

$$(7) \quad DI_t = .16|\Delta PP_t| - .34\Delta UM_t - .52CC_t - .23V_{t-1} + .54V_{t-1}^2$$

$$R^2 = .458 \quad n = 20$$

These results suggest that, holding the other variables constant, for low levels of collective violence, the index of democratization falls (less democratic) following periods of violence. But for high levels, the opposite is true; that is, there is a tendency toward a higher level of democratization. There are many interpretations of these results, at least one of which is consistent with the resource management perspective. It is that a moderate level of violence brings repressive measures, but that very high levels happen during times of extreme contention and elicit concessions. This particular relationship between the index of democratization and collective violence is the most problematic and least clear aspect of our results. The exhortation for further research is once again brought forward.

The converse relationship--looking at the effects of repression on collective violence--is clearer.

In the resource management perspective, repression is seen as eventually increasing the cost of collective action. Therefore it is hypothesized that increased repression leads to decreased collective violence. Equation (6) expresses this hypothesis:

$$(8) \quad V_t = \beta_1 |\Delta PP_t| + \beta_2 \Delta UM_t + \beta_3 CC_t + \beta_4 D_{t-1} + \beta_5 DI_t$$

The results again confirm the hypothesis:

$$(9) \quad V_t = .07|\Delta PP_t| + .30\Delta UM_t + .43CC_t - .55D_{t-1} - .50 DI_t$$

$$R^2 = .350 \quad n = 20$$

The independent variables explain 35% of the variation in collective violence. A high proportion of public expenditures going to defense and a large decrease in the index of democratization, the repression variables, are both strongly associated with low amounts of collective violence.

Thus the two relationships between repression and collective violence has gained some suggestive support from these data. The data indicate that repressive activities of the government follow collective violence, which is followed, in turn by a decline of collective violence.

Summary and Conclusion

The resource management perspective was presented as an explanation of collective violence. A model which reflected an indirect representation of the resource management perspective was applied to data on collective violence in France from 1866 to 1965. The results showed that collective violence was a function of the two processes predicted by the resource management theory: (1) political contention arising from the mobilization of new groups making demands on the government and (2) the absence of high levels of repressive activity by the government. This approximation of the model is weakest on measuring and demonstrating the

relationship with mobilization. None of the variables used here successfully captured mobilization. The one mobilization variable (change in union membership) failed to show a relationship with collective violence when the other variables were held constant, but was related to the onset of repressive activities. The contention variables showed substantial relationships with collective violence, but not as strongly as the repression variables. We do not interpret the relative strength of these mobilization, contention and repression variables as indicative of their relative pertinence in the real world, since the measures employed here are too crude to differentiate among them.

The conclusions reached here do not offer definitive answers, but rather suggest items for the future agenda of research on collective violence. However modest these results are for the verification of the resource management model, they are superior to results found applying a more sophisticated representation of the relative deprivation theory of the same set of data (Synder and Tilly, 1972). This lends further support to the assertion that theories which predict collective violence from individual level and primarily economic variables are, at best, incomplete.

The recent construction of time series data sets which include information on different types of collective action and collective violence mitigates some of the difficulties of comparing different theories on time-based data. Some work has begun, such as Hibbs' sophisticated and provocative

analysis of post-war strike activity in advanced industrial countries (Hibbs, 1973a).

Further development of the resource management theory is also a promising avenue of endeavor. The work of Tilly (1970), Gamson (1968), Oberschall (1973), Stinchcombe (1968) and Olson (1968) has been of a pioneering nature, developing and refining the concepts. The task that now begs attention is developing the perspective into a form that can be expressed in testable models, operationalizing the concepts and empirically testing the model for its applicability, generalizability and derivable propositions. Nothing would be more pleasing than to see the development of sophisticated empirical work on the resource management perspective render this kind of primitive, but necessary, initial testing obsolete.

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