

Political Opportunity Structures and Political Protest: Anti-Nuclear Movements in Four Democracies

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Since the 1960s, successive protest movements have challenged public policies, established modes of political participation and socio-economic institutions in advanced industrial democracies. Social scientists have responded by conducting case studies of such movements. Comparative analyses, particularly cross-national comparisons of social movements, however, remain rare, although opportunities abound to observe movements with similar objectives or forms of mobilization in diverse settings.

A social movement that lends itself to cross-national study is the anti-nuclear power movement, which swept across the political landscapes of America and Europe in the 1970s. In some countries, the nuclear power conflict reached an intensity unprecedented in the history of technology controversies. So far, the opportunity for a theoretically-orientated and controlled comparison of anti-nuclear movements has not been seized, for while case studies of nuclear power conflicts generate a wealth of descriptive detail, individually they are not suited to the task of arriving at a generalized understanding of the factors that determine the dynamics of social movements.¹

This article is an attempt to use some of the rich detail of the existing case studies to construct a systematic comparison of the anti-nuclear power movements in France, Sweden, the United States and West Germany. All four countries have experienced intense conflicts over nuclear technology, but anti-nuclear movements in each have pursued a different strategy and have had a different impact on overall energy policy. I shall argue that a particular set of variables is most useful for explaining these variations,

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¹ The non-theoretical literature includes several useful handbooks, written by anti-nuclear activists, about the development of nuclear power conflicts in a number of countries, as well as several descriptively rich comparative analyses written by academic observers. Representative handbooks include: Projektbereich Ökologie der Vereinigten deutschen Studentenschaft, Bochum, *Atomenergie International: Atomprogramme und Widerstand in 28 Ländern* (Bochum: Druckladen, 1978); Anna Gyorgy and friends, *No Nukes: Everyone's Guide to Nuclear Power* (Boston: South End Press, 1979); and Lutz Mez, ed., *Der Atomkonflikt* (West Berlin: Olle und Wolters, 1979). Representative academic analyses include: John Surrey and Charlotte Huggett, 'Opposition to Nuclear Power: A Review of International Experience', *Energy Policy*, IV (1976), 286-307; Dorothy Nelkin and Michael Pollak, 'The Politics of Participation and the Nuclear Debate in Sweden, the Netherlands, and Austria', *Public Policy*, XXV (1977), 333-57; also 'The Political Parties and the Nuclear Energy Debate in France and Germany', *Comparative Politics*, XII (1980), 127-41; and also *The Atom Besieged: Extraparliamentary Dissent in France*

namely, a nation's *political opportunity structure*. Political opportunity structures are comprised of specific configurations of resources, institutional arrangements and historical precedents for social mobilization, which facilitate the development of protest movements in some instances and constrain them in others. While they do not determine the course of social movements completely, careful comparisons among them can explain a good deal about the variations among social movements with similar demands in different settings, if other determinants are held constant. Comparison can show that political opportunity structures influence the choice of protest strategies and the impact of social movements on their environments. The latter, in particular, is a topic that has received little attention until recently.²

The explanation of the strategies and impacts of social movements suggested in this article differs from – but is not necessarily inconsistent with – those advanced by three other theoretical approaches: Marxian-macrosociological, microsociological and resource mobilization. Essentially, what distinguishes the approach taken here is the importance assigned to explaining movement variations, both in terms of mobilization and impact. Marxian-macrosociological analysis, for example, links the emergence of social movements to various stages in the development of socio-economic modes of production; and those following this approach have viewed the anti-nuclear movement as a member of a larger class of 'new social movements' that has been spawned by the systems of bureaucratic and technological control that regulate social life in late capitalism.³ What proponents of this approach do not explain is why the various national anti-nuclear protests have had such dissimilar careers,

and Germany (Cambridge, MA: MIT Press, 1981); and Jim Falk, *Global Fission: The Battle Over Nuclear Power* (Melbourne: Oxford University Press, 1982).

² Societal impacts of social movements are a concern of the following recent literature: William Gamson, *The Strategy of Social Protest* (Homewood, IL: Dorsey, 1975); Gary Marx and James Wood, 'Strands of Theory and Research in Collective Behavior', *Annual Review of Sociology*, 1 (1975), 363–428; Frances Fox Piven and Richard Cloward, *Poor People's Movements: Why They Succeed, How They Fail* (New York: Pantheon, 1979); Ted Robert Gurr, 'On the Outcomes of Violent Conflict', in Ted Robert Gurr, ed., *Handbook of Political Conflict* (New York: Free Press, 1980), pp. 238–94; Doug McAdam, *Political Process and the Development of Black Insurgency, 1930–1970* (Chicago: University of Chicago Press, 1982); and Sidney Tarrow, *Social Movements: Resource Mobilization and Reform During Cycles of Protest: A Bibliographic and Critical Essay*, Western Societies Program, Occasional Paper No. 15, Center for International Studies (Ithaca, NY: Cornell University, 1982).

³ Key contributions to this perspective include: Alain Touraine, *The Self-Production of Society* (Chicago: University of Chicago Press, 1977), Chap. 6; Alain Touraine, *The Voice and the Eye* (Cambridge: Cambridge University Press, 1981); Alain Touraine, Zsuzsanna Hegedus, François Dubet and Michel Wieviorka, *La Prophétie Anti-Nucléaire* (Paris: Edition du Seuil, 1980); Alberto Melucci, 'The New Social Movements: A Theoretical Approach', *Social Science Information*, xix (1980), 199–226; Jürgen Habermas, *Theorie des kommunikativen Handelns*, Volumes 1 and 2 (Frankfurt: Suhrkamp, 1981); Klaus Eder, 'A New Social Movement?', *Telos*, 52 (1982), 5–20; and Claus Offe, 'New Social Movements as a Meta-Political Challenge' (unpublished paper, Universität Bielefeld, June 1983). A critical review of the literature is found in Jean Cohen, 'Between Crisis Management and Social Movements: The Place of Institutional Reform', *Telos*, LII (1982), 21–40.

in terms of both differential articulation and impact, in otherwise similarly constituted capitalist societies.

Insensitivity to the importance of explaining movement variations also characterizes microsociological approaches, which seek to explain the mobilization of protest and its impact on policy and institutions as direct consequences of the number and intensity of social 'strains' and 'grievances' or of the relative deprivation experienced by particular social groups.⁴ As has often been noted, strains or deprivations in and of themselves seldom explain variations in the dynamics of social movements. This is certainly true for the cases under study; each country's energy program presented its citizens with similar levels of grievances, but the national movements that emerged developed in distinct ways. As will be shown, political opportunity structures functioned as 'filters' between the mobilization of the movement and its choice of strategies and its capacity to change the social environment. At most, we can say that the existence of strain and relative deprivation is a necessary but not a sufficient condition of social protest.⁵

The explanatory approach suggested here is loosely linked to the relatively recently elaborated resource-mobilization perspective in social protest research, which conceives of social movements as collective and rational decision-makers that mobilize their followers and promote their causes with the best available strategies given limited cognitive and material resources.⁶ Most of the empirical studies that adopt this perspective, however, concentrate on those internal variables of movement mobilization that are deemed to be within an incipient movement's discretion, e.g., incentive structure in membership recruitment, internal organization, specification of goals and skills in forming coalitions with allies. In contrast, the emphasis of the present comparison of anti-nuclear movements is on relating the strategic choices

⁴ This perspective is labelled as 'Durkheimian' in Charles Tilly, *From Mobilization to Revolution* (Reading, MA: Addison-Wesley, 1978). It has been adopted and refined by authors as diverse as the structural-functionalist Neil Smelser in *Theory of Collective Behavior* (New York: Free Press, 1962) and the behavioralist Ted Robert Gurr in *Why Men Rebel* (Princeton, NJ: Princeton University Press, 1970). Critical assessments of the relative deprivation perspective are found in Michael Useem, *Protest Movements in America* (Indianapolis: Bobbs-Merrill, 1975) and J. Craig Jenkins, 'Sociopolitical Movements', in Samuel R. Long, ed., *The Handbook of Political Behavior*, Vol. 4 (New York: Plenum Press, 1981).

⁵ Early critics of the social strain and relative deprivation theories rejected their validity out of hand, but some contemporary critics accept the intensification of grievances as one of several determinants of social movement mobilization. For example, see E. J. Walsh, 'Resource Mobilization and Citizen Protest in Communities Around Three Mile Island', *Social Problems*, xxxix (1981), 1-21; Harold R. Kerbo, 'Movements of "Crisis" and Movements of "Affluence": A Critique of Deprivation and Resource Mobilization Theories', *Journal of Conflict Resolution*, xxvi (1982), 645-63; and Keith Webb, et al., 'Etiology and Outcomes of Protest: New European Perspectives', *American Behavioral Scientist*, xxvi (1983), 311-31.

⁶ Key contributions to the resource mobilization perspective are Anthony Oberschall, *Social Conflict and Social Movements* (Englewood Cliffs, NJ: Prentice Hall, 1973); William Gamson, *The Strategy of Social Protest* (Homewood, IL: Dorsey, 1975); and John D. McCarthy and Mayer Zald, 'Resource Mobilization and Social Movements: A Partial Theory', *American Journal of Sociology*, lxxxii (1977), 1212-41.

and societal impacts of movements to specific properties of the external political opportunity structures that movements face. Such institutional constraints have often been simply assumed, rather than systematically and comparatively used to explain social movements' trajectories.⁷

A comparison of anti-nuclear protest movements in France, Sweden, the United States and West Germany is well-suited to discovering the effects of institutional constraints on social movement mobilization for several reasons. First of all, these four anti-nuclear movements share similar operational objectives, namely, to prevent the completion of nuclear power plants under construction, to prevent work from beginning on planned projects and, ultimately, to shut down existing nuclear facilities. Secondly, in all of the cases, nuclear power conflicts grew from localized, segmented conflicts about specific power plants into national movements and controversies in the same time period, soon after the first energy crisis of 1973-74.⁸ (Anti-nuclear movements

⁷ McCarthy and Zald, 'Resource Mobilization and Social Movements', p. 1236, for instance simply state that they have assumed the 'modern American context' for their theory. But the institutional context is, as Piven and Cloward, pp. 15-37, point out, an important determinant of movement mobilization that may vary. A greater emphasis on external political opportunity structures is found in some of the recent social movement research. See McAdam, *Political Process and the Development of Black Insurgency*; Tarrow, *Social Movements*; and Tilly, *From Mobilization to Revolution*, Chap. 4.

⁸ If the paper focused on the explanation of early nuclear power conflicts, a more disaggregate level of analysis would have been in order: site-specific variables, such as the absence or presence of other industrial polluters, including nuclear ones, at a prospective plant site; patterns of rural settlement; fiscal side-payments to communities willing to host nuclear facilities; and the secretiveness of decision-making among local political and economic elites have been found to be reliable predictors of protest in numerous case studies. For France, see Didier Anger, *Cronique d'une lutte: le combat anti-nucléaire à Flamanville et dans La Hague* (without location: Jean-Claude Simoën, 1977); Philippe Garraud, 'Politique électro-nucléaire et mobilisation: la tentative de constitution d'enjeu', *Revue française de science politique*, xxix (1979), 448-74; Thierry Jund, *Le Nucléaire contre l'Alsace* (Paris: Syros, 1977); N. J. D. Lucas, *Energy in France: Planning, Politics and Policy* (London: Europa Publications, 1979), pp. 188-212; and Alexandre Nicolon, 'Analyse d'une opposition à un site nucléaire', pp. 79-159 in Francis Fagnani and Alexandre Nicolon, *Nucléopolis: matériaux pour l'analyse d'une société nucléaire* (Grenoble: Presses Universitaires de Grenoble, 1979). For Sweden, see Lennart Daleus, 'A Moratorium in Name Only', *Bulletin of the Atomic Scientist*, xxxi (1975), 27-33. For the United States see Lynton Caldwell, Lynton Hayes, and Isabel MacWhirter, *Citizens and the Environment: Case Studies in Popular Action* (Bloomington, IN: Indiana University Press, 1976), Chaps. 3, 6, 7 and 8; Steven del Sesto, *Science, Politics and Controversy: Civilian Nuclear Power in the United States, 1947-1974* (Boulder, CO: Westview, 1979), Chap. 6; Stephen Ebbin and Raphael Kasper, *Citizen Groups and the Nuclear Power Controversy: Uses of Scientific and Technical Information* (Cambridge, MA: MIT Press, 1974); Gyorgy et al., *No Nukes*; Robert E. Kasperson et al., 'Public Opposition to Nuclear Energy: Retrospect and Prospect', *Science, Technology and Human Values*, v (1980), 11-23; and Dorothy Nelkin, *Nuclear Power and Its Critics: The Cayuga Lake Controversy* (Ithaca, NY: Cornell University Press, 1971). For West Germany, see Battelle Institut, *Bürgerinitiativen im Bereich von Kernkraftwerken* (Bonn: Bundesministerium für Forschung und Technologie, 1975); Herbert Kitschelt, *Kernenergiepolitik: Arena eines gesellschaftlichen Konflikts* (Frankfurt: Campus, 1980), Chaps. 5.2 and 5.4; Dieter Rucht, *Von Why! nach Gorleben: Bürger gegen Atomprogramm und nukleare Entsorgung* (Munich: Beck, 1980); and Joachim Schritt, *Bauern gegen Atomanlagen* (Offenbach: Verlag 2000, 1977).

are treated here as complex aggregations of protest events at the level of entire countries, not as sequences of separable protest episodes at a more disaggregated level.) Thirdly, the objective 'threat' of nuclear power was about the same in each country in that all governments were firmly committed to nuclear programs of approximately the same size and growth rates at the time that anti-nuclear protest became a national phenomenon. Each country, for example, expected to install one to two gigawatts of nuclear electricity generation capacity per million inhabitants by the late 1980s. Finally, as we shall see, the subjective sense of deprivation and grievance also was quite similar. This assessment is supported by data about the social base of the movements indicating that the primary recruits were professionals and (public) service sector employees, farmers and property owners in the vicinity of proposed nuclear sites, students and young radicals, making each national movement an expression of 'middle-class radicalism'.⁹ They shared not only similar social bases but similar opponents: each faced a pro-nuclear coalition comprised of nuclear scientists, engineering firms, utilities and promotional or regulatory state agencies.¹⁰

EXPLAINING STRATEGIES AND IMPACTS OF SOCIAL MOVEMENTS

Political opportunity structures can further or restrain the capacity of social movements to engage in protest activity in at least three different ways. Firstly, mobilization depends upon the coercive, normative, remunerative and informational resources that an incipient movement can extract from its setting and can employ in its protest. In Western democracies, non-violent resources are crucial for the emergence of protest. Thus, if movements can appeal to widely shared norms, collect adequate information about the nature of the grievance against which they protest and raise the money to disseminate their ideas and information, the chances of a broad mobilization increase. Secondly, the access of social movements to the public sphere and political decision-making is also governed by institutional rules, such as those reinforcing patterns of interaction between government and interest groups, and electoral laws.¹¹ These rules allow for, register, respond to and even shape the demands

⁹ Reliable quantitative data about the social background of anti-nuclear activists are hard to come by. But the case studies referred to in fn. 4 consistently identify these three groups of activists.

¹⁰ The alliances of pro-nuclear interests were very similar in all four countries during the early stages of the nuclear power debate. However, the reasons why these clusters of industrial and administrative interests are the logical outcome of nuclear technology development in the countries compared here are discussed in Herbert Kitschelt, 'Structures and Sequences of Nuclear Energy Policy-Making: Suggestions for a Comparative Perspective', *Political Power and Social Theory*, III (1982), 271-308.

¹¹ The concept of political opportunity structure is used here in a broader sense than that conveyed by 'state structure', a concept that has been used, and criticized, in recent discussions in the field of comparative public policy. See John Zysman, *Governments, Markets and Growth* (Ithaca, NY: Cornell University Press, 1983), pp. 291-300 and 347-9. Opportunity structure

of social movements that are not (yet) accepted political actors. They also facilitate or impede the institutionalization of new groups and claims. Thirdly, a social movement faces opportunities to mobilize protest that change over time with the appearance and disappearance of other social movements. The mobilization of one movement, for example, may have a 'demonstration effect' on other incipient movements, encouraging them to follow suit. And the simultaneous appearance of several movements contesting the institutions of social control often presents the best opportunity to maintain movement momentum and to change established policies.¹²

In the four countries compared here, the temporal opportunity structures encountered by the anti-nuclear movements were quite similar; the protests reached a peak in the second half of the 1970s and they grew out of the broader environmental movement. Crucial differences, however, characterize the resource and institutional opportunity structures they faced.¹³ These configurations, which are relatively inert over time, may also be labelled as the 'political regimes' prevailing in each country. While they are not immutable, they respond only slowly to new policy demands. And inasmuch as they pattern policy demands and options independently of the preferences of shifting coalitions of interested political actors and social forces, they inject a decidedly non-pluralistic element into the policy formation process.

Students of social movements at times distinguish relatively 'open' political opportunity structures from relatively 'closed' ones and note that the dominance of one type or the other sets limits to the responsiveness that movements can expect.¹⁴ A particularly useful outgrowth of this research is the identification of a curvilinear relationship between openness and movement mobilization, which shows that very closed regimes repress social movements, that very open and responsive ones assimilate them, and that moderately repressive ones allow for their broad articulation but do not accede readily to their demands.

This conceptualization of opportunity structures is useful but somewhat one-sided, for it considers only the input processes of political decision cycles. The other side of the coin is that the capacity of political systems to convert demands into public policy also affects social movement mobilization and

encompasses the concept of 'dominant policy style'. The latter is developed for a number of countries in Jeremy Richardson, ed., *Policy Styles in Western Europe* (London: George Allen & Unwin, 1982). A recent analysis in this vein of labour movements is found in Peter Lange, George Ross and Maurizio Vannizelli, *Unions, Change and Crisis: French and Italian Union Strategy and the Political Economy, 1945-1980* (London: Allen & Unwin, 1982).

¹² The concepts of movement cycles and reform cycles are developed in Tarrow, *Social Movements*, pp. 35-46.

¹³ Structures are those processes in a system that change at a rate so slow as to be fixed for the study of events that transpire over a short period of time. See Karl Deutsch, 'The Crisis of the State', *Government and Opposition*, xvi (1981), 331-41, at p. 332.

¹⁴ The distinction drawn between open and closed opportunity structures is used in Peter K. Eisinger, 'The Conditions of Protest Behavior in American Cities', *American Political Science Review*, LXVII (1973), 11-28.

impact: the output phase of the policy cycle also shapes social movements and offers them points of access and inclusion in policy-making.¹⁵ Indeed, this conclusion is supported by the many case studies which show that policies are often entirely renegotiated as they are implemented.¹⁶ Thus, the capacity of political opportunity structures to implement policies – as well as their openness to societal demands – ought to be seen to determine the overall responsiveness of politics to social movements.

While it is certainly the case that political opportunity structures vary among policy arenas within the same political regime, system-wide political properties and national 'policy styles' also play key roles in determining the dynamics of social movements. The nature of these properties and styles are of crucial importance because representatives of entirely new demands often cannot participate effectively in highly differentiated policy arenas and instead must appeal to actors and institutions in politics, such as parties, parliaments and courts, whose authority and decision procedures at least partially transcend those of particular policy arenas.

In this respect, at least four factors determine the openness of political regimes to new demands on the input side. (1) The number of political parties, factions, and groups that effectively articulate different demands in electoral politics influences openness. The larger this number, the more 'centrifugal' a political system tends to be and the more difficult it is to confine electoral interest articulation to the 'cartel' of entrenched interests that is represented by the established, bureaucratized parties. (2) Openness increases with the capacity of legislatures to develop and control policies independently of the executive. This is the case because a legislature is by definition an electorally accountable agent and is therefore much more sensitive to public demands, whereas only the uppermost positions in the executive are subject to such direct public pressure. (3) Patterns of intermediation between interest groups and the executive branch are another element shaping political openness. Where 'pluralist' and fluid links are dominant, access for new interests to the centres of political decision-making is facilitated. (4) Finally, political openness not only requires opportunities for the articulation of new demands, but new demands must actually find their way into the processes of forming policy compromises and consensus. For this to occur, there must be mechanisms that aggregate demands. Openness is constrained when there are no viable procedures to build effective policy coalitions.

In a similar vein, three operational dimensions characterize the capacity of political systems to implement policies. (1) National policies are implemented more effectively when the state apparatus is centralized. A complicated division of jurisdiction between a multitude of semi-independent government agencies and a federal stratification of state authority tends to

¹⁵ This term is used in Judith May and Aaron Wildavsky, eds, *The Policy Cycle* (Beverly Hills, CA: Sage, 1978) to describe public policy processes in terms of steps and stages.

¹⁶ This point is frequently stressed in implementation research. See Eugene Bardach, *The Implementation Game* (Cambridge, MA: MIT Press, 1977).

make policy implementation more cumbersome. (2) Simultaneously, government control over market participants is a key variable for government effectiveness in many policy areas.¹⁷ The degree of state control over the finance sector, the relative size of the public sector's share of GNP and its share of total employment, and the state's co-ordination, control or exclusion of economic interest groups in policy-making, are some of the factors that influence policy effectiveness. The greater is the control of economic resources and decision centres through political institutions, the more limited are the resources available with which to challenge policies. (3) Policy effectiveness is also determined by the relative independence and authority the judiciary enjoys in the resolution of political conflict. Policy implementation becomes more hazardous and cumbersome if courts are forums of political arbitration removed from executive branch control.

Differences in the openness and capacity of political regimes are continuous rather than discrete variables. Given the number of variables on each dimension, many combinations of openness and implementation capacity may occur. Nevertheless, for comparative purposes, one may roughly dichotomize each of the political input and capacity variables. Doing so shows that each of the four countries included in the present study represents a different configuration of regime properties (see Table I). Space constraints rule out a detailed defence of this classification of opportunity structures, let alone an analysis of each structure's historical origins or regime changes.¹⁸ Some classifications, however, are likely to be contested and therefore deserve a brief discussion.

TABLE I *Political Opportunity Structures in France, Sweden, West Germany and the United States*

		<i>Political input structures</i>	
		Open	Closed
<i>Political output structures</i>	Strong	Sweden	France
	Weak	United States	West Germany

With respect to *France*, there is broad agreement on the effectiveness, though not the efficiency, of national policy-making. More debatable is the characterization here of the French political system as closed. There are,

¹⁷ This variable permits only a restricted, though important, scope of generalization across policy areas. While it is important as a determinant of most economic and social policies, there are obviously other policy areas where it does not come into play as a determinant of policy formation.

¹⁸ The divergent features of political regimes found among advanced industrial democracies can be traced back to the circumstances surrounding their state-building, their location in the world economy, the timing and speed of their industrialization, and the formation of class and group coalitions promoting specific regime forms. For the purposes of this article, however, the varying outcomes of political development in the four countries are taken as givens.

however, several features of policy-making that support this characterization: the executive branch is clearly dominant over a weak legislature and there is policy-making access for only a select number of interest groups. Moreover, the party system of the Fifth Republic exhibits centripetal tendencies. Increasingly, this has meant that two blocs, organized along the fundamental socio-economic cleavages of French society, vie for political power. Thus, the two main competitors in the party system have had difficulty in accommodating the demands generated by the cross-cutting cleavages of the 'new politics'.¹⁹

Sweden's political capacity may not be as high as that of France; but its unitary public administration, weak political judiciary and fairly high degree of control and concertation of the economy justify its characterization as a 'high effectiveness' polity, as compared with either West Germany or the United States. More questions, though, can be raised about the openness of Swedish politics. While societal corporatism may indicate the opposite, Sweden's relatively differentiated, fractionalized party system and its consensus-orientated, responsive bureaucracy are all factors that weigh in favour of characterizing it as open. This is further supported by the fact that hitherto unrepresented new-politics issues, such as demands for participatory democracy, rights for students, the emancipation of women, comprehensive aid to less developed countries and, more recently, civil and socio-economic rights for immigrants have all been attentively registered by the political parties and have triggered policy innovations.²⁰ In both respects, Sweden's political process displays relatively great openness.²¹

¹⁹ Useful analyses of the French political system are found in Philip G. Cerny and Martin A. Schain, eds, *French Politics and Public Policy* (New York: St. Martin's Press, 1980); William Andrews and Stanley Hoffman, eds, *The Fifth Republic at Twenty* (Albany, NY: State University of New York Press, 1981); Stephen Cohen and Peter Gourevitch, eds., *France in a Troubled World Economy* (London: Butterworth Scientific, 1982); and Douglas Ashford, *Policy and Politics in France* (Philadelphia, PA: Temple University Press, 1982).

²⁰ Compare, for the assimilation of Swedish movements in the late 1960s, Olof Ruin, 'Participatory Democracy and Corporatism: The Case of Sweden', *Scandinavian Political Studies*, ix (1974), 171-84. Early socio-economic reforms and a better representation of women in politics have even pre-empted a strong women's movement in Sweden. Compare: Maud Edwards, 'Sweden', in Joni Lovenduski and Jill Hills, eds, *The Politics of the Second Electorate: Women and Public Participation* (London: Routledge & Kegan Paul), pp. 208-27; Hilda Scott, *Sweden's 'Right to Be Human': Sex Role Equality: The Goal and the Reality* (Avondale, NY: M. E. Sharpe, 1982).

²¹ For Sweden, see Neil Elder, *Government in Sweden: The Executive at Work* (Oxford: Pergamon, 1970); M. Donald Hancock, *Sweden: The Politics of Postindustrial Change* (Hinsdale, IL: The Dryden Press, 1972); and Thomas J. Anton, *Administered Politics: Elite Political Culture in Sweden* (Boston: Nijhoff, 1980). Several works note a marked decline in Sweden's capacity to build consensus and implement public policy. As similar trends also have been observed in other countries, the distance between the predominant Swedish 'policy style' and other regimes, nevertheless, may not have disappeared. See Gunnel Gustafsson and Jeremy Richardson, 'Concepts of Rationality and the Policy Process', *European Journal of Political Research*, vii (1979), 415-36; Olof Ruin, 'Sweden in the 1970s: Policy-making Becomes More Difficult', in Richardson, ed., *Policy Styles in Western Europe*, pp. 141-67; and Neil Elder, Alastair H. Thomas and David Arter, *The Consensual Democracies?* (Oxford: Martin Robertson, 1982).

America's political input structures exhibit fairly great openness to interest articulation but far less openness with respect to the aggregation of new demands. The comparatively strong position of the Congress, the lack of tightly integrated political parties, the relative openness of a deeply fragmented administration, all testify to the openness of politics in the United States. But the lack of structured systems of intermediation between interest groups, legislators and the political bureaucracy impose severe constraints on the capacity for political aggregation and innovation. New demands often 'evaporate' in the pluralist process of coalition formation or later on when a weak state agency has to renegotiate a policy with organized interests. The executive branch is territorially and substantively fragmented, has little control over the economy and must face an autonomous judiciary.²²

The description of *West Germany* as a polity with a 'weak' capacity breaks with the efficiency myth with which German politics has often been falsely associated. The jurisdictional and territorial fragmentation of the state is great, the judiciary is quite autonomous, and the state is restricted with respect to both the choice of instruments and the resources at its disposal in the control of private market actors. At the same time, its centripetal party system, organized along class and religious cleavages, weak legislature and inaccessible executive make West German political input structures appear more like those of the closed French system than those of the more open American and Swedish polities.²³

How do these different national political opportunity structures affect the strategies and impacts of social movements? Two major hypotheses guide the present comparison of anti-nuclear movements. Firstly, with respect to strategies, political opportunity structures set the range of likely protest activities. For instance, when political systems are open and weak, they invite *assimilative* strategies; movements attempt to work through established institutions because political opportunity structures offer multiple points of access. In contrast, when political systems are closed and have considerable capacities to ward off threats to the implementation of policies, movements are likely to adopt *confrontational*, disruptive strategies orchestrated outside established policy channels.

Secondly, political opportunity structures facilitate or impede movement impacts, among which we may distinguish three types: procedural, substantive

²² For the American political system, see Walter Dean Burnham, *Critical Elections and the Mainsprings of American Politics* (New York: Norton, 1971); Harold Seidman, *Politics, Position and Power: The Dynamics of Federal Organization*, 2nd edn (New York: Oxford University Press, 1975); Anthony King, ed., *The New American Political System* (Washington, DC: American Enterprise Institute for Public Policy Research, 1978); and James Sundquist, *The Decline and Resurgence of Congress* (Washington, DC: Brookings, 1981).

²³ Useful analyses of policy-making in West Germany are found in Renate Mayntz and Fritz Scharpf, *Policy-Making in the German Federal Bureaucracy* (New York: Elsevier, 1975); David Conradt, *The German Polity*, 2nd edn (New York: Longman, 1982); Kenneth Dyson, 'West Germany: The Search for a Rationalist Consensus', in Richardson, ed., *Policy Styles in Western Europe*, pp. 16-46.

and structural.²⁴ Procedural impacts or gains open new channels of participation to protest actors and involve their recognition as legitimate representatives of demands. Substantive gains are changes of policy in response to protest. And structural impacts indicate a transformation of the political opportunity structures themselves as a consequence of social movement activity.

To elaborate further, the second hypothesis leads us to expect procedural gains to covary with the openness of political systems. Thus, open regimes should be more willing to accept new groups, as it is likely that at least some established political actors will seek to strengthen their own positions by allying themselves with the newcomers. This incentive is missing in closed systems, where policy-making is the prerogative of a circumscribed cartel of political actors. For substantive gains to be made, a polity must have not only relatively open institutions and policy-making procedures but a high capacity to implement policies. The more openness and capacity converge, the greater the likelihood of policy innovation. A variation should occur when a regime is closed and strong. In this instance, movement activities may prompt a limited range of elite-initiated reforms. Substantive gains are least likely to be found in weak regimes, be they open or closed. Here the likely outcome of protest activity is political stalemate, a situation in which neither old nor new policies can be implemented successfully. Finally, structural impacts will figure when a political system cannot bring about either procedural or substantive reforms. In this instance, a social movement will try to broaden its demands to include those for altering the existing political system fundamentally.

According to the logic of these hypotheses, social movements in the four cases under consideration ought to pursue distinct and different strategies and to have different policy impacts. These expectations are summarized in Table 2. Bearing them in mind, we turn now to the empirical data about the careers of anti-nuclear movements in France, Sweden, the United States and West Germany.

STRATEGIES OF ANTI-NUCLEAR MOVEMENTS

What strategies have anti-nuclear protesters adopted? Assimilative strategies have included lobbying, petitioning government bodies, influencing public policy through referendum campaigns and partisan involvement in electoral contests. Additionally, movements have tried to affect policy implementation by participating in licensing procedures and litigation. Confrontational strategies have included public demonstrations and acts of civil disobedience, exemplified by occupations of nuclear plant sites and access roads. But the national movements have not chosen equally from among these two types of protest. Moreover, as Table 3 shows, the choice of strategy does not vary at random. Rather, it varies with the specific type of political opportunity structure.

²⁴ Gamson, *The Strategy of Protest*, Chap. 3, introduced the important distinction between procedural and substantive impacts or 'gains' of movements, but omitted structural impacts on the political regimes themselves.

TABLE 2 *Hypotheses About the Relationship Between Political Opportunity Structures and the Dynamics of Social Movements*

		Political input structures	
		Open	Closed
Political output structures	Strong	(1) Assimilative movement strategies dominant (2) Significant procedural gains (3) High substantive policy innovation (4) Few structural pressures (Sweden)	(1) Confrontational movement strategies dominant (2) Few procedural impacts (3) Limited substantive elite reform; low-medium innovation (4) Strong structural pressures (France)
	Weak	(1) Assimilative movement strategies dominant (2) Significant procedural impacts (3) Substantive impacts: tendency towards policy stalemate; medium-low innovation (4) Few structural pressures (United States)	(1) Confrontational and assimilative movement strategies (2) Few procedural impacts (3) Few substantive impacts, tendency towards policy stalemate; very low innovation (4) Strong structural pressures (West Germany)

In the political systems where open decision-making processes prevail, anti-nuclear activists attempted to influence, directly and indirectly, legislatures and elections early on in the policy conflict. Thus, in the United States, environmental interest groups adopted an assimilative strategy that included, at the federal level, lobbying in Congressional committees and attempting to influence key sets of actors in the executive branch such as the Council on Environmental Quality, the Environmental Protection Agency and, to a lesser extent, the Nuclear Regulatory Commission. At the state level, these groups were successful in placing several anti-nuclear referendums on the ballot. And, at both levels, environmental groups sought to influence elected representatives by publicizing their voting records on nuclear and environmental matters.²⁵ In Sweden, anti-nuclear protesters organized themselves as public interest groups. Unlike their American counterparts, they preferred to work directly through the established party system rather than through either the legislature or the bureaucracy.²⁶ Both the Centre party, whose electoral base

²⁵ In addition to those listed in fn. 2, detailed analyses of the nuclear power conflict in the United States are found in: Dorothy Nelkin and Susan Fallows, 'The Evolution of the Nuclear Debate: The Role of Public Participation', *Annual Review of Energy*, III (1978), 275-312; and Jerome Price, *The Anti-nuclear Movement* (Boston: Twayne Publishers, 1982).

²⁶ For the Swedish nuclear controversy, see Daleus, 'A Moratorium in Name Only'; Nelkin and Pollak, 'The Politics of Participation'; Dean Abrahamson, 'Governments Fall as Consensus Gives Way to Debate', *Bulletin of the Atomic Scientist*, xxxv (1979), 30-7; Ann-Marie Westmann,

TABLE 3 *Strategies of Anti-Nuclear Protest Mobilization in France, Sweden, the United States and West Germany*

	Assimilative strategies aimed at political inputs		Assimilative strategies aimed at political outputs		Confrontational strategies against political process
	Lobbying/petitioning	Elections/referendums	Interventions in licensing procedures	Litigation in courts	
United States	high	high	high	high	low
Sweden	high	high	low	low	medium
West Germany	low	low (later: high)	high	high	high
France	low	low (later: high)	low	low	high

Public demonstration, acts of civil disobedience

is essentially middle-class and whose constituency includes many young, educated people who are attracted to the issues of social decentralization and self-management, and the Eurocommunist Swedish Communist party adopted anti-nuclear positions in the mid-1970s. Other significant arenas of political participation included the several investigative government commissions on nuclear policy that sat during the course of the controversy and the national referendum on the nuclear program in 1980.

By contrast, in political systems where the established channels of political articulation offer few opportunities to voice protest, movements opted for more confrontational 'outsider' strategies. For instance, no major party in either France or West Germany adopted a clear-cut anti-nuclear position during the controversy.²⁷ In both countries parliament exercised next to no control over nuclear policy, and executive agencies were inaccessible to the nuclear opposition, rendering lobbying strategies futile. Finally, neither in West Germany, where the Basic Law rules out plebiscites, nor in France, where political elites stood in the way, could anti-nuclear groups dramatize their demands through national referendums. In France, the Socialists raised the idea of a referendum while in opposition but quickly abandoned it once in office. Given the inaccessibility of the existing political input structures, anti-nuclear movements in both countries began to press for structural change through the new anti-nuclear ecology parties of the late 1970s.

Variations in movement strategies also hold good with respect to the implementation of nuclear policy. In the United States and West Germany, each with weak implementation capacities, an arm's length relationship between government and the nuclear industry prevails. At least on paper and in the formal decision-making procedures, state regulators are neutral referees in conflicts between the industry and its critics. Licensing procedures, therefore, allowed nuclear critics to intervene in public investigative hearings and to sue against regulatory decisions. However, procedures are cumbersome and involve a plethora of competing agencies. In the United States and to a lesser extent in West Germany, intervention in licensing activities emerged as a major strategy of anti-nuclear groups and legal councillors.²⁸ Moreover, in

'Schweden, Wohlfahrtsstaat am Scheideweg', in Mez, *Der Atomkonflikt*, pp. 229-40; and Hans Zetterberg, *The Swedish Public and Nuclear Energy: The Referendum of 1980* (Tokyo: United Nations University, 1980).

²⁷ The role of political parties in West German and French nuclear power controversies is analysed in Alexandre Nicolson and Marie-Joséphine Carriéu, 'Les parties face au nucléaire et la contestation', in Fagnani and Nicolson, *Nucléopolis*, pp. 79-159; Nelkin and Pollak, 'The Political Parties and the Nuclear Energy Debate in France and Germany'; and Kitschelt, *Kernenergiepolitik*, Chap. 5.5.

²⁸ For the United States, see Ebbin and Kasper, *Citizen Groups and the Nuclear Power Controversy*; and Elizabeth S. Rolph, *Nuclear Power and the Public Safety: A Study in Regulation* (Lexington, MA: Lexington Books, 1979). For West Germany, see Kitschelt, *Kernenergiepolitik*, Chap. 4. Licensing procedures in the United States, West Germany, France and Sweden are compared in Lutz Hoffmann *et al.*, *Faktoren der Standortwahl für Kernkraftwerke in ausgewählten Industriestaaten* (Bonn: Bundesministerium für Raumordnung, 1978).

both countries, the courts became a central battlefield in the controversy.²⁹ Although court action was frequently responsible for significant delays in nuclear construction projects, the courts were rarely inclined to rule in the plaintiff's favour.³⁰ Thus, anti-nuclear activists realized that licensing skirmishes and litigation could only temporarily stave off nuclear projects and that other means of achieving their cancellation or shut-down were required.

In France and Sweden, in contrast, relatively effective public implementation capacities prevented intervention in the regulatory machinery. Both countries disallow broad political participation in licensing procedures and conduct no public hearings about licensing applications.³¹ The protesters therefore had to look for other promising strategies to alter the course of nuclear policy.

The frequency of confrontational protest behaviour also supports the contention that a link exists between movement strategies and opportunity structures.³² Confrontational incidents are most common in the regimes I have categorized as closed, as a measure of demonstration activity in the four countries indicates. In France, between 1975 and 1977, approximately 175,000 people rallied against nuclear power in ten demonstrations. Determined police action against the demonstrators subsequently led to a decline in such mass events. In West Germany, the intransigence of political elites provoked demonstrations too, but a weak state did not act decisively to quell the unrest. From February 1975 to April 1979, approximately 280,000 people participated in seven demonstrations at nuclear sites. Several site occupations were also attempted. In the aftermath of the Three Mile Island accident, in the fall of 1979, approximately 120,000 attended a Bonn demonstration against nuclear power. Several large demonstrations have taken place since then.

In the less intransigent Swedish and American systems, demonstrations have played only a minor role. Two, attended by between 10,000 and 15,000

²⁹ The role of litigation in West German and American anti-nuclear activities is discussed in Constance Ewing Cook, *Nuclear Power and Legal Advocacy: The Environmentalists and the Courts* (Lexington, MA: Lexington Books, 1980); Kitschelt, *Kernenergiepolitik*, Chap. 5.4; Nelkin and Pollack, *The Atom Besieged*, Chap. 11.

³⁰ The effectiveness of litigation and the importance of the courts in the anti-nuclear movement's strategy has sometimes been overestimated, e.g., by Nelkin and Pollack, *The Atom Besieged*. There is not a single instance in either country where appeals courts have permanently revoked nuclear construction or operation licences. A discussion of the limits of the litigation strategy and the disillusionment it brings appears in Herbert Kitschelt, 'Justizapparate als Konfliktlösungsinstanz?' *Demokratie und Recht*, VII (January 1979), 3-22; and in Lettie McSpadden-Wenner, 'Energy Environmental Trade-Offs in the Courts: Nuclear and Fossil Fuels', Regina Axelrod, ed., *Environment, Energy, Public Policy* (Lexington, MA: D. C. Heath, 1981), pp. 81-109.

³¹ The French licensing procedure is discussed in Jean-Marie Colson, *Le Nucléaire sans les Français: Qui décide? Qui profite?* (Paris: Maspero, 1977), pp. 101ff.

³² These correlations between political structures and protest activity also appear in earlier movements from which anti-nuclear groups recruited some of their participants. Student movements in the late 1960s, for instance, were more militant and embittered in West Germany and France than in Sweden or in the United States.

people from Sweden and Denmark, were held in 1976 and 1977 to protest against the construction of the Barseback nuclear complex. In the United States, demonstrations and civil disobedience were strategies 'imported' from Western Europe. Despite its head start in the late 1960s, the American anti-nuclear movement staged its first large-scale demonstration only in 1978, at the site of the Seabrook plant in New England.³³ To be sure, the accident at Three Mile Island in March 1979 was followed by a number of demonstrations with large turnouts, such as those in New York City, Washington, DC, and San Francisco, but occurring as they did, in the wake of what was depicted as a near national disaster, they must be viewed as temporary aberrations from the prevailing American pattern of assimilative protest.

Overall, there is convincing evidence that political opportunity structures direct the paths of social mobilization taken by the various national nuclear protest movements. It is a different matter, however, whether even strategies well-adapted to differing political regimes necessarily produce success in terms of procedural, substantive or structural impacts.

POLITICAL OPPORTUNITY STRUCTURES AND SOCIAL MOVEMENT IMPACTS

If political opportunity structures shape the impact of anti-nuclear movements on policy, we should not expect policy impacts to be attributable to the overall scale and intensity of protest but rather to vary, within limits, independently of them. High mobilization does not necessarily lead to profound impacts if the political opportunity structures are not conducive to change. Conversely, lower mobilization may have a disproportionate impact owing to properties of the political opportunity structure.

To test this argument, one would ideally need a good common measure of overall movement strength in each country. However, given the numerous protest strategies adopted, such a measure is difficult to find. Poll information on opinions about nuclear energy provides a very rough indicator; but polls are extremely sensitive to the way questions are phrased and are, at best, indirectly related to anti-nuclear protest activities.³⁴ Moreover, poll findings are not stable over time and are vulnerable to a public issue-attention cycle.³⁵ That said, and allowing for the lack of strictly comparable cross-national sur-

³³ The Seabrook controversy is discussed in Steven Barkan, 'Strategic, Tactical and Organizational Dilemmas of the Protest Movement Against Nuclear Energy', *Social Problems*, xxvii (1979), 19-37; and in Harvey Wasserman, *Energy War: Reports from the Front* (New York: Lawrence Hill, 1979).

³⁴ Survey questions have been manipulated so as to create a virtual 'politics of nuclear polling', with advocates and opponents of nuclear power using the surveys most favourable to their own position. This is discussed in Otwin Renn, *Kernenergie aus der Sicht der Bevölkerung* (Jülich: Kernforschungsanlage Jülich, 1977), pp. 47-9.

³⁵ The concept of the 'issue attention cycle' for social movements is developed in Anthony Downs, 'Up and Down with Ecology: The "Issue Attention Cycle"', *Public Interest*, xxviii (1972), 38-50.

veys, several tentative generalizations can be drawn from opinion surveys taken during the late 1970s, at the height of the public controversy.³⁶ Anti-nuclear sentiments appear to have peaked once around 1976 and again in 1979, after the Three Mile Island accident, France being an exception in the latter instance. At these peaks, a plurality of respondents in all countries favoured nuclear power (35 per cent to 50 per cent of respondents), sizeable minorities opposed it (30 per cent to 45 per cent), and significant, but over time declining, groups expressed no opinion (10 per cent to 30 per cent). Anti-nuclear preferences reached a plurality only for a brief period following the Three Mile Island accident. Since 1979, they have declined in all four countries. Survey findings as similar as these can clearly shed little light on the significantly different policy impacts of anti-nuclear protests in France, West Germany, the United States and Sweden.

More direct measures of protest mobilization also do not yield plausible associations with movement impacts. The number of participants in the various protest activities, for instance, even when standardized for country size, turns out to be a poor predictor of movement impact. The United States has had a comparatively low level of mobilization, but its nuclear program is stalemated. France, in contrast, has had much greater mobilization, but its program has experienced little disruption. Also, the number and total membership of anti-nuclear protest organizations does not yield a reliable independent measure of protest intensity, because cross-national variations reflect varying opportunity structures rather than varying intensities of mobilization. This caveat is borne out in the open Swedish and American regimes, where protests are more formally organized and rely heavily on established nature-protection lobbies. These lobbies are much less important in France and West Germany.

Any assessment of the overall strength of the anti-nuclear movement must further consider the complication that 'power' and 'strength' are relational concepts, which measure not only the resources and activities of anti-nuclear groups but also those of the pro-nuclear advocates. If, for instance, governments had changed their evaluation of nuclear power autonomously, not merely as a reaction to the more or less effective veto-power of anti-nuclear protesters, then less pro-nuclear policies would indicate an intrinsic weakening of the pro-nuclear advocates, not the strength of anti-nuclear protest or opportunity structures conducive to the exercise of veto-power. Empirically, though, there is little evidence for autonomous change in the positions, preferences and resources of the nuclear advocates in the four countries during the protest period. Everywhere, nuclear manufacturing industries, electric utilities and state agencies promoting nuclear power remained firmly committed to the

³⁶ For opinion surveys about nuclear energy issues, see Gerard Duménil, 'Energie nucléaire et opinion publique', pp. 317-74 in Fagnani and Nicolon, *Nucléopolis* (France); Barbara Farah et al., *Public Opinion About Energy: A Literature Review* (Golden, CO: Solar Energy Research Institute, 1979) (United States); Renn, *Kernenergie aus der Sicht der Bevölkerung und Wahrnehmung und Akzeptanz technischer Risiken* (Jülich: Kernforschungslage Jülich, 1981) (Germany); and Hans Zetterberg, *The Swedish Public and Nuclear Energy* (Sweden).

new technology. For example, industrial policies in both Sweden and France targeted nuclear plant manufacture as a major export industry and, therefore, it enjoyed a secure political position. The wholly or partially nationalized electric utilities were also strong lobbyists. Nevertheless, the outcome of the nuclear controversy in the two countries differs dramatically with respect to the long-term future of their nuclear industries.³⁷

Overall, the evidence about mobilization does not support an explanation of differential movement impact based solely on the relative internal strengths and weaknesses of the movements and their pro-nuclear opponents. The alternative to this approach is to try to capture the dynamic interplay between movement mobilization and regime response by examining systematically the types of impacts anti-nuclear movement have had. To this I now turn.

PROCEDURAL IMPACTS

Anti-nuclear movements have made procedural inroads when they have been able to gain greater access to formal political decision-making. At one end of the spectrum, procedural impacts in France have been virtually non-existent. Because the French party system is organized along a bipolar socio-economic cleavage, its parties have been reluctant to represent anti-nuclear demands. This is well illustrated by the inability of either the Socialists or the Communists to respond to the protest. The Socialists, for example, temporarily flirted with the anti-nuclear cause in the 1978 and 1981 campaigns but once in government quickly backed away. Vacillation also characterized the position of the Socialist-leaning labour union, whose leadership was sceptical about the merits of nuclear power but was unable to generate widespread support for an anti-nuclear position. The Communist party and its labour union, which is firmly entrenched in the utility and energy industries, were even less accessible.

The anti-nuclear movement also met with indifference and worse from the various state authorities. During the Giscard administration, for instance, the nuclear issue was never discussed at length in the French legislature. Once elected, the Socialist government rid itself of the internally divisive issue in an early and brief parliamentary debate in October 1981. At that time, the new government simply decided to continue the nuclear policy of its conserva-

³⁷ It has also been argued that weakness of a nation's energy sector, above all the absence of strong oil companies, explains why governments protect nuclear and other energy policies more from movement challenges than do countries with strong, indigenous energy industries. For this argument, see Peter Gourevitch, 'The Second Image Reversed: The International Sources of Domestic Politics', *International Organization*, xxxii (1978), 881-911, esp. p. 906. At first blush, this model seems to explain the differences between France and the United States. The weak French energy sector requires firm government support, whereas the United States can afford a more pluralist style because its energy sector is strong and can fight for itself. The model fails to explain, however, why West Germany and Sweden, each with comparatively weak energy industries, were unable to imitate the French strategy and, instead, retreated, each in its own particular way, from an all-out, long-term commitment to nuclear power.

tive predecessor and gave little consideration to the dissenting minority within its own parliamentary party. Furthermore, no efforts were made to represent anti-nuclear interests in arenas of quasi-corporatist decision-making or to organize a national plebiscite to resolve the conflict.³⁸ The French anti-nuclear movement also failed to gain access to executive branch agencies and, although the government streamlined nuclear licensing procedures and made them more comprehensive in the late 1970s, the new rules still prevented the opposition from participating in public licensing hearings and from appealing effectively to the courts.³⁹ Finally, the French state responded to anti-nuclear demonstrations and civil disobedience with a dose of retaliation so heavy – as in its response to the 1977 demonstration against the new fast breeder reactor in Malville – that anti-nuclear activities have since been effectively discouraged.

The anti-nuclear movement in West Germany did not fare much better with the established political parties than did its French counterpart. The conservative opposition parties were clearly in favour of nuclear power. The German labour unions were also strongly supportive of the expansive nuclear program. And although the parties in the Social Democratic–Free Democratic coalition government were internally divided between pro-union and pro-business nuclear advocates and important oppositional minorities, a situation that led to a temporary policy stalemate, they never unequivocally represented the anti-nuclear position. Moreover, the parties were unable to influence the firmly pro-nuclear policies of the Social Democratic–Free Democratic government. It is therefore not surprising that parliamentary debates on nuclear energy during the period never effectively gave voice to the anti-nuclear position. A parliamentary commission on nuclear energy which included pro- and anti-nuclear ‘experts’ was convened in 1979, late in the controversy. It issued a strategically ambivalent mid-term report in 1980, which pro-government partisans hoped would draw anti-nuclear sympathizers over to the government parties in that year’s national election.⁴⁰ After the election, in 1982, however, a broad majority of commissioners endorsed the planned nuclear program, almost in its entirety. Overall, the anti-nuclear movement in West Germany made no gains in procedural representation, for its mobilization

³⁸ The new Socialist government allowed consultative local referendums on nuclear power projects. But this provision was far less sweeping than it sounds, for referendums may be overruled by decisions of regional political bodies, and the reform was accompanied by government and electric utility threats of economic hardship for uncooperative regions. The licensing reform by the Socialist government is described in M. Rappin, ‘Dezentralisierung des französischen Genehmigungsverfahrens’, *Atomwirtschaft-Atomtechnik*, xxvii (1982), 39–41.

³⁹ For the litigation initiated by French anti-nuclear activists, see Colson, *Le Nucléaire sans les Français*, pp. 139–50, and Nelkin and Pollak, *The Atom Besieged*, Chap. 11.

⁴⁰ The political dynamics of this commission are analysed in Herbert Kitschelt, ‘Der Zwischenbericht der Enquete-Kommission “Zukünftige Kernenergiepolitik”: Stagnation oder Innovation in der politischen Ökonomie des westdeutschen Energiesektors?’ *Jahrbuch Technik und Gesellschaft*, 1 (1982), 165–91.

failed to open any new party, legislative, corporist or (constitutionally forbidden) plebiscitarian avenues of representation.

The obstacles encountered by the West German nuclear program were in fact generated at the implementation end of the policy process, by procedures that were neither fully open nor closed to public participation. The existing licensing procedures were fragmented and did slow the program down, but opponents were not able to use these weaknesses purposively to pursue their own policy agenda because they were unable to extend their procedural participation, e.g., through more extensive citizens' rights to sue collectively against industrial projects (*Verbandsklage*). Until 1981, however, when the movement began to wane, the government was unable to take the decisive measures necessary to tip the scales firmly in favour of the program's proponents by, for instance, streamlining the licensing procedure and restricting the opportunities for procedural obstruction that the anti-nuclear activists enjoyed. By neither consistently repressing anti-nuclear protesters nor granting them new democratic rights, the state may have unwittingly fuelled the movement's mobilization and thwarted the nuclear program.

The United States, while also a case of policy stalemate, exhibits opportunity structure features that distinguish it from West Germany. America's 'decomposed' party system began to assimilate anti-nuclear demands with relative ease in the early 1970s. Then, in 1976, the anti-nuclear movement succeeded in placing anti-nuclear referendums on the ballot in a number of states. This action and the electoral response were measures of public opinion that further sensitized legislators to the issue. Partly as a consequence, more members of Congress, regardless of party affiliation, shifted to an anti-nuclear position. Anti-nuclear activists also strengthened their position in the executive branch. During the Carter presidency, the zenith of the conflict, several anti-nuclear activists were appointed to high-ranking positions in energy and environmental agencies. Even so, they could not conquer entrenched pro-nuclear bastions. The intensifying nuclear power debate led instead to a progressive fragmentation of political power and a stalemate in both Congress and the administration, which prevented adoption of any coherent nuclear policy. Numerous changes in the organization and jurisdiction of legislative and administrative bodies in the nuclear arena illustrate this process.⁴¹ Few new policy initiatives were undertaken, and key political actors were unable to forge lasting and effective coalitions. With respect to the reform of nuclear licensing procedures, for instance, neither advocates nor opponents of nuclear power were able to make decisive gains. Although pro-nuclear forces in the United States have regained strength during the Reagan presidency, the stalemate has not

⁴¹ There are several overviews of American nuclear energy policy that place it in the more comprehensive setting of American energy policy: Irwin C. Bupp and Jean-Claude Derian, *Light Water: How the Nuclear Dream Dissolved* (New York: Basic Books, 1978), Chaps. 8 and 10; Walter Rosenbaum, *Energy, Politics and Public Policy* (Washington, DC: Congressional Quarterly Press, 1981); John Chubb, *Interest Groups and the Bureaucracy: The Politics of Energy* (Stanford, CA: Stanford University Press, 1983), Chaps. 4 and 6.

been broken and no stable governance of nuclear energy is in sight. The American political opportunity structure has thus facilitated the partial, though inconsistent, inclusion of the anti-nuclear opposition in decision-making arenas.

At the end of the input spectrum furthest removed from France lies Sweden, which exhibits the greatest degree of procedural responsiveness. The anti-nuclear opposition there was represented by two opposition parties (the Communist and the Centre) as early as 1973, and parliament served as a forum for the nuclear debate. Moreover, the pro-nuclear Social Democratic government financed a broadly participatory national debate on the issue. This debate especially had dramatic consequences for the Swedish nuclear energy program, for it intensified and crystallized the public's anti-nuclear sentiments, which in turn contributed to the defeat of the Social Democrats in the 1976 election.⁴² The new government, headed by a prime minister opposed to nuclear energy, was, however, divided on the issue. The government tried at first to end the deadlock by adopting the quasi-corporatist strategy of appointing an energy commission, which was staffed by the chief antagonists in the controversy. But when this effort failed, along with efforts to negotiate a viable policy compromise between the ruling parties, the government collapsed in 1978. The 1979 accident at Three Mile Island injected a new urgency into the debate, which prompted all parties to agree to a national referendum, to be held after the upcoming election, that would remove the issue from the realm of ordinary political campaigning. In summary, the Swedish anti-nuclear movement found that its political opportunity structure offered an eclectic variety of participatory avenues: electoral, corporatist and plebiscitarian. What it did not find, however, were similar opportunities to influence implementation – for example, to intervene in nuclear plant licensure proceedings. In this respect, Sweden is much like France.

SUBSTANTIVE POLICY IMPACTS

What kind of policy impacts have anti-nuclear movements sought? On the one hand, anti-nuclear activists have sought the suspension of nuclear power plant licensing and construction, and, in certain instances, the shut-down of already-operating plants. On the other hand, they have called for a reorientation of energy policies towards energy conservation and research on renewable energy resources. While these goals have been pursued by activists in all of the four countries under consideration, the degree to which they have been successfully pursued varies widely. It is to this variation that we now turn.

That at least several of the movements have been rewarded by scaled-down nuclear programs is clear from Tables 4 and 5, which provide, respectively, information about the number of commercial nuclear power plants under

⁴² Compare Nelkin and Pollak, 'The Politics of Participation'.

TABLE 4 *Commercial Nuclear Power Plants in Construction, Operation, or Decommissioned*

	1974	1977	1980	1984
France	10	30	44	54
Sweden	10	12	12	12
United States	87	136	140 (144)*	125 (144)*
West Germany	15	18	19	21

* The higher figure includes plants under construction, but temporarily mothballed (1984: 9) or permanently abandoned (1984: 10).

Sources: calculations based on raw data from *Nuclear News*, 'The World List of Nuclear Power Plants', Vol. xvii (1974), No. 10; Vol. xx (1977), No. 10; Vol. xxiii (1980), No. 10; Vol. xxvii (1984), No. 2.

construction or already in operation in each country during the period from 1974 to 1984, and information about the number of planned nuclear stations not yet under construction. Not surprisingly, the regimes most tolerant of the anti-nuclear opposition, Sweden and the United States, are also the ones with a steady or declining number of plants planned and built in the last decade. West Germany's program is also, if only temporarily, restrained. And, of the four, only France's program continues to grow and to grow rapidly. But what specific attributes of political opportunity structures have made some movements more successful than others in achieving this portion of the anti-nuclear agenda?

One might be tempted to suppose that a simple drop-off in demand for additional electricity explains the differences between the four countries. But growth of electricity demand has also slowed down dramatically in France, where the nuclear program has continued apace. German and American utilities still deplore the expected 'shortfall' of, in their view, potentially inexpensive nuclear base load capacity. Moreover, in all four countries, utilities did not expect declining growth rates in the 1970s and planned many new nuclear

TABLE 5 *Nuclear Power Plants Planned But Not Yet Under Construction*

	1974	1977	1980	1984
France	15	2	3	0
Sweden	2	0	0	0
United States	125	64	14 (28)*	2
West Germany	4	8	4 (8)*	2 (7)*

* Figures in brackets include plants without definite construction schedule.

Sources: as for Table 4.

stations. In France, however, a political-economic regime intransigent to anti-nuclear activists was able to realize such plans and overbuild nuclear capacity to an extent that it precipitated a financial crisis of the nationalized *Electricité de France*.⁴³ In West Germany, the United States and Sweden, effective anti-nuclear opposition 'saved' utilities from making investments that would have appeared uneconomic in retrospect. Why did this happen?

Where political opportunity structures were conducive to popular participation, anti-nuclear activists could impose economic penalties on nuclear builders, by slowing the construction of plants being built and increasing the risk of future investments. In the United States, Sweden and West Germany, anti-nuclear activists were continually able to raise the costs of plants, but those in France were unable to do this. Greater responsiveness to the anti-nuclear opposition invariably led to extremely tight and often changing safety regulations.⁴⁴ Once formulated, these new safety standards allowed opponents to intervene to insist that they be complied with. The two factors reinforced each other; when nuclear regulatory agencies tightened their safety standards, opponents felt justified in their suspicions and pressed for additional requirements or else requested that existing plants be upgraded to meet the latest standards. Thus, new safety standards and the delays they brought with them – both resulting from relatively open political opportunity structures – increased the capital costs and finance charges on borrowed capital incurred by the builders of nuclear plants.

Table 6 shows that construction schedule delays were most pronounced in the United States and West Germany, both of which have fragmented implementation structures.⁴⁵ Here, in addition to licensing procedures, the courts also contributed to the delay problem when they suspended construction work during litigation. Much shorter delays were typical in France and Sweden, where tight implementation procedures offer few opportunities for outside intervention. The contrast is best illustrated with a comparison of average completion times; in the United States, it takes twelve to fourteen years to complete a commercial nuclear plant, while in France it takes only six.

In Sweden, nuclear policy was changed not by disrupting the policy

⁴³ These financial difficulties are discussed in Stephen Cohen, 'Informed Bewilderment: French Economic Strategy and the Crisis', in Cohen and Gourevitch, *France in a Troubled World Economy*, pp. 21–48; and in Herbert Kitschelt, *Politik und Energie: Energie-Technologiepolitiken in den USA, der Bundesrepublik Deutschland, Frankreich und Schweden* (Frankfurt: Campus Verlag, 1983), pp. 249–51.

⁴⁴ This process was accompanied by increasing outlays for nuclear safety research that led to further regulatory requirements and delays of nuclear power plants. See Barry Weingast, 'Congress, Regulation and the Decline of Nuclear Power', *Public Policy*, xxviii (1980), 231–55.

⁴⁵ These data would be even more striking if only plants originally scheduled for completion between 1976 and 1980 had been included. By the 1980s, after the controversy's peak, plants were delayed an average of 73.7 months in the United States, 42.2 months in the Federal Republic, 15.9 months in France, and 17.2 months in Sweden. By 1984, some time after the peak of the nuclear controversy, delays for this group of power plants had increased still further: 86 months in the United States, 56 in West Germany, 26 in Sweden, and 16 in France. Data are calculated according to sources and procedures described under Table 6.

TABLE 6 *Average Construction Delays of All Nuclear Power Plants Under Construction or in Commercial Service (Months)**

	1974	1977	1980	1984
France	0.7	3.6	7.1	11.3
Sweden	2.7	4.9	15.9	19.8
United States	20.0	35.9	49.4	53.1
West Germany	6.1	13.8	30.6	42.4

* Delays for each plant were measured as number of months behind construction schedule expected at that time when the plant order was given. For each country, delays were calculated only for plants already in operation or under construction and still scheduled to be completed. Plants where construction has not yet begun or plants mothballed while under construction are not included.

Sources: calculations based on sources given in Table 4.

implementation process but by working through the 'input side' of politics. As a result of a difficult and long drawn-out process of mutual adjustment among opposing groups, not a single political party continued to advocate further expansion of the nuclear program when the national referendum was held in March 1980. Although anti-nuclear activists did not succeed in persuading a majority of the voters to support an immediate halt to all construction activity and a dismantling of existing plants, the Swedish government has taken the magnitude of public opposition into account and has ordered no new plants, a move that is certain to guarantee the demise of the Swedish nuclear industry. The strength of the 'input side' of Swedish politics is also demonstrated by that country's ability to respond positively to the other half of the anti-nuclear agenda, which calls for an energy policy orientated towards conservation and the development of renewable fuels, especially biomass.

Why such a basic shift in overall energy strategy has not occurred in either the United States, West Germany or France is again to be traced back to variations in national opportunity structures. Energy conservation programs, for instance, working through incentives, taxes, regulation and state investment in infrastructure have been most aggressively pursued in the 'high intervention' political economies of Sweden and France.⁴⁶ In Sweden, the trade-off between nuclear power and conservation has been direct. In France, however, the commitment to conservation complements the government's existing one to nuclear power and, at least indirectly, is attributable to elite efforts to appease the anti-nuclear opposition without yielding to its key demands.⁴⁷ In the United States and West Germany, conservation policies have scarcely been pursued beyond allowing free market mechanisms to increase the prices of scarce resources.

⁴⁶ For a more detailed analysis of energy conservation policies, compare: International Energy Agency, *Energy Conservation: The Role of Demand Management in the 1980s* (Paris: OECD, 1981), and Kitschelt, *Politik und Energie*, Chap. 4.1.

⁴⁷ See Lucas, *Energy in France*, pp. 152-6.

Government research in energy conservation and renewable energy technologies exhibits similar patterns. While governments in all four countries targeted their financial support almost exclusively on nuclear research until the mid-1970s, funding of new energy technologies managed to take off in the two open regimes. In contrast to Sweden, the research program in the United States has been beset with problems, most of which stem from this new research area's unstable supporting coalition and to inefficient program implementation.⁴⁸ Using budget outlays for nuclear and renewable energy technologies as an indicator, Table 7 illustrates the differences between the energy technology policies of the four countries.

TABLE 7 *Public Energy Research and Development Expenses in the Four Countries in 1979 (Per Thousandths of GNP)*

	Nuclear fission	Renewables/energy conservation	Overall energy technology expenditures
Sweden	0.14	0.65	1.05
United States	0.49	0.36	1.61
France	0.72	0.28	1.54
West Germany	0.83	0.12	1.39

Sources: International Energy Agency, *Energy Research, Development, and Demonstration in the IEA Countries 1979* (Paris: Organization for Economic Cooperation and Development, 1980); Organization for Economic Cooperation and Development, *OECD Energy Balances 1976-1980* (Paris: OECD, 1982).

Is it not possible to explain all the changes in nuclear and energy technology policy through shifting electoral fortunes and changes of governments, rather than through the more stable political opportunity structures? For France and Germany, the answer must be no. Changes from a conservative-liberal to a socialist government and vice versa made little difference to energy policy. Even in the United States, four different presidents (Nixon, Ford, Carter and Reagan) declared themselves more or less enthusiastically in favour of nuclear energy, but none was able to create an effective coalition to support it. Generally, long-term energy strategies appear to be difficult to maintain in the fluid American system of policy formation, as both the rapid rise and demise of renewable energy research and of the nuclear fast breeder reactor technology demonstrate.

The only case broadly consistent with the importance of elections and changes of government is that of Sweden, where a government change in

⁴⁸ An instructive analysis of the budget decisions for solar energy by the US Congress is provided by W. Henry Lambricht and Albert Teich, 'Policy Innovation in Federal Research and Development: The Case of Energy Research and Development', *Public Administration Review*, IXL (1979), 140-7. A detailed comparative analysis of the formation and implementation of energy technology policies can be found in Kitschelt, *Politik und Energie*, Chap. 6.

1976 did precipitate a shift in energy policy. However, this case is not inconsistent with our competing regime hypothesis, for the latter would also predict policy changes to occur as a consequence of electoral and government changes whenever political regimes are open and have the capacity for effective policy implementation. But, even in Sweden, electoral politics is of only limited significance for policy innovation because policy changes are frequently built on much broader than minimum winning coalitions, as evidenced by the unanimous decision of the political parties in 1980 not to pursue nuclear power beyond the twelve-reactor program.

Differences in nuclear policy among the four countries are also not entirely explained by the import dependence argument, which predicts intransigent pursuit of nuclear energy whenever dependence is high. Thus, the French, Swedish and West German dependence levels on imported oil are too similar to justify the significant differences that can be found in their respective nuclear policies.⁴⁹ Moreover, in Sweden uranium deposits are the only significant indigenous non-renewable fuel reserve. Despite this, Sweden is attempting to withdraw from the nuclear economy. In the American case, energy import sensitivity and vulnerability is much lower than in Europe, but the United States' role as the hegemonic Western power and the absolute magnitude of American energy imports in world trade render the long-term question of energy supply no less significant in the United States than in Europe.⁵⁰

Raw figures about foreign energy dependence and national energy resources are, by themselves, not likely to explain public policy. A shortcoming of both resource dependence and change of government explanations is that they are not sophisticated enough to reconstruct the actual process of nuclear power policy formation. Opportunity structures come much closer to explaining the process through which a new policy is learned or an old policy is reaffirmed in the face of challenging political demands.

STRUCTURAL IMPACTS OF ANTI-NUCLEAR MOVEMENTS

Aside from the procedural and substantive impacts, the impact of anti-nuclear movements on political regimes themselves may vary between countries, depending on the type of opportunity structure that exists. The less innovative and more immobile a political regime, the greater the risk that this inflexibility itself will trigger demands that go beyond the immediate policy issue to ones threatening the legitimacy of the regime.

Changes in political implementation capacities resulting from anti-nuclear protest are difficult to detect in the four countries for the 1973–83 period.

⁴⁹ Large German coal deposits do not improve this picture dramatically. Because mining and burning coal have deleterious environmental and economic consequences, Germany has been hesitant to exploit this resource at an accelerated pace.

⁵⁰ An assessment of the world energy situation after the second oil crisis of 1978–80 is found in Daniel Yergin and Martin Hillenbrand, eds, *Global Insecurity: A Strategy for Energy and Economic Renewal* (Boston: Houghton Mifflin, 1982).

Everywhere, the inertia of administrative institutions and the economic power of the established actors in the energy sector are formidable. Structural impacts do, however, stand out with respect to the four countries' input patterns. Where the political input structures are closed, noteworthy efforts have been made to realign the party system. New 'green' or ecological parties have appeared and adopted the nuclear issue as a major plank in their political programs.⁵¹ These parties tend not to be organized along traditional cleavages of class, religion and ethnicity.⁵² Instead, they are mobilized on the basis of alleged inequalities of 'qualitative' and 'reproductive' life chances, which are created by the subordination of nature and society to large-scale economic enterprise and bureaucratic state institutions.⁵³

We would expect ecological parties to be stronger in regimes that are less responsive to anti-nuclear demands, such as those of France and West Germany, and weaker or non-existent in more innovative ones, such as those of Sweden and the United States. In fact, the West German ecology party, *Die Grünen*, founded in the late 1970s, has managed to win more than 5 per cent of the vote in most West German state elections since 1979. In the March 1983 federal election, for example, it received 5.6 per cent of the popular vote, and in the European election of 1982 8.2 per cent. In France, ecological voting lists experienced remarkable successes in the local elections of 1977. They were less successful in the 1978 National Assembly elections, however, when they could not agree on either participation in the election or a common campaign strategy. Nevertheless, the ecological candidate in the French presidential election of 1981, Brice Lalonde, received almost 4 per cent of the vote on the first ballot. The two ecological parties participating in the 1984 election together won 6.7 per cent of the vote.

In contrast, green parties in the United States and Sweden have received little support. The Swedish ecological party failed to receive 2 per cent of the vote in the Riksdag election of 1982 and has remained well below the minimum 4 per cent threshold it needs for representation in parliament. The closest equivalent to an ecology party in the United States, the Citizens' party, is insignificant.

Although there is a striking correlation between the performance of ecological parties and the outcomes of the nuclear conflict in the early 1980s, one

⁵¹ For discussions of ecological parties, see Claude-Marie Vadrot, *L'Écologie: histoire d'une subversion* (Paris: Syros, 1978); Garraud, 'Politique electro-nucléaire et mobilisation'; Roland Roth, ed., *Parlamentarisches Ritual und politische Alternativen* (Frankfurt: Campus Verlag, 1980); Jörg Mettke, ed., *Die Grünen: Regierungspartner von morgen* (Reinbek: Rowohlt, 1982); Ferdinand Müller-Rommel, "'Parteien neuen Typs" in Westeuropa: eine vergleichende Analyse', *Zeitschrift für Parlamentsfragen*, xiii (1982), 369-90; and Horst Mewes, 'The West German Green Party', *New German Critique*, xxviii (1983), 51-83.

⁵² The new parties thus destabilize the formation of cleavages that have been institutionalized in West European party systems throughout most of this century. Compare Seymour Martin Lipset and Stein Rokkan, eds, *Party Systems and Voter Alignments* (New York: Free Press, 1967).

⁵³ This argument is elaborated in the theories referred to in fn. 3.

is well advised not to interpret the new parties as 'single issue' formations. Thus, the nuclear conflict and political opportunity structures may offer a good explanation of the emergence of such parties in a specific historical period, but a multitude of other factors may influence their future course.⁵⁴

CONCLUSION

This comparison of nuclear power conflicts in four countries shows that the mobilization strategies and impacts of social movements can, to a significant degree, be explained by the general characteristics of domestic political opportunity structures. Furthermore, the cases show that governments do not necessarily engage in a reactive process of learning when faced with unexpected opposition to a policy. In the case of nuclear energy, the capacity to learn from the experience of manifest conflict did not simply follow from the magnitude of protest. Rather, it was shaped in certain pre-established ways by the channels and opportunities that political regimes offered to opponents to disseminate their message and disrupt established policies. Variations of such institutional rules led to different dispositions of governments to defend or revise policies. Where political input structures were open and responsive to the mobilization of protest, as in Sweden and to a lesser extent in the United States, a search for new policies was triggered. Where they were closed, as in France and West Germany, governments insisted more intransigently on a predetermined policy course. Where state capacities to implement policies were weak, as in the United States and West Germany, the nuclear protest movement had at least a chance to disrupt the policy against which it was mobilized. Where political capacities were stronger, as in Sweden and France, nuclear policy was shielded from most of the attacks on its implementation. The combination of political input and output structures in each country sets limits on policy innovation. Where openness was high and capacity strong, innovation tended to be greater. Sweden approximates this configuration best. Where the reverse configuration existed, policy-making immobility prevailed. This is especially patent in the West German case, and to a lesser extent in the United States. Under these conditions, established policies were stalemated, and new policies could not be agreed upon or implemented.

Theories are fruitful only if they can be applied to cases beyond the ones they were first designed to explain. In extending the logic of the present argument to nuclear power conflicts in other countries, one must, however, take into account the possibility that several factors, controlled in this study, might vary in a larger sample of cases, most notably the relative size of nuclear

⁵⁴ Thus, ecological parties in countries with weak nuclear conflicts or with opportunity structures not conducive to the formation of new parties will benefit in the future from a demonstration effect provided by the successful ecological parties, especially the West German party. A more exhaustive comparative analysis of ecological parties in different countries would require a detailed examination of the socioeconomic development, the political culture and the system of party competition in each instance.

programs and the intensity of anti-nuclear mobilization. This qualification underlines again the caveat that the regime hypothesis does not explain differences of social movement mobilization and energy strategies in their entirety.

Beyond the nuclear case, it is conceivable that the regime hypothesis can explain the strategies and impacts of other movements concerned with qualitative life-chances and the physical structuring of the social environment. Many of these conflicts cut across the social cleavages currently institutionalized in party systems, arenas of functional interest group representation and administrative agencies. Political regimes have a varying propensity to innovate in procedural, substantive and structural ways when confronted by challenging new groups. Energy policy aside, environmental protection, consumer safety regulation, information systems control, genetic engineering regulation, military technology and strategic planning, urban development and transportation planning are but a few examples of issue areas that may precipitate new social movements with dynamics similar to those of anti-nuclear movements.