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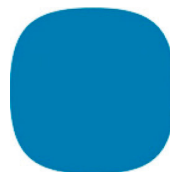
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Campaigns, skirmishes and battles: anti-nuclear movements in the USA, France and West Germany

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Abstract

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Probably never before in history has the introduction of a new technology induced such widespread and tenacious opposition as nuclear power. This paper offers a comparative analysis of the struggles over nuclear power in the western democracies of the USA, France and West Germany during the past two decades. It describes the courses, strategies, organizations, action repertoires and outcomes of these struggles. It pays particular attention to an interpretive concept which focuses on political opportunity structures, and argues that this concept, in its present form, is too simplistic to adequately explain the diversity of oppositional movement actors, strategies and action repertoires. Suggestions are offered for developing a more complex analytical concept.

Introduction

In the first years of civilian nuclear power development the general public knew little about the economic, technical and ecological aspects of this new technology and what they did know was based on the public relations efforts of the industry. From today's perspective, the arguments offered to citizens of the 1950s and 1960s, such as the promise that atomic energy would become too cheap to meter, appear somewhat bizarre. Even the esthetic qualities of nuclear power stations seemed to be evident. In 1958, the citizens of Marcoule, the site of the first two nuclear reactors in France, were invited to appreciate the "un-

deniable beauty" of their new industrial neighbor (*Midi-Libre*, February 19, 1958).

Early efforts to challenge such glowing assertions remained few and far between for over a decade. Among the first were those of the followers of Lanzo del Vasto, a charismatic leader strongly influenced by Gandhi, who opposed the French government's decision, in 1958, to construct an atomic bomb near their commune. They organized a small protest action featuring civil disobedience.

... We attacked the nuclear center of Marcoule knowing that here the atomic bomb is going to be built, though they did not dare to admit this fact. We were 24 persons... and we sat down in front of the closed doors of the director's office. Half a day later, two hundred policemen came from Nîmes, took us by the legs and pulled us away. We decided to come back for another attack with ten thousand people. (Del Vasto, 1981, p. 66)

Elsewhere, a year earlier, Jean Pignero had become concerned with the effects of radioactivity, but it was not until 1962 that he founded the first anti-nuclear association in France (Pignero, 1981). Neither group, though for very different reasons I will explore, could overcome its marginal and somewhat peculiar status.

It was not until the late 1960s that significant protest activities were reported in France. But for the next decade the harmonious image of the benefits of nuclear energy production ("Atoms for peace") was fundamentally challenged and opposition included large numbers of people. In July 1971, some 15,000 rallied against the nuclear plant in Bugey. Pierre Fournier, one of the most influential activists at the time, stated: "Bugey 01: the take-off of an ecological movement in Europe, the first non-violent demonstration of such a size on this side of the Atlantic, the birth of a new world..." (Fournier, 1975, p. 52). The protests intensified quickly. The movement grew rapidly and reached its peak in 1977 when about 60,000 people, including many West Germans, demonstrated against the fast breeder in Creys-Malville. The nuclear industry and associated governmental authorities were subject to harsh criticism, and thus the technology suffered a crisis of legitimation. As the conflict escalated, however, Del Vasto's hopes for a non-violent upheaval were dashed. At Creys-Malville, a confrontation between the protesters and armed police left a young demonstrator, killed by a gas grenade, and many others wounded. For many, the movement had taken on broader political dimensions as well: "At the peak of its mobilization capacity, the movement entered into a battle against the state, and the movement broke down" (Touraine et al., 1980, p. 145).

After this relatively short phase of mass mobilization and heated confrontation the protests declined. By the 1980s the movement was scattered and weak while the French government continued to implement the most ambitious nuclear power program in the world.

Is the story of nuclear power struggles in France unique? I will attempt to answer this question in respect to the strategies, action repertoires and courses of anti-nuclear movements in the USA, France and West Germany; I will also consider the conceptual and methodological issues raised by the question, which are of interest for research in social movements more generally. There are three parts to this paper. In the first, I examine the claims of Herbert Kitschelt's approach to account for cross-national variations in the strategies and outcomes of anti-nuclear movements. In the second part, I will offer an overview of empirical data from the three countries, that will form the basis for the development of a more complex explanatory concept for movement strategies and action repertoires offered in the third, and concluding, part.

Comparing anti-nuclear power struggles: Kitschelt's structural approach

There exists an impressive body of literature on struggles over nuclear power. Most of this work, however, is limited to a local or a national case. Few studies cover more than one country (Surrey and Huggett, 1976; Falk, 1982; Hatch, 1986; Fach and Simonis, 1987; Von Oppeln, 1989; Rüdig, forthcoming). And only a few of these attempt an ambitious systematic cross-national analysis (e.g. Nelkin and Pollak, 1981; Rüdig, 1986). I believe the most helpful and ingenious of these are the studies of nuclear power conflict by Herbert Kitschelt (Kitschelt, 1983, 1986). He attempts "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" (Kitschelt, 1986, p. 57). He develops the concept of a "political opportunity structure" and it is from this conception that my argument begins. In this section, I will outline Kitschelt's discussion of four anti-nuclear movements and his explanatory approach.

Kitschelt distinguishes between assimilative and confrontational strategies:

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. (1986, p. 67)

With respect to the four movements under investigation, his classification of their strategic choices is shown in Table 1. He identifies three dimensions in which the outcome of oppositional movements may be measured: procedural impacts (such as access to formal political decision making), substantive policy impacts (such as the suspension of nuclear power plant licensing and con-

Table 1

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	Public demonstration, acts of civil disobedience
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

Source: Kitschelt, 1986, p. 69.

struction, the closing down of operating plants, a reorientation of energy policies towards energy conservation, and research on renewable energy resources) and structural impacts on the political regime itself. Kitschelt's findings on differential outcomes are too complex to be presented here. Of particular relevance to the present argument is his finding that,

...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 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. (1986, p. 78)

Among the factors accounting for both the movement's strategic choices and outcomes, Kitschelt emphasizes the role of relatively inert national political opportunity structures. These,

... 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. (1986, p. 58)

Political opportunity structures are divided into two sets of variables. The first he terms "political input structures," whose crucial dimension is the openness of the political regime to new demands. Openness or closeness is determined by at least four concrete factors, including the number of political parties, the independence of the legislature in the development and control of policies, patterns of mediation between interest groups and the executive branch, and aggregation mechanisms for new demands. The second he terms "political output structures," by which he means the capacity of political sys-

tems to implement policies, and here he distinguishes between the three factors of state centralization, governmental control over market participants, and the relative independence and authority of the judiciary.

This framework allows him to show how the strong and weak political output structures of, respectively, Sweden and the USA may relate to their similarly open political input structures and how the strong and weak output structures of, respectively, France and West Germany may relate to their similarly closed political output structures. To these structural assessments he correlates movement strategies and impacts. Leaving aside the Swedish case he draws the following conclusions:

- In France, closed political input structures together with strong implementing capacities account for the dominance of confrontational strategies, the relatively low impact of the anti-nuclear movement on the procedural and substantive level, and the movement's strong structural pressures.
- In the USA, highly open input structures and weak implementation capacities account for the prevailing assimilative movement strategies, significant procedural impacts, a tendency towards policy stalemate, medium-low innovation, and the movement's weak structural pressures.
- In West Germany, relatively closed input structures and weak implementation capacities account for the parallel use of confrontational and assimilative movement strategies, and limited procedural impacts, few substantive impacts, a tendency towards policy stalemate, very low innovation, and the movement's strong structural pressures.

The author wisely expresses certain reservations about his classifications and interpretations, and acknowledges that differences in the openness and capacity of political regimes are continuous rather than discrete variables, that there may well be other factors determining political output and input structures and, finally, that domestic political opportunity structures cannot explain mobilization strategies and impacts of social movements in their entirety, but only to "a significant degree" (1986, p. 84).

As I, too, am convinced of the important impact of political regime structures on social movements, it is not my intention to question this useful approach in principle. In my view, the level of analysis in this approach is too abstract, the choice of categories is too crude, the variables that have been selected are too limited, and the empirical data are in some ways oversimplified. It seems to me that the author was too much tempted by the logical clarity and elegance of his approach. My main argument is not that reality is more complex than any analytical reconstruction. But, rather, I want to emphasize dimensions and factors that must be *systematically* included in this kind of comparative analysis. Otherwise, I believe such a structural approach will not have the explanatory power it claims. In the next section I will develop this emphasis by taking a closer look at the anti-nuclear movements in the USA, France and West Germany.

Struggles over nuclear power: a description and comparison of three cases

In this section I will draw a picture of anti-nuclear struggles in three countries and focus in detail on the second half of the 1970s, the years of greatest opposition to nuclear power production. I will highlight events and activities of these years with special attention to movement strategies and action repertoires, particularly as these features tend to disappear below the high level of data aggregation on which cross-national analysis is usually based. First, I will present a short history of the three cases, and, secondly, I will develop a more detailed comparison.

USA: many campaigns, few skirmishes, no battles

Opposition to the civil use of nuclear energy was limited in the USA of the late 1950s and 1960s. Although activities such as those during the Cayuga Lake controversy of the late 1960s preceded European protest movements, these local activities had no national impact and focused exclusively on legal forms of protest (Nelkin, 1971; Mitchell, 1981). The anti-nuclear struggles "became a large-scale social movement with a distinct identity *only* after the devastating consequences of the 1973–1974 energy crisis" (Price, 1982, p. 9). Conflicts within Congress, and between Congress and the White House, over energy policy contributed to the rise of the nuclear debate in the wider public. For the opposition, an important point of contention was the dual function of the Atomic Energy Commission (AEC) as both the promoter and regulator of nuclear power production. Well-known organizations, such as Friends of the Earth, Ralph Nader's Critical Mass, and the Union of Concerned Scientists, developed a single-issue coalition politics to reorganize or abolish the AEC, to tighten safety standards and to extend the procedural opportunities for legal intervention. After intensive internal struggles, the Sierra Club, the oldest and largest environmental association, also officially took an anti-nuclear position. Confronted with the growing anti-nuclear critique, the administration made some procedural concessions, but on the whole pursued the nuclear power program as planned. The struggle still focused on the exchange of arguments. The government initiated an impressive safety report which came immediately under fire from the Sierra Club and the Union of Concerned Scientists. Soon, the anti-nuclear opposition realized that the battle could not be won in the mere exchange of arguments.

In 1974, the first "national" anti-nuclear conference ("Critical Mass") was held in Washington, DC. From that time on, the anti-nuclear movement invested considerable energy in building up a close network and in integrating as many people as possible. Several contingent incidents fueled the anti-nuclear

critique and sustained the movement's credibility. The most notable of these included the mysterious death of Karen Silkwood, the revelations that the Diablo Canyon nuclear plant under construction rested on a geologic fault, the publication of a skeptical report on reactor safety by the American Physical Society, and the dangerous fire at the Brown's Ferry nuclear plant. By the mid-70s, the range of publicly debated problems related to nuclear energy production broadened to include the questions of non-proliferation, the transport and storage of radioactive wastes, the side effects of uranium mining, the consequences of a "plutonium economy," and the danger of terrorist sabotage. Fundamental doubts on nuclear power production have become widespread in both the scientific community and broader sectors of the population (Price, 1982, p. 15). With this, the movement had definitely shifted "from elite quarrel to mass movement" (Mitchell, 1981).

More and more, local and regional groups intensified legal intervention. In particular, they tried to influence state legislature, block or impede licensing for new reactors, attain moratoriums by referendum, gain access to evacuation plans, and so on. At this point, the activities of the anti-nuclear movement became highly visible. In 1975, one year after Silkwood's death, a large rally in New York City was organized. In the same year, a second Critical Mass conference took place at Washington, DC. The Silkwood case was investigated twice, although without any definite results.

Besides attempts in various states to prepare legal interventions, the referendum organized by the California Nuclear Safeguards Initiative, though ultimately defeated, had considerable mass media coverage (Office of Technology Assessment, 1984, p. 212). In the struggle for a referendum in California (Proposition No. 15) and in other cases, pro-nuclear forces mobilized as well. Demonstrators were confronted with plant workers defending their jobs. Such powerful organizations as the Atomic Industrial Forum, the American Nuclear Society, individual corporations, and even right-wing associations like the Ku Klux Klan and the John Birch Society supported pro-nuclear campaigns. On the one hand, the anti-nuclear movement was too strong to be neutralized by these forces. On the other, the time of rapid gains of terrain seemed to be over.

"Having been frustrated by the tactics of legal intervention and voter referenda, however, anti-nuclear groups turned to direct action" (Price, 1982, p. 17). Inspired by the German example of Wyhl, in 1976 the Clamshell Alliance occupied the construction site at Seabrook, New Hampshire. Other alliances formed all over the country. During this period, direct action was considered an effective instrument and the actions at Seabrook were imitated elsewhere, particularly on the West Coast (Katz and List, 1981; Cohen, 1982). Hundreds were arrested and civil disobedience became widespread within the anti-nuclear movement. More than a simple tactic, this form of action was seen as a

way to generate solidarity in a broader struggle against large-scale technology and corresponding structures of political power.

In 1977, demonstrations increased in frequency and number of participants: 20,000 demonstrated at Seabrook. Nuclear power production faced a full-blown oppositional movement with an elaborated ideology, sophisticated arguments, a decentralized but effective organizational structure, and a clever use of strategies and forms of action. These factors contributed to a gradual crisis of nuclear energy production. With the shutdown of reprocessing plants and the disengagement in fast breeder reactors promoted by President Jimmy Carter, the long-term future of nuclear energy seemed to be less attractive than several years previously. The costs of nuclear energy production increased dramatically due to higher security standards, construction delays and rising costs for raw uranium. Between 1977 and 1980 few additional commercial reactors went into operation and no more new reactors were ordered; later, a number of plants under construction were abandoned. The nuclear industry in the USA experienced a decline.

The Three Mile Island accident in March 1979 brought the deathblow for the extension of nuclear power. This incident gave the anti-nuclear movement in the USA an enormous push for mobilization (Walsh, 1981). After the accident, the largest anti-nuclear rally was held in Washington, DC, with an estimated 65,000 participants. "The size of the demonstrations and the number of persons arrested grew larger and larger. In October, at Battery Park, New York City, over 300,000 people turned out for a demonstration..." (Price, 1982, p. 20).

In the 1980s, the nuclear industry could not recover from its setbacks. More extensive information about the Three Mile Island accident, rising costs for nuclear power and, in particular, the Chernobyl disaster, contributed to the strengthening of an anti-nuclear critique in public opinion. During the 1980s, confronted with the crisis of the nuclear industry, there was less need for the movement to be active, although it assumed the role of watchdog in matters of nuclear power. Clearly, though not only because of its own abilities, the anti-nuclear movement in the USA has won the battle.

France: the lost battle

Despite the fact in the early 1970s the French nuclear power program was still underdeveloped, the French anti-nuclear movement was the first to flourish in Europe. By the end of 1970, the first regional anti-nuclear committee was created to oppose the nuclear reactor project in Fessenheim. In April 1971 a protest march there numbered about 1,500 people and included activists from the USA and members of the *Amis de la terre* (the French section of Friends of

the Earth, founded in 1971). Other activities that year included a large demonstration of 15,000 at Fessenheim, an anti-nuclear camp and a sit-in near the site of Bugey, and a final protest march from there to Lyon. A December 28, 1971 press conference held in Strasbourg was supported by 47 anti-nuclear groups (*Amis de la terre*, 1975, p. 252).

At about the same time, traditional environmental organizations became worried about nuclear energy. A first debate was organized in March 1972 in Bordeaux. The driving forces of the emerging movement, however, were small ecology groups whose focus of interest was broader than the nuclear issue. These groups were often supported by regionalist movements. An important mediating role was played by several individuals as well as counter-cultural and ecological journals (*Charlie-Hebdo*, *La gueule ouverte*, *Le sauvage*).

In many respects, 1974 was a crucial year. With the sudden increase in oil prices, energy policy, and thus nuclear policy, was placed squarely on the public agenda. In the spring, for the first time, the issue was debated both in the Senate and National Assembly. The government proclaimed its official policy of *tout électrique, tout nucléaire* (only electricity, only nuclear power) and announced a huge nuclear program. In November, the selection of sites for 40 nuclear reactors was published. To facilitate the implementation process the government offered the participation of local and regional political representatives, although this participation has been seen as more symbolic than substantial (Oudiz, 1979, p. 161). Intriguing questions were raised not only about the right choice of nuclear sites but also on the security, economic and social aspects of nuclear energy. From then on, the anti-nuclear was a visible nationwide phenomena. The candidacy of the ecologist René Dumont contributed to a growing sensibility for ecological concerns. Several local referenda on the issue of nuclear power plants were held. Surprisingly, with the exception of Flamanville, in all these referenda the pro-nuclear voters were in the minority (Colson, 1977, p. 121 ff; Laurent, 1978, p. 17).

Despite this upsurge of movement activity, the government did not appear to feel challenged. The pro-nuclear alliance of all the large political parties stood firm and the government responded only symbolically to the oppositional critique. In 1975, the nuclear program was slightly reduced and the slogan of *tout électrique, tout nucléaire* was officially abandoned (Puisseux, 1983, p. 6). Moreover, the advisory council, *Haut comité de l'environnement*, which had been founded in 1972, was revitalized in 1975, although it did not play a significant role.

In 1975, 400 scientists signed a manifesto critical of nuclear power production. Similar activities followed. One year later, the manifesto was supported by 4,000 scientists. Inspired by the US Union of Concerned Scientists, a French scientific group opposed to nuclear energy (*Groupe d'information scien-*

tifique sur l'énergie nucléaire) was established early in 1975.

In 1975/1976, the anti-nuclear movement became broader and intensified its activities. Local campaigns, meetings and demonstrations were held in many places. In June 1976, during a demonstration in Plogoff in Brittany, property of the national electricity company EDF was demolished, access roads were blocked, and the site was temporarily occupied. Malville, the site of a commercial fast breeder under construction, became a focus of interest. A demonstration in July 1976 at Malville, organized by 21 anti-nuclear committees and supported both by highly politicized, non-violent activities and by the local population, was quite successful: 20,000 people participated. Despite the presence of police forces and the infamous National Guard (CRS), many demonstrators were able to occupy the construction area without any acts of violence. This event was seen as stimulating both for activists and scientific observers: "Malville 1976 is the culmination of a communitarian encounter, of the exodus from the counter-cultural ghetto, and the victory over an adversary which is disoriented by the demonstrative renouncement of violence, and the alliance between young students and peasants" (Touraine et al., 1980, p. 144). To be sure, this is a rather euphoric statement. Different tendencies within the anti-nuclear movement were far from merging together. Moreover, demonstrations in these years were not attended by more than a few thousand people.

Though the movement was not very impressive in terms of mass media coverage and mass mobilization, it became significantly involved in many local conflicts. Remarkably, the national electricity company stated in February 1976: "In all sites where we carried out opinion polls, people were hostile towards the construction of nuclear reactors" (Colson, 1977, p. 122). Moreover, the movement gradually lost its "outsider" character. In the same year, workers of the reprocessing plant in La Hague started a strike, which was supported by the socialist trade union (CFDT). This union had gradually moved to a critical posture and argued in favor of a moratorium for the nuclear program without, however, taking an outspoken anti-nuclear position (CFDT, 1980, p. 8).

The year 1977 was both the highlight and the turning point of the anti-nuclear mobilization in France. While the government pursued its policy of symbolic concessions, the anti-nuclear movement pulled together its troops (Samuel, 1978, p. 32 ff). Various organizations and committees, not well coordinated, mobilized for a large demonstration at Malville. In terms of quantity, it was a success. About 60,000 people, including demonstrators from Italy, Switzerland and particularly West Germany, came to Malville. In reality, the event ended in disaster. Police forces and the National Guard blocked demonstrators and, after some negotiations, started frontal attacks. One demonstrator was killed, three people (among them a policeman) lost a hand or a foot, about 100 additional anti-nuclear protesters were wounded, and some 20

others were arrested, eight of whom were sentenced to spend several months in jail. Of course, this was not the end of anti-nuclear activities. The credibility of the opposition movement in the public's eye was, however, seriously damaged, and the movement never really recovered from the Malville disaster. In the same year, though for many other reasons, the national debate over the issue of nuclear power came to an end (Garraud, 1979, p. 472).

From 1977 on, the question of whether or not an ecological party should be established, and if so in what form, absorbed much of the energy of the ecologist and anti-nuclear groups (Vallet, 1978, p. 204). The movement could not overcome its fragmented status. Many groups were centered around prominent individuals. Moreover, the traditional left/right cleavage undermined all unifying attempts. Insofar as the Socialist Party, and particularly the Socialist trade union, became more sensitive to ecological concerns, promoting a concept of social self-government (*autogestion*), many anti-nuclear activists, particularly those with a left-wing background, were tempted to follow the siren promising a general renewal via a left-wing government. Local struggles (for instance in Alsace and Brittany) went on, however.

Before the presidential election in 1979, Mitterand declared he would slow down the nuclear program, cancel the extension of the reprocessing plant in La Hague, and initiate a referendum on nuclear power. Given such promises and the fact that many activists had a leaning to the political left, he gained the support of many anti-nuclear activists. By the time the movement realized that Mitterand's promises were not going to be kept, it was too weak and scattered to mount an effective revival. Even the Three Mile Island accident had no significant impact on the French anti-nuclear movement. After many years of demonstrations, blockades and violent actions, only the projected reactor in Plogoff, in Brittany, was cancelled in June 1981.

The fate of the anti-nuclear movement is probably best illustrated by the case of Brice Lalonde, one of the best known French ecologists involved in anti-nuclear activities. In the mid-80s he accused President Mitterand of having betrayed the movement. However, as the present Minister for Environment in a Socialist government, Lalonde has reached some kind of accommodation with nuclear power production. Given the pro-nuclear phalanx of virtually all established forces, and the fact that the nuclear program has been implemented successfully, there is no doubt that the movement has lost the battle. If there is to be a crisis for nuclear energy in France in the future, it may well be due to economic and technical reasons rather than to the anti-nuclear movement.

West Germany: ongoing campaigns, skirmishes and battles

Anti-nuclear activities in West Germany in the 1960s and the beginning of the 1970s were relatively insignificant (Radkau, 1983). In 1973 and 1974,

protesters were attracted to a few local struggles over planned nuclear reactors. Of these, the struggle over the site of Wyhl, on the upper Rhine, became significant after the peaceful occupation of the site lasted several months. The conservative state government was forced to negotiate, reach a formal compromise and end the illegal occupation, for the protesters had considerable support in the local population. Moreover, the anti-nuclear opposition in Wyhl succeeded in a first round of litigation. In general, although the government strongly supported nuclear power on all levels, it was not able to develop a clear strategy to deal with its unexpected challengers.

The Wyhl conflict (Rucht, 1980) encouraged many anti-nuclear groups at other sites, particularly in the West German cities. Very quickly a loose coalition of grassroots and conventional organizations was created and thus formed a real mass movement. Additionally, the engagement of scientists and clerical groups was complemented by the reservations against nuclear energy expressed by minorities within the Social Democratic and Liberal parties.

For the most part, the government reacted on the level of symbolic politics. Among other things, it launched a citizen's dialogue on nuclear energy which, largely unintended, fueled the anti-nuclear critique with further information and arguments. Not surprisingly, the growth of the movement also provoked counter-mobilization. Whereas pro-nuclear citizen action groups, although sponsored by the nuclear industry, remained totally insignificant, pro-nuclear campaigns were more important among scientists, particularly in the trade unions. With the support of employers, these mobilized for pro-nuclear mass demonstrations in 1976.

In 1976 and 1977, the situation became really heated. The movement organized several mass demonstrations with tens of thousands of people. At the sites of Brokdorf and Grohnde, where protesters tried to imitate the Wyhl occupation, the conflicts ended in direct and violent confrontations with police. Unlike in Wyhl, the police were now prepared to react in a paramilitary fashion, and even organize "preventive" attacks. On the other side, the movement attracted many radical leftist activists who felt strong enough to risk direct confrontation. Although there was to be no repeat of Wyhl, the large numbers of people involved suggest the movement was stronger than ever before. Most anti-nuclear activists were quickly faced with the limits to open confrontation. Many of them had participated in the mass demonstration in Malville (France). In 1977, when the movement mobilized against the fast breeder reactor at Kalkar, police even blocked highways to prevent tens of thousands of protesters from gaining access to the Kalkar district.

With this experience, factions within the movement now turned to very different strategies or combined some of them, for example, carrying out violent actions such as sabotage, acts of civil disobedience such as blockades and mass

demonstrations, litigating, intensifying the scientific debate on nuclear energy, developing and promoting alternative energy sources, seeking allies in established parties, and creating the Alternative Lists and Green parties.

In reaction to this diversification, the nuclear industry and the state authorities in turn reacted with strategies ranging from criminalization to friendly dialogue. In the following years conflicts on many sites continued. In particular, the problem of nuclear waste storage and reprocessing became dominant issues. In Gorleben the pro-nuclear forces became more and more defensive. In what was widely seen as a concession to the opposition, they organized an international scientific hearing in Hannover on this project. Then at the same time as the opposition organized a major protest march from Gorleben to Hannover, the Three Mile Island event "exploded" in the mass media. Along with the strong opposition and the doubts raised by some leading experts, these factors brought an end to the Gorleben project in its initial form. Although this was only a partial success for the movement, only the reprocessing project was canceled at this specific site and the larger nuclear waste storage project continued; Gorleben — after Wyhl — has become the second nationwide symbol for a successful struggle against nuclear energy (Rucht, 1980).

By the end of the 1970s the long-term future of nuclear energy had become a highly controversial matter not only for the general public, but also within the scientific arena, for trade unions, parties and parliaments. In this period a parliamentary commission investigated the advantages and disadvantages of both nuclear and non-nuclear "energy paths." Their conclusions were ambivalent, but an important message of the commission was that a non-nuclear future, without disastrous consequences for the economy and wealth, was possible. Additionally, the rise of the Green party, as the only party to take a clear anti-nuclear stance, contributed to the continuation of the nuclear discourse within the realm of established politics.

Nonetheless, in the field of extra-parliamentary conflicts, beside some local conflicts of high significance, the issue of nuclear reprocessing remained a matter of important debate. In the early 1980s, the selection of Wackersdorf (Bavaria) for a reprocessing facility occasioned a highly symbolic and tenacious struggle in which a broad range of strategies and counter-strategies were employed (Kretschmer and Rucht, 1987; Kretschmer, 1988). Unlike earlier conflicts, both the trade unions and the social democrats here moved to the side of the critics. In spite of the strength of the opposition, however, the likelihood of stopping this project seemed very remote. In many respects, the event at Chernobyl was crucial. In addition to the event itself, the way the administration reacted to it was significant. The nuclear industry and regulatory agencies lost much credibility, the movement was revitalized, and new social strata, among them many young mothers, joined the movement. Now, the large majority of

the Social Democrats, the Liberal Party and the trade unions took an anti-nuclear stance. The argument was no longer on the ultimate issue of nuclear power per se, but on the conditions and the timing of phasing it out. Even the conservative government, at least rhetorically, now agreed that nuclear power would be viable for a transitory period of only some decades.

Even before the Chernobyl event, the nuclear program had reached a phase of stalemate. The industry was concentrating on the completion of facilities already under construction and no additional reactors were ordered. The surprising abandonment of the formerly tenaciously defended Wackersdorf project — for monetary cost-benefit reasons and against the advice of the federal government — has contributed to the delegitimation of nuclear energy in West Germany. Most people in West Germany have lost their faith in nuclear energy. The anti-nuclear movement could do little about the installation of nuclear generating equipment that now provides about one-third of the West German electrical production. But against this initial phase, the present weakness of nuclear power's credibility and its apparently limited future suggest that the anti-nuclear movement will not be the final loser. As in the French situation, this prognosis is due not only to the effect of oppositional movements, but also to factors external to them. Thus, for domestic reasons as well as the lack of an export market, the nuclear industry in Germany is presently in a substantial crisis.

A comparative assessment of the three cases

Courses of conflicts

Overall, the courses of conflicts in the three countries examined here appear very similar. Up to the late 1960s, only individuals or small groups protested against nuclear energy production. Usually, these protests were locally based, isolated from each other and largely insignificant. Some years earlier than in Europe, anti-nuclear groups in the USA spread out all over the country, forming loose networks and gaining momentum. In Europe, the first to flourish was the French movement and it was soon followed by the West German one. By the mid-70s, significant anti-nuclear energy movements existed in virtually all those Western countries which relied, or intended to rely, on nuclear energy. In this period, when the movements established nationwide and even international networks, they constituted a significant challenge to official energy policies. The issue of nuclear power was widely debated in public. In France and West Germany, opinion polls demonstrated a significant increase in popular opposition (Kiersch and Von Oppeln, 1983, p. 77). In the first half of the 1970s in the USA, between 25 and 30% of the population expressed a negative attitude towards nuclear power (Office of Technology Assessment, 1984, p. 211).

In the USA and West Germany there was a de facto moratorium on new plant construction. The USA was the first country where a powerful nuclear industry, and consequently the anti-nuclear power movement, experienced a rapid decline (in the late 1970s). With the Three Mile Island accident in 1979 this decline became definite. Only in France, at least up to the mid 80s, was the ambitious nuclear power program carried out as planned. In spite of this fact, the anti-nuclear movement in France did not grow, but rather, experienced decay. Unlike in France, the West German movement survived into the 1980s, although on a smaller scale than before. With the "Chernobyl effect," the German movement became revitalized and centered around the conflict over a major nuclear reprocessing plant, which, by the end of the 1980s, was canceled for economic reasons. Today, in all three countries, the opposition to nuclear power has lost its intensity. In the USA and West Germany, this is due, at least in part, to the success of the opposition. In France, the situation was just the opposite. The strength of the pro-nuclear forces, and the lack of institutional leverage points for the anti-nuclear movement, led to its deep frustration and finally its decay.

Strategies and action repertoires

One finds the dual typology of assimilative strategies and confrontational strategies, at least on one level, evident in anti-nuclear movements in all three countries. In general, confrontational strategies were relatively important in West Germany, while they did not play a significant role in the USA. The French movement ranged in between. These statements, however, need further qualification.

First, disruptive and confrontational actions (e.g. sit-ins during hearings) sometimes took place within the legal and procedural participation of protest groups. In many other cases, demonstrations were organized in parallel or in direct reaction to the outcome of procedural participation.

Second, one can question the typology insofar as demonstrations are subsumed to confrontational strategies. Depending on the character of the demonstrations, this may not necessarily be wrong. In many cases, however, demonstrations were rather conventional and peaceful, and therefore come closer to assimilative strategies.

Third, the actual strategies of anti-nuclear movements within the same country varied considerably over time. For instance, in characterizing the level of confrontational strategies as low in the USA one underplays the significant role of demonstrations and civil disobedience in the period 1975–1977. Whereas Kitschelt acknowledges changes in strategies with respect to elections and referendums in West Germany and France, I would argue that there have been

more strategic shifts. Moreover, the strategic changes mentioned by Kitschelt are not discussed in relation to opportunity structures.

Besides the problem of changing general strategies within the same political opportunity structure there is still another need for differentiation. If a national protest movement is classified according to the respective dominance of assimilative or confrontational strategies, or a combination of them, we still know little about the quality and the range of the action repertoire, never mind typical strategic and tactical dilemmas (Barkan, 1989). Confrontational action may or may not involve terrorist sabotage. Assimilative strategies, such as participation in administrative procedures, can be used in very different ways. Protest groups may be convinced that this is the only legitimate form to express dissent, and thus will accept the outcome whatever it may be. Other groups may rely on this instrument to demonstrate its purely symbolic function, with radical activities already in mind. Coming back to our cases, we could argue that the anti-nuclear movement in the USA relied primarily on non-confrontational forms of action because of its pragmatic character and its general belief in the reform capacities of the political system. On the other hand, both the German and the French anti-nuclear movements pursued conventional channels of expressing discontent with less hope, and even with cynicism. Thus, we would have to decipher the meaning of various activities with respect to national movements, and particularly to certain tendencies. Given the nature of the French political system, and the intransigent way the nuclear program was implemented, much more violence could have been expected in France as compared to Germany. This was, however, not the case.

Moreover, any explanation of movement strategies based on structural factors ignores the role of crucial events. For instance, the disaster of Malville in July 1977 was in fact the Waterloo of the French anti-nuclear movement. On the other hand, the successful occupation in Wyhl continued to inspire many later protest activities, such as the resistance against the reprocessing plant in Wackersdorf (Kretschmer and Rucht, 1987). Similarly, a major scandal such as the Silkwood case can heavily undermine the credibility of the nuclear industry, and fuel intensive anti-nuclear engagement. Finally, there are contingent events, such as nuclear accidents, which may cause a revival of the movement and even inspire new forms of action. The most spectacular of these was the largest anti-nuclear demonstration in the USA, following the Three Mile Island accident. Hence we would have to identify turning points which should not be underestimated in their effect upon public opinion, strategies and counter-strategies, and we would have to study the action repertoire of a movement as it developed over time.

Regarding these problems, we would probably not only need a more refined typology of strategies, but also, a broader set of explanatory factors. One weak-

ness of a purely structural approach is that it ignores completely the dynamic interplay of the actors. Isn't it reasonable to assume that the choice of strategies depends heavily on the previous or expected measures of one's opponent?

Organization and mobilization capacity

In relation to the size of the country, the West German anti-nuclear movement has clearly the most developed organizational infrastructure and the highest mobilization capacity. Moreover, unlike in France and the USA, many campaigns were carried out on the national level. This national coordination was facilitated by a twofold network of more conventional environmental associations, on the one hand, and the loosely coupled radical action groups on the other. In none of the three countries could any organization attain a hegemonic position within the movement. For the most part, one finds SPIN-type organizations (Gerlach and Hine, 1970). In the USA it is probably the sheer size of the country, together with the decentralized structure of the electricity industry, which fosters the decentralization of movement organization and activity. Also, the anti-nuclear movement in France, despite the highly centralized structure of the French administration and nuclear power industry, acted primarily on the local, rather than national, level. This is certainly an effect of the strong anti-centralist attitudes within the overall French environmental movement. We can conclude from these findings that there is no general correlation in the degree of centralization of the state and industry with that of the organization of the anti-nuclear movement.

Similarly, we cannot assume a close correlation between a movement's mobilization capacity and the outcome of its mobilization. Kitschelt is certainly right in arguing that "the number of participants in various protest activities...turns out to be a poor predictor of a movement's impact...Also the number and total membership of anti-nuclear protest organizations does not yield a reliable independent measure of protest intensity..." (Kitschelt, 1986, p. 73). Moreover, organization and quantitative mobilization in the nuclear power issue has to be considered in relation to other conflict areas and issues. What may be a low number in cross-national comparison can be perceived as remarkable within a given country. In addition, one should take into account the structure of a "movement's industry." Even if the number of organized adherents may be impressive, organizations may have a low impact if they are preoccupied with strong inter-organizational conflicts. This is one reason why the environmental movement in France was weak compared to that of West Germany (Rucht, 1989). Intra-organizational conflicts may even block organizations with millions of members to the extent that they cannot act as a pressure group — as was the case with the German Alliance for Nature Protection (*Deutscher Naturschutzring*).

Despite his own reservations on the significance of mass mobilization, Kitschelt argues that in the "closed regimes" of the French and West German case situations, more people attended demonstrations, in a given period, than in "open regimes" such as those in Sweden and the USA (Kitschelt, 1986, p. 71 ff). But if this the case, how is it that France, with a political regime much more closed than that of Germany, never experienced the size of German anti-nuclear demonstrations (100,000 people in Hannover in 1979; 120,000 in Brokdorf in 1981; 150,000 at an anti-nuclear festival in Burglengelfeld in 1986) (cf Nelkin and Pollak, 1981)? And why is it that the number of people arrested in acts of civil disobedience, from 1974 to 1979, seemed to be higher in the USA than in France and West Germany if, in the former case, predominantly assimilative strategies were employed? Of course, one could argue that arrest may have a lower significance in the USA than in Europe. However, the intensive preparation of US protest groups for the eventual case of arrests, and the fact that sometimes friends or relatives replaced an activist (if personal disadvantages as a consequence of arrest were expected), suggests that there may be significant costs in acts of civil disobedience.

Finally, there is a methodological caveat if we argue for or against the policy impact of mass mobilization or of distinct strategies. We know little about critical thresholds. A bit more or less radicalism may completely change the perception of the action.

Outcomes

Probably the greatest variance between our three cases could be found with respect to the substantial outcomes of the anti-nuclear struggles. In absolute figures, the USA still produces more nuclear energy than any other country. At a closer look, however, it is clear that nuclear power production in the USA, having lost both its economic attraction and its legitimation in the eyes of the public, has become a dead end. In Germany, where at present about one-third of the electricity production comes from nuclear power, the development of nuclear power has been at a standstill for a few years. Although the future of nuclear energy is open, because the established parties are divided over the issue it is likely that nuclear energy will be less important in the future, if not abandoned altogether. By contrast, in relative terms, France has implemented the world's most ambitious nuclear program. Today, more than two-thirds of its national electricity production is based on nuclear power. Due to its deep involvement in nuclear power, the national electricity company has considerable overcapacity and enormous debts. In the foreseeable future there will be no increase, or only a slight one, in nuclear power production in France.

The procedural outcomes of the nuclear struggles, such as the extension of citizens' rights in licensing procedures and in getting information, have been

low in the USA and insignificant in West Germany and France. The structural impacts on the regime itself seem to be insignificant in all three countries. As for political outcomes, i.e. the acknowledgement of the anti-nuclear movement as a serious and legitimate actor, there have been more significant gains in the USA and West Germany than in France.

The limits of structural explanation

At this point in our discussion of the range of empirical findings of strategies and action repertoires in a cross-national perspective, some of the problems and limits of a structural explanation have become evident. In this section, in discussing our initial question of the determinants of strategies and action repertoires of anti-nuclear movements, I will examine a number of conceptual problems more systematically, and I will relate our empirical findings to Kitschelt's structural approach, presented in the first section of this paper.

The diffusion of effective arguments and actions

Given the similarities in the strategies and actions of anti-nuclear movements in different countries at the same period, it is hard to explain these features mainly by a parameter such as the "openness of political regimes." The remarkable coincidence of similar protest activities in different countries, for example, the spreading out of direct action between 1975 and 1977, could be interpreted by two mechanisms. First, modern mass media convey news of spectacular events immediately and extensively. Second, the international network of the anti-nuclear movements allows for a constant and direct exchange of experiences. With this communication, effective protest actions tend to be quickly adopted beyond local and national borders. Sometimes, as was the case in various specific anti-nuclear conflicts, activists from different countries even joined in common action. Hence, the significance of national opportunity structures, as a crucial variable, has to be relativized. Despite significant differences in regime structures, one finds very similar protest techniques employed in the same period. Moreover, the demand for a nuclear moratorium became relevant in all three countries in the same period of the mid-70s. Also, the fact that the nuclear programs were introduced at different periods, whereas the overall timing of the anti-nuclear movement cycle was roughly similar in the three countries, has certainly to do with the cross-national diffusion of anti-nuclear arguments and actions — factors that are not specific to the countries discussed here.

Socio-cultural factors

Besides political structures, there are also deeply rooted socio-cultural conditions that may shape considerably the conflicts within a given country. Gamson (1988) has rightly emphasized the role of "cultural themes." These represent a general reference frame which may resonate more or less with the specific frames and symbols promoted by conflictual actors (see also Ladd et al., 1983). In France, for example, the traditional vitality of anti-centralist attitudes in the provinces provided a strong backing for anti-nuclear activities. In this perspective, nuclear energy was seen as a part of "internal colonization" in the interest of big capital and state bureaucracies located in Paris. Given the radical ideas and action repertoire of regionalist movements, and their overlap with environmental and anti-nuclear groupings, it is no wonder that the anti-nuclear movement in this country tended toward radical action and highly decentralized organizational structures.

The variation of strategies over time

A closer analysis of social movement strategies has revealed considerable variation, even in the same country, over time. Obviously, a structural approach that assumes stable opportunities cannot account for such variations. Here, a range of conjunctural factors may come into play, such as temporal opportunity structures (for example, a new government which is more open-minded towards the anti-nuclear arguments), the rise of a new ally (e.g. the trade unions in the German case), a shift in the counter-strategies of a major movement's opponent, a gradual move of public opinion on the issue at stake, the rise of a movement's party in the electoral arena, changing internal conditions of oppositional groups, or contingent events (such as the death of an activist or an accident in a nuclear plant).

Likewise, other phenomena such as the ongoing relevance of the West German anti-nuclear movement, its strong reactions to the Three Mile Island and Chernobyl accidents (in contrast to France), or the rapid decline of the French anti-nuclear movement apparently do not depend on inert political input structures. With respect to the latter example, in order to explain the movement's decline we would have to assess such factors as how the mass media presented outstanding protest events, party and governmental constellations, the degree of factionalism within the movement, and the relevant issues competing with the nuclear one within a national arena, etc.

In Kitschelt's approach, counter-strategies employed by the opponents of the anti-nuclear movement, particularly by state authorities, political parties, trade unions and the nuclear industry, are not discussed in detail. To be sure, such

dimensions as "access to the political system" and "implementation capacity" may represent general strategic orientations which have crystallized into structural forms. These structures may favor or restrict a movement's strategic options. But, insofar as these structures are conceptualized as stable patterns of a political regime, there must be other factors which determine variations of counter-strategies in response to the activities of the anti-nuclear movement.

If we look at counter-strategies used by a state to neutralize or defeat anti-nuclear forces we find considerable variations over time. In West Germany, for example, the anti-nuclear protests in the early 1970s were not taken seriously. After they increased in relevance, the Ministry of Research and Technology initiated a public relations campaign. Moreover, in order to demonstrate its open-mindedness, it published a volume which documented the positions of various pro-nuclear and anti-nuclear groups, hoping that the decision on the nuclear power program could be legitimized at least post facto by an exchange of arguments in which the pro-nuclear side was expected to win (*Bundesministerium für Forschung und Technologie*, 1974). Only when the protests continued and intensified did state authorities attempt to develop a better understanding of the grounds for protest. In the mid-70s, the administration engaged a commercial social science institute to study the motives of anti-nuclear protest (Battelle-Institut, 1975). Subsequently, the Ministry of Research and Technology launched the *Bürgerdialog Kernenergie* (citizens' dialogue on nuclear power) in order to channel and appease the protests. Instead of creating trust in nuclear policy, this dialogue turned out to raise some pertinent questions, e.g. on the unsolved problem of nuclear waste disposal, the weak participation of the parliament and the citizenry in energy policy, etc. Then the dialogue was stopped and state authorities started a counter-attack on the anti-nuclear movement, particularly by criticizing its lack of substantial and legal competence to challenge nuclear policy. This attack became harsher when parts of the anti-nuclear movement shifted to aggressive and violent forms of resistance. In this period, particularly in 1977, repression and criminalization of anti-nuclear forces became an important counter-strategy. At the same time, however, representatives of the administration admitted that there were still problems with nuclear power (e.g. waste disposal), and that the concerns of "honest" citizens would be appreciated and respected. Within the Social Democratic and the Liberal parties, scientists and even trade unions became seriously divided over the nuclear issue and, moreover, it was no longer possible to ridicule and attempt to delegitimize the opposition as a whole. Consequently, state authorities became more receptive to forms of compromise. Moreover, in 1979 a parliamentary commission was established to evaluate the chances and risks of a non-nuclear future. And in the same year, the Prime Minister of Lower Saxony canceled the project of a nuclear reprocessing plant because of the large opposition.

The German example of shifting counter-strategies over time suggests that a meaningful analysis of strategies and counter-strategies has to shift to a more concrete analytical level in order to identify strategically defined sequences of the nuclear power struggle. In particular, the interplay of action and reaction has to be investigated. Only this kind of analysis would allow for an understanding of why specific strategies are used by a given actor at a given time.

The coexistence of different strategies

We also found in our study the coexistence of different strategies and counter-strategies in the same period and country. As mentioned above, German state authorities sometimes employed a dual strategy of discrimination and symbolic or substantial concessions. This leads to the conclusion that if structural opportunities account at all for these strategies, there must be non-determining opportunities, or, to put it differently, there must be contrasting perceptions of opportunities which account for the differential choice of strategies. As we know, social movements may use different strategies in an implicit division of labor. More often, they are bitterly divided over their strategies. The same may be true for the movements' opponents. In these cases, the anti- and pro-nuclear sides can hardly be conceptualized as unified actors.

General definitions, such as the predominance of confrontational movement strategies in France, may not be necessarily wrong, but they hide a lot of assimilative activities that were carried out in the same period. The French anti-nuclear movement did its best to exploit all channels of procedural participation. Parts of the movement collected signatures and signed petitions, campaigned for many local referendums, litigated, were involved in governmental advisory committees, became heavily engaged in electoral campaigns from the local to the European level and, finally, established lists and political parties. The fact that these channels offered less opportunities than in other countries, and that the movement was less successful, should not make us forget that a lot of energy was invested in these assimilative strategies.

Moreover, the notion of a movement's "strategic choice" should not be taken too literally. One may question the degree to which the French movement generally relied on confrontational strategies. Moreover, at least on the level of the movement as a whole, there seemed to be no conscious choice of strategy. Different factions within the movement always had different perceptions, and thus relied on different strategies. Other factions combined various strategies. What has been said of another kind of movement seems to be true as well for the anti-nuclear movements discussed here: "It is far more accurate to say that each nation's peace movement employs both assimilative and confrontational

strategies, and that each strategy is pushed as far as it can be taken" (Rochon, 1987, p. 12).

The meaning of the conflict

An explanatory approach also has to ask for the meaning of the nuclear conflict in a given country in different periods. A conflict can bear loadings far beyond the immediate issue under discussion, though in the case of opposition to nuclear power, the extent to which this "was and is a surrogate issue for many on the Left" (Rothman and Lichter, 1987) is debatable.

Gamson (1988) has introduced the idea that in a discourse over a conflictual issue a set of culturally available "packages" emerges which he calls an "issue culture." Investigating these packages in the public discourse on nuclear power in the USA, Gamson (1989) found that these packages changed over time. One could go a step further in arguing that it is not only the meaning that different actors give to nuclear power which shapes their attitudes and activities. In order to explain, for instance, strategic choices, we would have to investigate how the protesters perceive their role, whom they define as their opponent, what their ultimate goals are, and who feels challenged or threatened by whom through which forms of protest or counter-measures. This does not necessarily imply that we take the actor's self-image, ideology and utopia for reality, but that we at least consider them as factors that influence social interaction (for the Clamshell Alliance, see Downey, 1986). Addressing questions like these in relation to the three movements examined here, we find significant differences in the meaning of the anti-nuclear struggle.

The impact of the meaning of the conflict can be illustrated with respect to the perception of the role of the state. In France and West Germany, a significant part of the anti-nuclear movement struggled not only against a particular policy, but, at least in the present form, against the state per se. The state was perceived as being heavily engaged in promoting nuclear power and benefiting in many ways from the economic and social setting that corresponds to this source of energy. Terms such as the "atomic state" in Germany or "*electrofascisme*" in France made and still make sense for many anti-nuclear activists in these two countries (Bosquet, 1975; Jungk, 1977).

From the very beginning, the French and German states strongly supported the civil use of nuclear energy. Public administrations even promoted nuclear energy in periods when the electricity producers were reluctant to become engaged in nuclear power production. There was also a problematic overlap of interest. In Germany, it was often the case that the same politician was responsible for both the licensing and control of nuclear energy plants and economic decisions in public enterprises related to nuclear energy. Moreover, "the state"

was physically present in the effort to defend the sites in their use not only of local police forces, but also of the national guard, anti-terrorist brigades and paramilitary tactics. In France, more than in the USA, the regulation of nuclear energy production was closely linked to military interests. To this day, the French nuclear agency CEA is responsible for both the military and civil use of nuclear energy. Even in West Germany, a state which does not possess nuclear arms, there still are people who are suspicious of the potential misuse of nuclear reactors for military purposes. For many groups, opposing a nuclear site meant attacking the capitalist state or technocracy in general. This at least partly explains the intensity of the conflict. The administrations in France and West Germany were quite right in their perception that among the anti-nuclear activists there were groups using the nuclear question primarily as a leverage point for challenging the state.

Compared to the situation in France and West Germany, in the USA there is not only easier access to the political system, but also a lower significance of this system for economic and socio-cultural life. Unlike in Europe, the state is considered to be a (potential) third party. This implies appeals to the state to take this role seriously (see, for example, Ebbin and Kasper, 1974) instead of an all-out frontal attack against the state. Of course, this comes close to Kitschelt's arguments about the reasons for assimilative strategies in the USA. However, the regime's structure, i.e. its institutional openness to demands, is a feature which is distinct from the relevance and perception of the administration's role in the conflict. Both aspects have to be considered and assessed.

Towards the concept of arena

It should be clear from the discussion above that an "institutional" approach, focusing exclusively on relatively inert national political opportunity structures, has its limits. First, structural political opportunities exist both beyond and below the national level. Second, there are political opportunities which vary during the course of the conflict. Third, non-political opportunity structures may be relevant. Fourth, procedural and interactive factors come into play. In short, there is a need for a more complex approach which would be designed for a better integration of various aspects of structure and process.

Structures are, by definition, relatively stable relations between various components of a system. Structure does not entirely determine action, but it channels interactions within certain limits. Interaction, in turn, may also produce structure. Because of this "duality of structure" we cannot simply assume that structure determines action (Giddens, 1984).

Probably the idea of an *arena* could be applied as a fruitful analytical tool for analyzing conflicts such as the struggle over nuclear power (for an application

of a specific kind of arena concept on the West German nuclear conflict, see Kitschelt, 1980). Although this is not the place for developing a detailed concept of arena, some basic ideas will be presented here.

An arena can be defined as a structurally bound setting in which conflictual interaction takes place. In the course of the conflict the arena itself becomes structured in a more specific sense. This may include clearer definitions of actors' roles, the development of informal procedures of interaction, the ritualization of conflicts, the identification of points of agreement and disagreement, and the emergence of a division of labor within the movement, etc. The idea of the arena involves not only at least two conflicting parties, but also, the audience. In contrast to an arena as a mere play, in social and political arenas the audience is usually a crucial factor. At least in democratic societies, its leaning in the conflict may be decisive for the outcome. Therefore, the conflicting parties do not only calculate their strategies and tactics with respect to the immediate impact on the other side, but also, with respect to the audience. In consequence, we would not only have to investigate the interaction of the movement and its opponents, but also the role of third parties — particularly that of the media and potential allies not yet or only indirectly involved in the conflict.

The main advantage of such an arena concept is that it could relate structure and action. A second advantage is that it implies no premature assumptions on the type and level of structure channeling and shaping interaction. There may be pre-existing structures which are a given for all actors within the arena. There may be others which are more variable, and which may eventually themselves become matters of conflict. Also, we can imagine a national arena in which international factors may come into play. A third advantage is that this concept puts emphasis on the interactive processes between the conflicting parties and the audience which, usually, are widely neglected. Fourth, in a diachronic or synchronic perspective there may be several relevant arenas in which the same or different actors are engaged.

It has to be emphasized that the concept of an arena is only an analytical tool and not to be confused with an actual building, i.e. some kind of coliseum featuring a clear distinction between insiders and outsiders, with barriers separating the actors from the audience. Arenas are social phenomena with fluid zones between interactions within the arena and everyday life. There are also fields of action which are not linked or are only indirectly linked to the highly visible struggles which take place in arenas. Moreover, a closer investigation of the interplay of different actors within a structural setting could lead to the conclusion that the idea of *the* movement, *the* state or *the* political opportunity structure in a given nation always tends to be problematic. These are highly aggregated concepts to which general reference is made without specifying the actors,

activities and periods one has in mind. In reality, those "actors" perceived to be in an action system are rather themselves action systems composed of various parts which rarely push or pull in the same direction. But there are moments when heterogeneous forces become unified and the idea of an arena applies the best.

As for anti-nuclear struggles, we first would have to identify the most relevant arenas in different periods. For instance, we could identify an arena of the scientific debate on nuclear energy, a parliamentary arena, an arena of mass publics, an arena of litigation, etc. Second, we would have to identify encounters that take place within these arenas. Encounters are crucial interactions of the conflicting parties centered around a more specific question, e.g. a major debate on a new law concerning nuclear energy, a direct confrontation between mass demonstrators and police during the occupation of a nuclear site, etc.

Political opportunity structures which are not always national would have a decisive impact on an actor's strategy within a specific arena. In some cases and periods, a major decision concerning nuclear power in a neighboring country, a spectacular encounter in another type of arena, the sudden strategic shift of the opponent in the same arena or a contingent external event may be more important.

Admittedly, these are only rough ideas about the direction of further conceptual work. In addition to a further elaboration of the concept of (national) opportunity structures, more attention should be given to arenas in which action and issue framing takes place. Only with more complex conceptual tools and better empirical information would we be equipped to make a solid cross-national comparison.

Conclusion

Rather than elaborating and applying my own explanatory concept on the course and forms of nuclear conflicts, it has been my intention to demonstrate the difficulties and limits of such an enterprise, referring in particular to Herbert Kitschelt, who has presented an advanced explanatory approach in this field. This approach clearly has its value. Factors such as open or closed political input structures and strong or weak political output structures do have a certain explanatory power for an account of strategies. In particular, there is a high probability that closed political input structures in democratic regimes will induce more radical actions by opposition movements. We can also assume that the implementation capacity of a political regime is an important factor in determining the outcome of a policy once the decisions have been made. In general, however, it has been argued that the concept of political op-

portunity structure in its present form can only serve as a starting point for a more sophisticated analysis which includes a broader range of explanatory variables (Kriesi, 1989; see also Tarrow, 1989).

First, a cross-national comparison of contemporary conflicts over such modern technologies as nuclear power production has to take into account the aspect of *transnational diffusion* through the mass media and transnational networking of movements and their opponents. Second, beyond political structures, there are historical and *socio-cultural conditions* which may considerably shape conflicts within a given country. For instance, the French anti-nuclear movement was strongly influenced by the pre-existence of radical regionalist movements. Third, a closer analysis of social movement strategies has demonstrated that these may vary significantly over time. A structural approach referring to stable opportunities cannot account for these variations. Here, a range of *time-specific factors* may come into play (e.g. conjunctural opportunity structures, strategic shifts of one major actor, changes in public opinion, contingent events, etc.). Moreover, the attribution of confrontational or assimilative strategies tells us little about the actual action repertoire that has been employed. This depends more on the interplay of the actors than on inert political opportunity structures. Fourth, we also found in our cases the coexistence of different strategies in the same period in the same country. This has to do with *different perceptions and evaluations* of the same "objective" opportunity structure. Different perceptions, strategies and organizational structures, even within one party of the conflict, suggest that movements can rarely be conceptualized as unified actors. Finally, an explanatory approach has also to ask for the *meaning of the conflict* in a given period and a given country which can relate to questions far beyond the immediate matter of conflict. Obviously, the choice of strategies and action repertoires will be influenced by the actors' perceptions of what is at stake.

We may conclude from these points that an attempt to explain the strategies and action repertoires of anti-nuclear struggles in a comparative perspective has to go beyond the identification of national political opportunity structures. Our empirical description of three cases has unveiled a highly differentiated picture. Only with these detailed stories of the anti-nuclear conflicts in mind may we become sensitive to the broad variety of variables which may play a potential role, and thus have to be considered and weighed.

Without going into detail, I have presented some ideas on a concept of arena which could allow structural and process variables to be related without making any premature assumptions about their respective relevance. In contrast to a purely institutional approach, such an arena concept also puts emphasis on the dynamics of interaction, including the interactions' feedback on some elements of a structural setting. Public arenas, however, in which the reaction of

the audience also may be a crucial factor, represent only the most spectacular, but not necessarily the most important, side of the coin. It is also the microcosmos of social action which lays the groundwork for mobilization, new campaigns, skirmishes and battles in the future.

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References

- Amis de la terre, 1975. *L'escroquerie nucléaire*. Stock, Paris.
- Barkan, S.E., 1979. Strategic, tactical and organizational dilemmas of the protest movement against nuclear power. *Social Problems*, 27: 19–37.
- Battelle-Institut, 1975. *Bürgerinitiativen im Bereich von Kernkraftwerken*. Bericht für das Bundesministerium für Forschung und Technologie. Frankfurt.
- Bosquet, M. *Le sauvage*, April 1976.
- Bundesministerium für Forschung und Technologie (Editor), 1974. *Dokumentation über die öffentliche Diskussion des 4. Atomprogramms der Bundesrepublik Deutschland für die Jahre 1973–1976*. Bonn.
- Cazals, T., 1982. *La résistance au nucléaire dans la région du Gard-Rhodanien*. Mimeo, Institut d'Etudes Politiques d'Aix-en-Provence.
- CFDT, 1980. *Le dossier électronucléaire*. Seuil, Paris.
- Chafer, T., 1985. Politics and the perception of risk: a study of the anti-nuclear movements in Britain and France. *West European Politics*, 8: 5–23.
- Cohen, E.M., 1982. *Ideology, interest group formation, and protest: the case of the anti-nuclear power movement, the Clamshell Alliance, and the New Left*. PhD dissertation, Harvard University, Cambridge, MA.
- Colson, J.-P., 1977. *Le nucléaire sans les Français. Qui décide? Qui profite?* Maspero, Paris.
- Del Vasto, L., 1981. *L'arche avait pour voiture une vigne*. Denoel, Paris.
- Downey, G.L., 1986. *Ideology and the Clamshell Identity: organizational dilemmas in the anti-nuclear power movement*. *Social Problems*, 33: 357–373.
- Ebbin, S. and Raphaël, K., 1974. *Citizen Groups and the Nuclear Power Controversy: Uses of Scientific and Technological Information*. MIT Press, Cambridge, MA.
- Fach, W. and Simonis, G., 1987. *Die Stärke des Staates im Atomkonflikt*. Campus, Frankfurt.
- Falk, J., 1982. *The Battle over Nuclear Power*. Oxford University Press, Melbourne.
- Fournier, P., 1975. *Y'en a plus pour longtemps (textes choisis par Rolland de Miller)*. Editions du Square, Paris.
- Gamson, W.A., 1988. Political discourse and collective action. In: B. Klandermans, H. Kriesi

- and S. Tarrow (Editors), *From Structure to Action: Comparing Social Movement Research Across Cultures*. JAI Press, Greenwich, CT.
- Gamson, W.A., 1989. Media discourse and public opinion on nuclear power: a constructionist approach. *American Journal of Sociology*, 95: 1-37.
- Garraud, P., 1979. Politique électro-nucléaire et mobilization: la tentative de constitution d'un enjeu. *Revue française de science politique*, 29: 448-474.
- Gerlach, L.P. and Hine, V.H., 1970. *People, Power, Change: Movements of Social Transformation*. Bobbs-Merrill, Indianapolis, NY.
- Giddens, A., 1984. *The Constitution of Society*. Polity, Cambridge.
- Hatch, M.T., 1986. *Politics and Nuclear Power*. University of Kentucky Press, Lexington, KY.
- Journès, C., 1979. Les idées politiques du mouvement écologique. *Revue française de science politique*, 29: 230-254.
- Jungk, R., 1977. *Der Atom-Staat*. Kindler, Munich.
- Katz, N.H. and List, D.C., 1981. Seabrook: a profile of anti-nuclear activists, June 1978. *Peace and Change*, 7: 59-69.
- Kiersch, G. and Von Oppeln, S., 1983. *Kernenergiekonflikt in Frankreich und Deutschland*. Wissenschaftlicher Autoren Verlag, Berlin.
- Kitschelt, H., 1980. *Kernenergiepolitik: Arena eines gesellschaftlichen Konflikts*. Campus, Frankfurt.
- Kitschelt, H., 1983. *Politik und Energie: Eine vergleichende Untersuchung zu den Energie-Technologiepolitiken der USA, der BRD, Frankreichs und Schweden*. Campus, Frankfurt.
- Kitschelt, H., 1986. Political opportunity structures and political protest: anti-nuclear movements in four democracies. *British Journal of Political Science*, 16: 57-85.
- Kretschmer, W., 1988. Wackersdorf: Wiederaufarbeitung im Widerstreit. In: U. Linse, D. Rucht, W. Kretschmer and R. Falter (Editors), *Von der Bittschrift zur Platzbesetzung: Konflikte um technisch-industrielle Grossprojekte im Kaiserreich und in der Bundesrepublik*. Dietz, Bonn.
- Kretschmer, W. and Rucht, D., 1987. Die Protestbewegung gegen die Wiederaufarbeitungsanlage in Wackersdorf: Gruppen, Organisationen, Netzwerke. In: R. Roth and D. Rucht (Editors), *Neue soziale Bewegungen in der Bundesrepublik Deutschland*. Campus, Frankfurt.
- Kriesi, H., 1989. The political opportunity structure of the Dutch peace movement. *West European Politics*, 12: 295-312.
- Ladd, A.E., Hood, T.C. and Van Liere, K.D., 1983. Ideological themes in the antinuclear movement: consensus and diversity. *Sociological Inquiry*, 53: 252-272.
- Laurent, P., 1978. *L'aventure nucléaire*. Aubier, Paris.
- Linse, U., Rucht, D., Kretschmer, W. and Falter, R., 1988. *Von der Bittschrift zur Platzbesetzung. Konflikte um technisch-industrielle Grossprojekte im Kaiserreich und in der Bundesrepublik*. Dietz, Bonn.
- Mitchell, R.C., 1981. From elite quarrel to mass movement. *Transaction/Society*, 18(5): 76-84.
- Mitchell, R.C., 1985. From conservation to environmental movement: the development of the modern environmental lobbies. Discussion Paper QE 85-12. Resources for the Future, Washington, DC.
- Nelkin, D., 1971. *Nuclear Power and its Critics: the Cayuga Lake Controversy*. Cornell University Press, Ithaca, NY.
- Nelkin, D., 1978. The political evolution of the anti-nuclear movement in the United States. *Zeitschrift für Umweltpolitik*, 1: 131-148.
- Nelkin, D. and Pollack, M., 1981. *The Atom Besieged: Extraparliamentary Dissent in France and Germany*. MIT Press, Cambridge, MA.

- Office of Technology Assessment, 1984. Nuclear Power in an Age of Uncertainty. Congress of the United States, Washington, DC.
- Oudiz, A., 1979. Le choix des sites nucléaires. In: F. Fagnini and A. Nicolon (Editors), *Nucléopolis: matériaux pour l'analyse d'une société nucléaire*. Presses Universitaires de Grenoble, Grenoble.
- Pignero, J., 1981. Ecrit d'un militant. Protection contre les rayonnements ionisants, revue trimestrielle d'information, Verneuil l'Etang.
- Price, J., 1982. *The Antinuclear Movement*. Twayne, Boston.
- Puiseux, L., 1981. *La babel nucléaire: énergie et développement* (3rd ed.) Galilée, Paris.
- Puiseux, L., 1983. Les étapes de la politique énergétique française depuis 1945. *La Documentation Française*, No. 468. La politique énergétique française en 1983: 4-9.
- Radkau, J., 1983. *Aufstieg und Krise der deutschen Atomwirtschaft 1945-1975*. Rowohlt, Reinbek.
- Rochon, T.R., 1987. The West European peace movement and the theory of new social movements. Paper prepared for the Joint US/FRG Seminar on New Social Movements, Florida State University, Tallahassee, FL, April 2-4, 1987.
- Rothman, S. and Lichter, S.R., 1987. Is opposition to nuclear energy an ideological critique? *American Political Science Review*, 82: 947-951.
- Rucht, D., 1980. *Von Wyhl nach Gorleben: Bürger gegen Atomprogramm und nukleare Entsorgung*. Beck, Munich.
- Rucht, D., 1989. Environmental movement organizations in West Germany and France — structure and interorganizational relations. In: B. Klandermans (Editor), *Organizing for Change: Social Movement Organizations Across Cultures*. JAI Press, Greenwich, CT.
- Rüdig, W., 1986. Nuclear power: an international comparison of public protests. In: R. Williams and S. Mills (Editors), *Public Acceptance of New Technologies*. Croom Helm, London.
- Rüdig, W. (forthcoming). *Anti-Nuclear Movements: a World Survey*. Longman, Harlow.
- Samuel, L., 1978. *Guide pratique de l'écologiste*. Belfond, Paris.
- Surrey, J. and Huggett, C., 1976. Opposition to nuclear power: a review of international experience. *Energy Policy*, 4: 286-307.
- Tarrow, S., 1989. Struggle, politics, and reform: collective action, social movements, and cycles of protest. Western Societies Program, Occasional Paper No. 21, Cornell University, Ithaca, NY.
- Touraine, A., Hegedus, Z., Dubet, F. and Wieviorka, M., 1980. *La prophétie anti-nucléaire*. Seuil, Paris.
- Vallet, O., 1978. La force des écologistes. *Projet*, 122: 201-206.
- Von Oppeln, S., 1989. *Die Linke im Kernenergiekonflikt: Deutschland und Frankreich im Vergleich*. Campus, Frankfurt.
- Walsh, E.J., 1981. Resource mobilization and citizen protests in communities around Three Mile Island. *Social Problems*, 29: 1-21.