The Political Construction of the Nuclear Energy Issue and Its Impact on the Mobilization of Anti-Nuclear Movements in Western Europe*

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This paper investigates the relation between objective conditions and grievances and the construction of the nuclear energy "problem" and the mobilization of anti-nuclear movements in Western Europe. Using data on protest reactions to the Chernobyl disaster in Germany, France, the Netherlands, and Switzerland, we first discuss the effects of so-called "suddenly imposed grievances." We then turn to the frame alignment model, which emphasizes the importance of processes of definition and interpretation for the mobilization of social movements. We confront this model with data on public attitudes towards nuclear energy and anti-nuclear movement mobilization in Western Europe. Our analysis indicates that objective conditions as such have little explanatory power, and that similar events and conditions have led to widely diverging interpretations and levels of anti-nuclear mobilization in different countries. We find that the differential success of the interpretative efforts of anti-nuclear movements does not depend on the nature of the discursive struggle itself, or on the evidential base for the anti-nuclear movement's claims. Our data show that the movements' political opportunities, and the resulting cross-national variations in the degree to which anti-nuclear movements have been able to block or slow down the expansion of nuclear energy, have been crucial determinants both of the movements' impacts on public opinion and of the movements' levels of mobilization. We conclude that a combination of the political opportunity and framing perspectives is most fruitful in making sense of the differential careers of the nuclear energy conflict in Western Europe.

Introduction

The relation between objective conditions, grievances, and mobilization is perhaps the most hotly debated theme in the literature on social movements and social problems. Conventional wisdom has it that the explanation for protest behavior lies in intolerable circumstances, unbearable deprivations, and intense grievances. Classical theories of collective behavior have generally followed this line of argumentation and see social movements as a direct result of the frustrations and anomie caused by large-scale social-structural change (for instance, Kornhauser 1959; Gurr 1970). Supporters of the resource mobilization model have taken a diametrically opposed position, arguing that "there is always enough discontent in any society to supply grass-roots support for a movement if the movement is effectively organized and has at its disposal the power and resources of some established group" (McCarthy and Zald 1977:1215). This critique of the classical model is generally shared by adherents

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to political process models (for instance, McAdam 1982; Tarrow 1989; Kriesi et al. 1992), but their alternative to the grievance model emphasizes external political opportunities for mobilization, such as the chances of success and levels of repression and facilitation (Tilly 1978; Koopmans 1992), rather than the internal resources that are central to the resource mobilization approach.

The classical hypotheses view disorganization and uprooting as favorable to the development of protest, and social movements as a basically irrational form of tension release. However, these hypotheses find little support in empirical research.[1] Nevertheless, in as far as the relevance or irrelevance of grievances and social problems for the explanation of protest is concerned, the debate continues (Tilly 1984; Piven and Cloward 1992).

In this article we discuss two explanations that focus on the relevance of the intensity of social problems for the mobilization of social movements: the grievance model and the frame alignment model. The difference between the two models is that the grievance model tends to see social problems as given, objective facts to which social movements react, whereas the frame alignment model emphasizes the active role played by social movements in defining and constructing social problems. We contrast these models, which focus on the intensity of social problems in accounting for differences in social movement mobilization, to the explanations offered by the resource mobilization and political process models, which hold that what matters for mobilization is not the availability of problems but a social movement's internal capacities and external opportunities to do something about them — which may well be greatest where the intensity of the problem is relatively low.

We first discuss recent grievance-oriented explanations and test them by investigating the impact of the Chernobyl nuclear disaster on the mobilization of the anti-nuclear movements of Germany, France, the Netherlands, and Switzerland. Subsequently, we turn to the more elaborated frame alignment model and discuss whether this model provides an explanation for differences in public support, mobilization, and success of anti-nuclear movements in Western Europe.

Grievance Explanations

Although the classical tension-release model is now almost extinct, grievance-oriented explanations of social movements have recently made a comeback in the literature. A few quotations from studies of the ecology movement in Europe illustrate this:

> The actual course of ecological movements varied strongly between countries. Most importantly, it depended on the particular ecological problems of each individual country and the specific issues which happened to be raised, often precipitated by environmental disasters and scandals (Rüdig 1988:28).
>
> Rates of participation in the ecology movement are highest in Greece, and it is significant that metropolitan Athens probably has the most severe pollution problems of any major city in the European community (Inglehart 1990:52).
>
> In West Germany, the construction of nuclear energy plants and pollution damage to the Germans' beloved forests served to mobilize public support for the environmental movement. In France, however, there was no such mobilizing issue . . . The absence of such a central cause retarded the development of all social movements (Wilson 1990:80).

Although such explanations seem plausible, close examination casts some doubt upon their validity. Why, for instance, did the construction of nuclear power plants in Germany "serve to mobilize public support for the environmental movement," whereas the construction of far more plants in France provided "no such mobilizing issue"? And do mobilizing issues simply "happen to be raised"?

1. For an elegant overview of critiques of classical theories of social movements, see Aya 1990.

These questions notwithstanding, a strong case has been made in the recent literature for a re-evaluation of discontent as a cause of mobilization by studies of protest reactions to "suddenly imposed grievances." In his study of protests in the wake of the Three Mile Island nuclear accident of 1979, Walsh (1981), for instance, demonstrated a strong increase in anti-nuclear energy mobilization in the Harrisburg region after the accident, which suggests a strong link between the appearance of new grievances and the level of mobilization.[2]

For our present purpose, suddenly imposed grievances with an international scope are of particular relevance. Such occurrences provide a powerful test of the grievance argument because they allow us to compare social movement mobilization in different settings that are confronted with a similar "problem." The grievance model would then predict similar protest reactions in the different settings, whereas the alternative models would predict different reactions as a result of variation among the settings with regard to the prior level of mobilization of the movement in question (resource mobilization) and/or the available political opportunities (political process).

Chernobyl[3]

The Chernobyl disaster of April 26, 1986, provides a unique opportunity to test the grievance explanation of political mobilization since it affected many countries in a similar way and at the same point in time. Perhaps with the exception of a small area in the immediate surroundings of the damaged reactor,[4] there was no way in which people could have noticed anything without the mediation of the authorities and the news media. Radiation was invisible and intangible and its consequences lay in the future and would only be detectable statistically.

One may argue that because it required such mediation, the Chernobyl accident is exceptional, and therefore not very suited for a test of the merits of grievance-oriented explanations of social protest. However, in this respect the Chernobyl accident resembles many modern social problems. Whether one takes acid rain, the decay of the ozone layer, the disappearance of tropical rain forests, the threat of nuclear war, Iraqi aggression against Kuwait, or poverty in the Third World, none of these problems is immediately felt by the populations of the industrialized countries, and all of them have to be made "visible" by the media and have to be defined, interpreted, and framed by politicians, scientists, and social movements.

The degree to which the different Western European countries suffered objectively from increased levels of radiation differs considerably. Figures of the OECD (Organization for Economic Cooperation and Development) cited by Rüdig (1990) show that the average dose of radiation in the first year after the accident was highest in countries such as Austria, Finland, and Italy. Germany, Switzerland, and Sweden occupied an intermediate position, while France, the United Kingdom, Denmark, and the Netherlands received relatively small doses. However, these figures hide even larger differences between regions within countries and

2. It should be noted that Walsh's analysis goes beyond a pure grievance model, since he also acknowledges the importance of pre-existing levels of mobilization in the Harrisburg region.

3. This section largely draws on Koopmans 1992:206-11.

4. However, even the seemingly immediate consequences in the area around Chernobyl were in fact to a very large extent mediated by the reactions of the Soviet authorities. Before Gorbachev came to power, a nuclear accident comparable to Chernobyl would most probably not have caused much turmoil (as is demonstrated by the (non-) history of earlier nuclear accidents in the Soviet Union): The Soviet press and authorities would have remained silent, and there would not have been a massive evacuation of the surrounding villages and towns. (Significantly, despite Gorbachev's *glasnost* politics, the accident was publicized in the Soviet Union *after* it had been reported by the Western press.) At most, the deaths of a few workers at the plant would have been acknowledged as a tragic, but further politically insignificant industrial accident.

over time. In the weeks immediately after the accident it was hardly possible for the authorities, let alone for the public, to make a reliable assessment of its impact. No one knew when the reactor fire would be under control, and areas that were lightly affected one day might be severely hit the next day, simply because of a change in local weather conditions. Regional variation was extremely high, and hot spots could be found all over Europe, even in countries that were on average only lightly affected (Hawkes et al. 1986; Rüdig 1990). In some regions of France, for instance, radiation levels of up to four hundred times the normal level were measured (Hawkes et al. 1986:154).

Given the complexity of the situation and the importance of local and regional differences, it seems warranted to conclude that, certainly in the period immediately following the accident, there were no substantial differences in the degree to which Western European countries were affected. The degree to which the events in Chernobyl led to a revival of anti-nuclear protest nonetheless differed immensely, even among neighboring states such as Germany, France, the Netherlands, and Switzerland. As Figure 1[5] shows, of these four countries, only Germany witnessed a spectacular rise in the number of anti-nuclear protest events. In France and Switzerland only a small increase took place, and in the Netherlands no change at all was detectable.[6] The participation figures displayed in Figure 2[7] reveal similar cross-national differences. Germany again shows the largest increase in mobilization, while in the Netherlands, Chernobyl did not cause any change in the (low) level of anti-nuclear protest. The figure also makes clear that the increase in the number of French anti-nuclear movement protests did not imply any significant increase in participation. In Switzerland, however, the Chernobyl accident was followed by a substantive increase in participation, although the level reached did not match the German level. Summing up, in Germany the accident brought about a surge of actions — radical ones such as sabotage of electric-power pylons and blockades, as well as massive demonstrations. In Switzerland the Chernobyl effect on protesting was more modest and was limited to a few mass demonstrations. The French and Dutch movements, however, were unable to profit from the political fallout of the disaster. Thus, while people demonstrated in German Saarbrücken against the nuclear power station in French Cattenom, the same station remained unchallenged in France itself; and while the power station in North German Brokdorf — in an area only lightly affected by radiation — became the object of mass demonstrations, all was quiet around the two Dutch nuclear power stations.

The reactions of the authorities were equally divergent:

> On one side of a Rhine Bridge, at Kehl, in West Germany, the children were forbidden to play on the grass and the lettuces sat uneaten in the ground. On the French side of the bridge, around Strasbourg, very similar lettuces were declared harmless (Hawkes et al. 1986:154).

5. The data on (participation in) anti-nuclear protest events in Figure 1, as well as in Figure 2 and Table 3, have been drawn from a larger sample of protest events, derived from content-coding of one national newspaper (*Frankfurter Rundschau, Le Monde, Neue Zürcher Zeitung, NRC Handelsblad*) in each of the four countries mentioned, for the period 1975-1989. Newspapers were chosen according to a number of criteria (readership, scope, quality, etc.) to assure maximum cross-national comparability. *A posteriori* tests showed that indeed there were no significant differences in the four newspapers' selectivity in reporting protest events. Moreover, within-country comparisons with other available data sources showed that the newspaper data encompassed virtually all important protest events and provided an accurate picture of developments across time. For more details, see Koopmans 1992; Kriesi et al. 1995.

6. To make the Chernobyl effect detectable, the second four-month period (May-August) of 1986 also comprises the last five days of April, from the 26th — day one of the accident — onward.

7. Of course, participation figures are often hotly debated between organizers and (police) authorities, and both sides' estimates will be biased by subjective interests. We have chosen the strategy to code always the highest estimate given in the newspaper report, i.e., usually that of the organizers. Our data therefore do not pretend to represent any absolute truth. What matters is that by systematizing the bias in this way the participation figures are comparable across time and across countries. We have no reason to believe, for instance, that French movement organizers systematically provide more prudent estimates than their German counterparts, or that German organizers suddenly started inflating their estimates after Chernobyl.

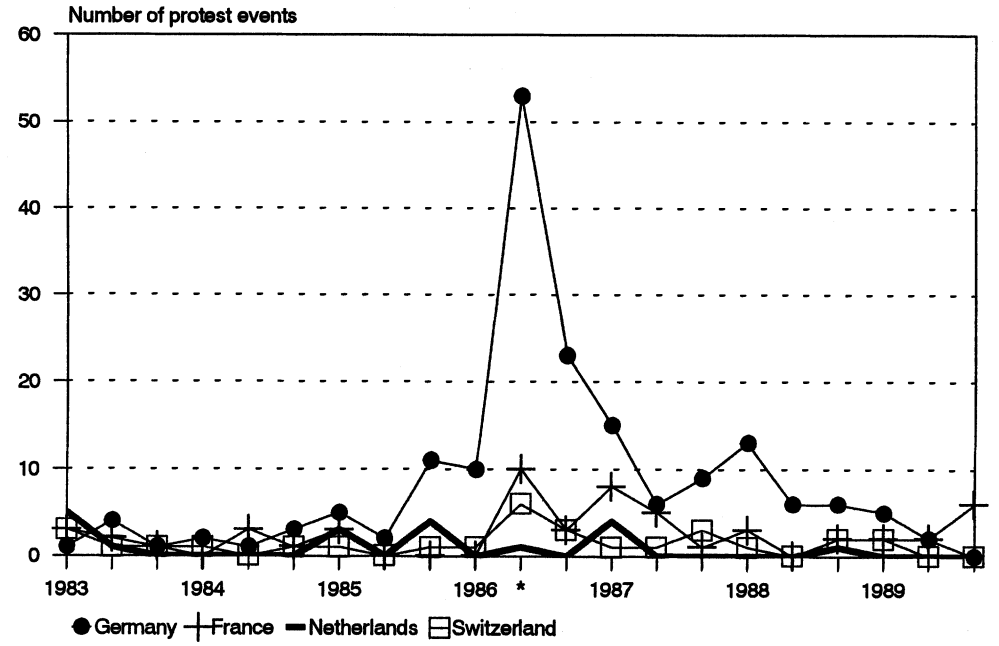

Figure 1 • ***Number of Protests of the Anti-Nuclear Movement per Four-Month Period in the Four Countries, 1983-1989***

The German weekly *Der Spiegel* concluded, although several other countries (at the time of writing, particularly Sweden and Finland) were more seriously affected by the "immediate" consequences of the disaster, that "the Federal Republic has been stricken most by the mediated consequences of the cloud — measured in fear becquerels and radiation-scare REM" (1986, No. 22:97).

Should we see the particularly strong reaction in Germany as a result of a typically German proclivity toward hysteria, or is even fear mediated by political circumstances? There is good reason to believe that the latter is the case with regard to the German reaction to Chernobyl. First, as Figures 1 and 2 show, the rise of anti-nuclear protest in Germany did not appear out of thin air, but had begun in 1985. This increase was due particularly to the rise of a massive protest movement against the construction of a nuclear reprocessing plant in Wackersdorf, Bavaria. The fact that the Chernobyl accident occurred in the middle of this vigorous campaign, which had attracted national attention and had reached a peak with a demonstration of 80,000 people less than a month before the events in Ukraine, must be considered an important explanation for the intensity of the German reaction to Chernobyl (Koopmans 1992). Public opinion had already been mobilized around the issue of nuclear reprocessing, the movement was well prepared organizationally, and it had a concrete object to focus its mobilization upon.

In addition, the anti-nuclear movement was strengthened by the reactions of the West German political parties. The Social Democratic Party (SPD) had already declared itself against the nuclear reprocessing plant in Wackersdorf in 1984. After the Chernobyl accident, the SPD government of North Rhine-Westphalia refused to license the fast-breeder reactor in Kalkar, and in the autumn of 1986 the party's federal congress adopted a resolution calling for the phasing-out of nuclear power within 10 years (Rüdig 1990). Moreover, even within the ranks of the governing parties, nuclear energy was no longer uncontested: Several state

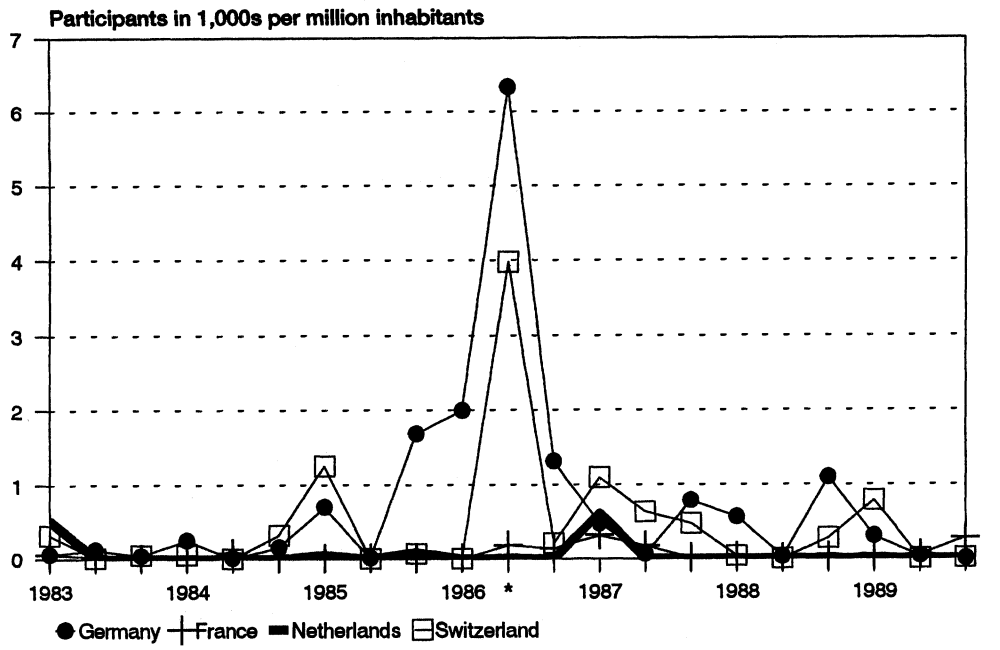

Figure 2 • ***Number of Participants in Actions of the Anti-Nuclear Movement per Four-Month Period, per Million Inhabitants in the Four Countries, 1983-1989***

branches of the liberal Free Democratic Party (FDP) spoke out against the Wackersdorf project, and a number of prominent members of the Christian Democratic Union (CDU), among them Federal President Richard von Weizsäcker, expressed their doubts with regard to nuclear energy (*Der Spiegel* 1986, No. 32:73). In combination with the staunch pro-nuclear position maintained by the federal government, and the Bavarian government's determination to complete the plant in Wackersdorf at any cost, this provided for a very favorable mix of opportunities for mobilization, making protest both necessary, possible, and potentially successful.

In France and the Netherlands, on the contrary, the anti-nuclear movement was in a rather desperate state at the time of the accident. The French movement had been reduced to marginal proportions after the Socialists took office in 1981, and even after Chernobyl all the major parties remained firmly behind nuclear power (Duyvendak 1992). In the Netherlands, the movement had largely demobilized after its campaign to force the closure of the country's two operating nuclear plants failed in 1981. By the time of the Chernobyl accident, however, the designation of a site for two new nuclear power stations had become a matter of political controversy. This could have given the movement some opportunities for mobilization, although its lack of combat readiness would certainly have been a formidable barrier to the kind of mobilization successes achieved in Germany. As it was, even this opportunity was taken from the movement. Because the Chernobyl accident occurred shortly before national elections, the right-wing government swiftly moved to postpone the decision on new nuclear stations and ordered renewed investigations into their safety and necessity (van der Heijden 1993). As a result, at the few anti-nuclear rallies that were organized in the Netherlands after Chernobyl only a few dozen people showed up.

In Switzerland, finally, the conditions for an increase in protest were somewhat more conducive, since the construction of the country's most controversial nuclear project, the

power station at Kaiseraugst, was about to begin. The possibility to link the Chernobyl accident to this pre-existing local conflict may explain why the level of participation immediately after the accident was higher in Switzerland than in France and the Netherlands. However, the government's October 1986 decision to postpone the Kaiseraugst project, much in the same way as the Dutch government's move, prevented a further reinvigoration of protest (Giugni 1992).

Interestingly, it seems that even German federalism contributed to the intensity of post-Chernobyl mobilization in that country (see also Krohn and Weingart 1987; Peters et al. 1989). Whereas the French authorities' claim that the radioactive clouds had somehow halted at the French borders could go virtually unchallenged, the German federal government was faced with a much more difficult task. Although it claimed, like its French counterpart, that there were no acute health risks and that the German nuclear power stations were not comparable to their Russian counterparts, it lacked the power to impose this view on local and regional authorities and thus was unable to convince the public. Much to the annoyance of the responsible federal minister, several state and local governments prohibited the consumption of fresh vegetables, closed children's playgrounds and swimming pools, and even canceled sports events (Hawkes et al. 1986; Joppke 1991).

We must conclude, then, that the political impact of the Chernobyl disaster cannot be adequately understood as a simple reaction to a "suddenly imposed grievance." Certainly, to some extent the accident brought about protest reactions in all Western European countries, and it may be that without Chernobyl the rise of anti-nuclear protest in Germany would have been less spectacular. Nevertheless, the results show that the effects of a suddenly imposed grievance such as the Chernobyl disaster are conditioned by situational factors such as the state of the anti-nuclear movement at the time of the accident, the political situation in which it occurred, and the outcome of the interpretive struggle between the anti-nuclear movement and pro-nuclear authorities.

Frame Alignment

The Chernobyl case shows not only the importance of political opportunities but also that prevailing definitions and interpretations of similar events can differ widely from one setting to another. Processes of definition and interpretation occupy a central place in the "framing" perspective on protest (Snow et al. 1986; Snow and Benford 1988, 1992). Snow and his colleagues to a large extent share our criticism of the traditional grievance perspective and point out that

> too much attention is focused on grievances per se and on their social psychological manifestations (e.g., relative deprivation, alienation), to the neglect of the fact that grievances or discontents are subject to differential interpretation, and the fact that variations in their interpretation across individuals, social movement organizations, and time can affect whether and how they are acted upon (Snow et al. 1986:465).

At the same time, they criticize the resource mobilization perspective for skirting interpretive issues altogether, by assuming that grievances are ubiquitous and therefore do not merit investigation (Snow et al. 1986).

We do not want to contest the view that framing processes are important, but we do think it is necessary to inquire as to what their precise status is. As Snow et al. point out, an important issue to be resolved concerns the success or failure of framing efforts by social movements:

> In arguing that one or more varieties of frame alignment is a necessary condition for movement participation, we have proceeded as if all framing efforts are successful. But clearly that is not the case. Potential constituencies are sometimes galvanized and mobilized, on other occasions framing

> efforts fall on deaf ears and may even be counter-productive. This obdurate fact thus begs the question of why framing processes succeed in some cases but not in others (Snow et al. 1986:477).

The question, in our view, is whether the success of framing efforts depends on the argumentative power of the discourse as such (which would imply that frame alignment may have an independent effect on movement participation) or whether framing functions primarily as a mechanism that translates structural conditions, constraints, or opportunities into articulated discontent and dispositions toward collective action (which would imply a more modest status for frame alignment as a transmission belt).[8]

Snow et al.'s position on this issue is not entirely clear. They claim that frame alignment provides an independent contribution to the explanation of the success or failure of mobilization efforts (Snow et al. 1986). However, when Snow and Benford discuss factors influencing the potency of framing efforts they suggest that the success of framing efforts depends on their "empirical credibility" and "experiential commensurability" (Snow and Benford 1988:208), which brings the frame alignment model close to the grievance-oriented explanations discussed earlier. Empirical credibility refers to "the fit between the framing and events in the world" (Snow and Benford 1988:208):

> By empirical credibility, we refer to the evidential basis for a master frame's diagnostic claims . . . to the extent that there are events or occurrences that can be pointed to as documentary evidence . . . a master frame has empirical credibility (Snow and Benford 1992:140).

Experiential commensurability refers to whether a frame fits "the personal experience of the targets of mobilization" (Snow and Benford 1988:208). As an example, the authors give an explanation for the greater mobilizing capacity and more radical program of the Western European peace movements compared to their U.S. counterpart:

> In Western Europe, in contrast to the United States . . . movement activity appears to be more constant and intense. To the extent that these observations are empirically accurate, we think they can be explained in part by differences in the nature of cross-national experience with warfare and nuclear weaponry. Experience with warfare and nuclear weapons has been less direct and immediate in the United States than it has in Japan and Europe. Although the United States has been involved in numerous wars and skirmishes, none have taken place on its soil since the mid-1800s. Additionally, U.S. nuclear weapons installations tend to be located greater distances from dense population settlements than is the case in Western Europe. Given the Europeans' direct experience with warfare and the closer proximity of nuclear weapons installations to populations masses, it follows that the threat of nuclear war has far greater experiential commensurability for citizens of European countries than for Americans (1988:209).

To be sure, in a footnote in a later article Snow and Benford emphasize that what is at issue "is not whether diagnostic and prognostic claims are actually factual or valid, but whether their empirical referents lend themselves to being read as 'real' indicators of the claims. When they are, then the claims have empirical credibility." However, they immediately take the edge off this radically constructionist position, by stating that "although this is obviously an interpretive issue, *we suspect that it is easier to construct an evidential base for some claims than for others*" (Snow and Benford 1992:140-41, emphasis added). Gamson has accurately diagnosed the ambiguity of Snow and Benford's model:

> The authors have their feet planted solidly in a conventional positivist epistemology while their heads are in the clouds of a post-positivist, constructionist world. The very term "empirical credibility" suggests the unresolved conflict (Gamson 1992:69).

We now take a closer look at the struggle over nuclear energy to see if, and to what extent, the frame alignment model — in either of its versions — may help to explain the

8. This, it should be stressed, does not make it unimportant, since any sound explanation should specify the mechanisms that link causes and effects (Harré and Secord 1972; Elster 1989).

differential impact on public opinion and the diverging levels of mobilization of anti-nuclear movements in different Western European countries.

The Struggle Over Nuclear Power

Not only in the specific case of the Chernobyl disaster, but also more generally, the conflict over the use of nuclear power has given rise to diverging dominant interpretations. In some countries, such as the Netherlands or Denmark, the anti-nuclear movement's viewpoint that nuclear energy is both dangerous and unnecessary has become the dominant one among the general public, the news media, and a majority of the political parties. In other countries, such as West Germany, no clear winner has emerged from the debate between pro-nuclear and anti-nuclear interpretations, and the fight for hegemony continues. In still other countries, with France as the best-known example, anti-nuclear forces have clearly lost the discursive struggle, and have been marginalized by a discourse that emphasizes the safety of the national nuclear industry and the need for nuclear power as a guarantee of economic independence and as a source of national *grandeur*.[9] The differential success of the framing

Table 1 • ***Public Opinion Toward Nuclear Energy: Size of Anti-Nuclear Majority (Percentage Who Find Risks of Nuclear Energy Unacceptable Minus Percentage Who Find Nuclear Energy Worthwhile)***

	1978	*1987*	*Change 1978-87*
France	2%	−3%	−5%
Switzerland	−2%	10%	12%
Germany	11%	19%	8%
Netherlands	26%	27%	1%
Belgium	12%	6%	−6%
United Kingdom	−32%	1%	33%
Italy	−24%	46%	70%
Denmark	−3%	49%	52%

Source:
Eurobarometer, cited in Rüdig 1990:346

efforts of anti-nuclear movements is reflected in the figures displayed in Table 1[10] about public opinion toward nuclear energy in eight Western European countries.[11] The table shows that support for the anti-nuclear movement's view that the risks of nuclear energy are unacceptable generally increased since 1978. In 1978, those who found nuclear energy worthwhile still formed a majority in half of the countries, but by 1987 opponents of nuclear

9. In addition to these international differences, the dominant "packages" in which nuclear energy has been framed have also changed over time. For a fine analysis of these longitudinal shifts for the United States, see Gamson and Modigliani 1989.

10. The answering categories "of no interest," "don't know," and "no answer" have been disregarded. For Switzerland, no *Eurobarometer* data are available. As a substitute we used the percentage difference between anti-nuclear and pro-nuclear votes in two national referenda held in 1979 and 1990. (The anti-nuclear majority in the latter referendum led to a ten-year moratorium on the construction of new nuclear power stations.)

11. We have displayed information only for those countries for which *Eurobarometer* data are available for both 1978 and 1987 (which led to the exclusion of all non-EC countries (except Switzerland), as well as Spain and Portugal, for which no 1978 data are available). In addition, we excluded those EC countries that do not have nuclear power stations and never had plans to build them (Luxembourg, Ireland, and Greece). The latter decision follows from our consideration that attitudes toward nuclear energy are only meaningful in countries where nuclear energy has been a matter of political decision making and public debate.

energy were in the majority in seven out of eight countries. However, there are two exceptions to this pattern of increasing support for the anti-nuclear movement's views: France, where in 1978 opponents of nuclear energy still formed a slight majority, but which by 1987 was the only country with a pro-nuclear majority; and Belgium, where the anti-nuclear majority decreased. On the other side of the spectrum, we find two countries, Italy and Denmark, that have seen particularly spectacular increases in the number of opponents of nuclear energy, who in 1978 still formed a minority in both countries.

Thus, there is no question that framing efforts by the anti-nuclear movement have had differential success across countries. The question is where these differences come from. One possibility is that anti-nuclear movements in countries such as France have constructed less convincing frames against nuclear energy than their counterparts in Italy, the Netherlands, or Denmark. This explanation is not very plausible. To begin with, to an important extent the anti-nuclear frame was an international discourse, with relatively little cross-country variation, resulting from intensive international diffusion of arguments and symbols (just think of the laughing sun as the anti-nuclear symbol, or of the slogan "Nuclear Energy? No, Thanks!") (van der Heijden, Koopmans, and Giugni 1992). Moreover, this interpretation cannot explain why, for instance, the idea that nuclear energy would lead to a police state was unconvincing in a strong state like France — where the idea originated (*électrofascisme*) — whereas in Germany it became a major discursive weapon for the movement (*Atomstaat*).

An alternative explanation along the same lines would be that cross-national variation can be explained by the fact that *pro*-nuclear forces were able to construct more convincing frames in some countries than in others. For example, it may be argued that appeals to national independence and *grandeur* struck a responsive chord in France, whereas in other political cultures with a less pronounced sense of national identity such appeals would be much less effective (this form of frame resonance is called "narrative fidelity" by Snow and Benford [1988:210-11]). The problem with this explanation, which emphasizes the role of relatively stable national political cultures, is that it doesn't account for the fact that in 1978 public opinion was still comparatively favorable to the French anti-nuclear movement, which achieved mobilization levels higher than any other European anti-nuclear movement at that time (see Nelkin and Pollak 1981; Rüdig 1990). This is illustrated by the history of anti-nuclear protest in the French-German border region. In the early 1970s, the French movement served as an example for German civic initiatives across the border, and French protesters were actively involved in the 1975 site occupation in the German village of Wyhl that brought about a breakthrough for the German movement. By the end of the 1980s, this situation had completely reversed. While German protesters had been strengthened by their ultimately successful campaign against the Wyhl station, their French colleagues had demobilized almost completely, and the few protests that were still organized against the French nuclear stations at Fessenheim and Cattenom were dominated by German activists (Koopmans 1992). These remarkable shifts clearly cannot be explained by relatively stable national political cultures and identities.

Thus, we must look outside the discursive realm for the causes of the diverging success of anti-nuclear movements in convincing the public. Following Snow and Benford, we should investigate whether the claims of the anti-nuclear movement had more "empirical credibility" or "experiential commensurability" in some countries than in others. A factor that is likely to play a role in this respect is the size of a country's nuclear industry. Following the argumentation of the frame alignment model and as an analogy to Snow and Benford's explanation for the divergent mobilizing capacities of the Western European and U.S. peace movements, it may be argued that in countries with a large number of nuclear plants, in which many people have direct experience with nuclear reactors in their immediate surroundings, the anti-nuclear movement's views will more easily find a sympathetic hearing. Table 2 shows, however, that this is not the case. On the contrary, France and Belgium, the

countries where the anti-nuclear movement has been least successful in convincing the public, are also the two countries with the largest share of nuclear energy in total electricity production. Moreover, in the countries with the largest anti-nuclear majorities — the Netherlands, Italy, and Denmark — nuclear energy is least developed.[12]

Another explanation that is sometimes suggested is that pro-nuclear forces find it easier to influence public opinion in countries with limited natural energy sources. This would indeed account for the high percentage of supporters of nuclear energy in France, but it fails to explain why in Denmark, which has the highest dependence on energy imports of the eight countries (Rüdig 1990:355), opponents of nuclear energy are firmly in the majority. Moreover, the two countries with large national energy sources at their disposal — the Netherlands and the United Kingdom — occupy very divergent positions as regards the public's attitudes towards nuclear energy.

The results displayed in Table 2 suggest that an explanation that focuses on political opportunities, and more particularly on success chances, is better able to make sense of cross-national variations in public attitudes toward nuclear energy. The last column of the table presents the percentage of planned nuclear capacity in 1974 that had been realized by 1988, which may serve as an indicator for the success of the anti-nuclear movement in limiting the expansion of nuclear energy.

Table 2 • ***Planned and Realized Shares of Nuclear Energy in Total Electricity Production***

	% Planned 1974	*% Realized 1988*	*% of Plan Realized*
France	68	70	103
Switzerland	44	37	84
Germany	47	34	72
Netherlands	43	5	11
Belgium	50	66	132
United Kingdom	43	19	44
Italy	43	0	0
Denmark	23	0	0

Source:
Rüdig 1990:102, 348

Before we discuss the results presented in the table, we would like to emphasize that it is not a necessary condition for our argument that reductions of nuclear energy programs can be wholly attributed to the anti-nuclear movement's efforts. In fact, the political process model suggests that the opportunities provided by the movement's opponents — governments and nuclear industries — will be a more important determinant of success than the mobilizing capacities or strategies of anti-nuclear movements. What matters here is whether we may counterfactually suppose that without pressure from the anti-nuclear movement the nuclear programs of the 1970s would have been implemented to approximately their intended extent. This presupposition is plausible in most of the countries under study. The exception might be Great Britain. As Rüdig notes, in contrast to other Western European

12. The only way this finding can be made to agree with Snow and Benford's hypotheses is by assuming that, objectively, nuclear energy is not problematic at all. In that case, anti-nuclear attitudes should be seen as expressions of an irrational fear, which *lose* their empirical credibility the more people are actually confronted with the harmlessness and beneficial effects of nuclear power. However, as we will show further on, there is no need for this relapse into the classical imagery of social movements, as it is perfectly possible to understand cross-country differences without resorting to the assumption that about half the population of Western Europe is guided by irrational and unfounded fears.

countries, the reductions of the British nuclear program have had little to do with pressure from the — very weak — British anti-nuclear movement:

> Throughout the history of nuclear power in Britain, many delays were *not* due to anti-nuclear opposition but due to problems located within the industry. The British anti-nuclear movement found itself largely unable to exploit the difficulties in the nuclear sector (Rüdig 1990:352, emphasis in original).

This may also explain why, as we will see, the development of the mobilization of, and public support for, the British anti-nuclear movement deviates to some extent from the pattern found in the other countries.

If we compare Tables 1 and 2, we note striking similarities in the positions different countries occupy in the two tables. Thus, the failure of the French and Belgian movements to influence public opinion is linked to an even greater failure to influence nuclear energy policies: In both countries nuclear energy's share in electricity production in 1988 was even larger than the share envisaged by the authorities in 1974. In Italy, Denmark, and the Netherlands, on the other hand, the anti-nuclear movement not only achieved a discursive victory, but also succeeded in either preventing any expansion of nuclear energy beyond the level already attained in 1974 (the Netherlands), blocked plans to embark on nuclear energy (Denmark), or even forced the closure of all existing nuclear power stations (Italy). Furthermore, Switzerland and Germany occupy intermediary positions in both tables: The anti-nuclear movements of these countries were moderately successful both in convincing public opinion and in influencing nuclear energy policies. The only partial exception to this pattern is the United Kingdom, which in 1988 had the second-most unfavorable public opinion climate for the anti-nuclear movement, despite a sizable reduction of the country's nuclear program. On the other hand, the strong increase in the number of opponents of nuclear energy since 1978 is again in line with the pattern for the other countries.

Thus we find that discursive success and substantive success are intimately related. This cannot be interpreted as a logical consequence of the responsiveness of authorities to public opinion. As Table 1 shows, in 1978 French and Belgian public opinion was comparatively favorable to the anti-nuclear movement, whereas the Italians and the Danes were far from staunch opponents of the nuclear option at that time. If the degree of expansion of nuclear energy was simply a function of an initially anti-nuclear public opinion climate we would have expected the French and Belgian movements to have been more successful in substantive terms than their Italian or Danish counterparts. The results therefore suggest that the direction of causality has been the other way around: Anti-nuclear attitudes have followed rather than caused substantive movement successes. Apparently, in order to solve the problem of "cognitive dissonance," people have changed their definitions of nuclear energy as problematic in countries where they found no opportunities to influence the development of nuclear energy (Duyvendak 1992). As Cobb and Elder put it:

> We normally think of policy problems as having their origins in events and circumstances. These create difficulties, which prompt a search for solutions. Often, however, this is not the case. . . . Situations defined as inevitable and unalterable, however lamentable, are not likely to be considered policy problems, but rather just hard facts of life (1983:177, 174).

Conversely, in countries where the development of nuclear energy has come to a standstill or has been abandoned altogether, the public seems to have interpreted this as proof of the problematic nature of this form of electricity production.

Seen from this perspective, it is not surprising that opponents of nuclear energy in France, who lost their last hopes for success after the Socialists came to power in 1981 and subsequently — against their previous promises — continued the nuclear program of their conservative predecessors almost unaltered (see von Oppeln 1989; Duyvendak 1992), have

largely given up their struggle and to some extent have even bent their viewpoints to the inevitable.[13]

Variations in movement success offer a plausible explanation for variations in public attitudes toward nuclear energy, but what about mobilization? A comparison of the mobilization levels reported in Table 3 with the public opinion figures in Table 1 makes clear that grievances again do not predict levels of mobilization: The two countries that share a low level of mobilization, France and the Netherlands, are each other's perfect antipoles with regard to the level of anti-nuclear grievances.[14] But a comparison of tables 2 and 3 makes clear that there is no linear relation between success and mobilization either, since both the highly successful Dutch movement and the highly unsuccessful French movement have a relatively low level of mobilization for the period 1975-89. Rather, moderate levels of success, as in Germany and Switzerland, seem to offer the best conditions for a high level of anti-nuclear mobilization. This result is in line with the conclusions drawn from earlier investigations into the relation between success and movement mobilization. Eisinger (1973:15) and Kitschelt (1986:62) both arrive at the conclusion that the relationship between the degree of "openness" of a political system and movement mobilization is curvilinear: Both very open and very closed regimes have lower levels of mobilization, whereas regimes that are neither very open nor very closed tend to display the highest level of movement activity. Rüdig similarly concludes that partial success is "the condition which is crucial to a sustained development of protest groups" (1990:235). This curvilinear relation between success and movement mobilization results from a combination of counteracting factors. Success stimulates further mobilization because it enhances belief in the efficacy of collective action. But, further mobilization

Table 3 • ***Level of Mobilization of the Anti-Nuclear Movement: Total Participation, 1975-89 (Per Million Inhabitants)***

France	9,000
Switzerland	24,000
Germany	26,000
Netherlands	15,000

after a success often necessitates a reorientation of the movement, which requires effort and time and may cause the movement to lose momentum and initiative. Moreover, subsequent successes tend to become harder and harder to obtain, since movements tend to pick the ripest apples — those parts of the nuclear program against which public opposition is strongest and institutional resistance weakest — first (Koopmans 1992). This happened, for instance, to the Dutch anti-nuclear movement, which was very successful in blocking construction plans for new nuclear power stations but was unable to sustain its level of mobilization when it subsequently had to focus on the closure of the two already existing stations, a goal that was much more difficult to achieve, and for which the movement found little political support.

13. Conversely, the hope for an electoral victory of the Socialists, and the support this party gave to the anti-nuclear movement as long as it still was in the opposition, were responsible for the comparatively high level of mobilization of the French anti-nuclear movement in the 1970s. It goes beyond the scope of this article to enter into a detailed discussion of the different components of the political opportunity structure that determine the degree of success (and the perception of success chances) of anti-nuclear movements. The literature has identified several aspects that play a role here: more stable factors such as the strength or weakness of the state and the extent of its control over the nuclear industry (Kitschelt 1986; Fach and Simonis 1987), as well as the role of the judiciary in the implementation process (Nelkin and Pollak 1981), and more variable factors such as the openness of the traditional left for the movement's demands (von Oppeln 1989) and the fact whether the left is in government or in the opposition (Kriesi et al. 1992).

14. This result has important implications for research on social movements. Survey researchers often use data on adherence to a movement's goals or "sympathy" for a movement as indicators of a movement's strength. As our findings indicate, such data confuse cause and effect and tell us more about the successful or unsuccessful history of a movement and about its present opportunities than about the actual level of mobilization of a movement.

Conclusion

Taken together, the results of our comparative analysis of anti-nuclear energy movements provide little support for grievance-oriented approaches to social movements. Despite the fact that the nuclear accident in Chernobyl confronted different countries with the same event, the intensity and content of protest differed widely, from a surge of anti-nuclear protests in Germany to virtually no reaction in the Netherlands and France. This result points to a fundamental problem with the concept "suddenly imposed grievances," namely, that it equates objective conditions with the sentiments (subjective grievances) attached to them, and therefore presupposes much of what we need to explain. Labeling nuclear accidents as "suddenly imposed grievances" is taking one important step too far and may lead one to focus only on those accidents that did lead to mobilization by anti-nuclear activists (i.e., those where objective conditions and subjective grievances coincided), ignoring both the fact that many nuclear accidents have provoked little, if any, protest (or may even have remained unknown to us).[15] As the Chernobyl case demonstrates, the same accident may be a major political event in one country while provoking as little controversy as the weather report in another.

Our data on the struggle over nuclear power confirm this absence of a direct relation between objective conditions, grievances, and mobilization. The extent of the nuclear energy "problem" was found to be unrelated to the level of mobilization of the anti-nuclear movement; nor could it explain public attitudes toward nuclear energy (i.e., subjective grievances). Grievances, in turn, provided no explanation for levels of mobilization. Of course, we do not deny the trivial truth that the existence of anti-nuclear energy movements depends on the discovery and development of nuclear energy, just as peace movements do not develop in absolutely peaceful societies. In other words, the very existence of the objects movements focus upon is indeed a necessary, but far from sufficient, condition to give birth to grievances and protest. But any mobilization asks for "facts" to be considered as "problems." As adherents of the constructionist perspective on social problems have stressed time and again, these facts do not speak for themselves (Blumer 1971; Spector and Kitsuse 1973; Schneider 1985; Hilgartner and Bosk 1988). The appearance that they do speak for themselves (as reflected, for instance, in the concept of "suddenly imposed grievances") is only created after they have been given meaning by human agents.

Processes of meaning-giving are central to the second approach we scrutinize in this article: the frame alignment model. The Chernobyl case and the struggle over nuclear power more generally provide ample evidence of cross-country differences in the dominant discourses in which nuclear energy has been framed. The importance of processes of collective definition and interpretation is therefore not at issue. Our attention has instead been directed toward the factors that determine the potency of framing efforts by anti-nuclear movements and their opponents in different countries. As we have pointed out, Snow and Benford's position on this issue is somewhat ambiguous and oscillates between a purely constructionist position in which the potency of frames is determined by factors internal to the discursive process, and a focus on a frame's "empirical credibility" and "experiential commensurability," which links the frame alignment model to grievance-oriented explanations. The latter interpretation of Snow and Benford's position of course shares the general failure of explanations focusing on supposedly aggrieving conditions in accounting for differences in the mobilization of anti-nuclear movements.

15. Several examples of near or real disasters in the 1950s and 1960s that received little, if any, attention at the time have by now become known (e.g., major leakages from the Windscale reprocessing plant in the United Kingdom, the contamination of a huge area in the Russian Urals, and the partial meltdown of a fast-breeder reactor in the United States; for the latter example, see Gamson 1988:231-32).

This does not mean, however, that the construction of grievances or social problems is a self-contained process, with no "external" foundation whatsoever, as is supposed in the alternative reading of Snow and Benford's position and in many versions of the constructionist view on social problems. Our findings indicate that the construction of grievances and social problems, and the degree to which they give rise to social movement mobilization, are rooted not in aggrieving conditions but in political power relations. Such political opportunities determined the degree of success of challenges to the ambitious nuclear programs formulated in the 1960s and 1970s, and in turn, success proved to be a powerful determinant of both anti-nuclear grievances and mobilization. Therefore, instead of focusing exclusively on discourse and meaning, it seems more fruitful to combine the framing and political opportunity perspectives and to look at the political conditions under which specific discourses become imaginable. The cases discussed here provide ample evidence of the influence of opportunities on the perception and definition of events as grievances. In the Chernobyl case, the strong French state even successfully denied the existence of a problem and, in the absence of any competing version among the country's political elites, was able to convince the population that radiation had somehow halted at the country's borders, and that the unsafe nature of Soviet reactors was of no relevance to superior French nuclear technology. This interpretation of the problem may have been unreal, but it was perfectly real in its consequences.

Conversely, anti-nuclear movements that were confronted with more favorable opportunity structures and were able to successfully block or slow down the construction of nuclear power stations were also able to win the discursive battle and to convince a majority of the public of the problematic nature of nuclear energy. In that sense, Mauss is correct when he states that "social movements generate social problems" (1975:XVI-XVII). However, he is also right in adding that

> social unrest, social problems, social movements, and the like are more likely to occur under some social conditions than under others. One important and rather obvious example of such a contingency is whether the political system permits the collective expression of new constructions of reality by interest groups (Mauss 1975:38-39; see also Schneider 1985:224-25; McAdam 1990:12).

Social movements are sometimes victorious in their efforts to frame situations as problematic, but only when they operate in a political context that offers them the opportunities to do so.

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