Activists in Politics
The Influence of Personal Overlap on Social Movements’ Success

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Social movements strive for social change that realizes their ideal of how the ‘perfect world’ should look like. Movements want to succeed as fast as possible and therefore try to find the most effective ways of influencing decision-makers. In parliamentary democracies, the central decision-makers are political parties. Much of the extant literature emphasizes the use of public pressure and lobbying. In contrast, I argue that personal overlap between political parties and social movements is the strongest and most stable way for activists to influence politicians. Using novel micro data on the German antinuclear movement, and in particular its success in influencing the shutdown of nuclear power plants, I show how movements realize their goals significantly faster when they increase their personal overlap with political parties. My results suggest that there is a tipping-point of the effect of personal overlap between 30 and 40 percent, that is more than 30% of Greens in parliament are antinuclear activists. Beyond the tipping point, influence declines.

Introduction

What determines the success of social movements and how do these determinants work? There are two alternative approaches to answer that question, depending on the definition of success. Either, one can start from a macro perspective and trace (policy) outcomes back to social movements. Wapner (1995), for instance, analyses how social movements influence society’s opinion while he takes their organization as given. Or, one builds upon a micro perspective, for instance, the connection of internal structures and mobilization rates. In this example, the amount of success is equal to the amount
of mobilization. One recent exemplary study is the analysis of Lind and Stepan-Norris (2011) of the tenants’ rights movement’s mobilization efforts in Los Angeles.

I suggest to interpret success in relation to the ideals movements are following. Examples for such ideas are ‘democracy’, ‘peace’ or ‘environmental protection’. Furthermore, success is a result of development over time. Influence accumulates, more or less observable, until change takes place (Tilly, 1999). Consequently, the questions to answer are under what conditions movements will achieve social change, how fast they will achieve it, and what conditions may accelerate or slow down the development.

I argue that activists in political parties are an effective kind of connection for social movements to achieve their goals in parliamentarian democracies. Compared with other ways of influence like public pressure or lobbying, such personal overlap creates mutual trust and agreement about the issues at stake. For instance, think about the ways a well-known activist can influence politics while holding an important office in government. Activists in politics have intrinsic reasons to fight for the goals of their social movement even without extrinsic incentives like votes or nominations. Their advantageous position of being embedded within both networks, the network of movement organization and the network of their political party, allows them to combine resources of both sides. Therefore, the overlap of both organizational networks within individual activists is a strong and stable way of influence, and we can expect that an increase in such personal overlap will significantly increase the chances that a social movement will be successful.

Nevertheless, personal overlap has its disadvantages. Too much personal overlap can both endanger the identity of the social movement and undermine mutual trust. Social movements emerge because the political system as a whole is regarded as unwilling or unable to deal properly with specific issues (Tilly, 1999). Hence, distance to political
decision-makers constitutes the movement’s identity. If activists perceive the distance between the social movement and the political system as too small, they might react with conflict or separation to restore their identity. But even if they accept personal overlap as a legitimate instrument to pursue goals, they will always be on guard. In this way, activists in politics need some of their resources to balance out movement’s and party’s demands, i.e. to keep this role-conflict on a controllable level. Activists and politicians play different games with different rules, but activists in politics have to play both games at the same time. For instance, they have to represent the idealistic aims of the movement while looking for majority backing within a diverse political party. Doing so successfully is increasingly difficult when personal overlap is high for the reasons I stated before. In this paper, I provide empirical evidence that personal overlap has an overall positive effect on success and that this effect reverses if personal overlap gets too high.

Considering the broad range of possible examples, the German antinuclear movement is an excellent case in point for a substantive analysis. Its goal is clearly definable: nuclear phaseout. Therefore, every new nuclear reactor or delayed shutdown is a setback, while every prevented construction or shutdown is a success. In addition, the German political system is federalistic and thus allows for comparison of regions that vary in the amount of success. These regions are nevertheless similar enough to expect the same mechanisms at work. Lastly, the antinuclear movement in Germany has a long history. Emerging in the 1970s, several decades are available for analysis.

To carry out the analysis, I collected information about members of parliament of the Green party and their connection to the antinuclear movement from biographical material, archived party documents, and parliamentary documents. The result is novel micro

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1See Polletta and Jasper (2001) for a broader discussion about the role of collective identity. Concerning new developments, Ackland and O’Neil (2011) provide insights on how organizations create identity by using the internet.
data on the German antinuclear movement. I furthermore evaluated official information to define 15 episodes in seven federal states of Germany. The timespans until another nuclear power station went offline or until plans to build a new one were abandoned, constitute those episodes. Important alternative explanations are also considered in my data and analysis. An event history analysis of these unique longitudinal data shows that personal overlap works in the expected direction and that alternative explanations do not weaken this result.

**Political Influence of Social Movements**

Social movements have to create influence on political decisions to achieve their goals. When it comes to the most effective way to do so, the institutional setting matters a lot. In democratic systems, three groups of actors drive decisions (Burstein and Linton, 2002). Interest groups as the first one contain social movements. Mass media as the second group shapes public opinion. And the third group is composed of political parties. Parties and their representatives in parliament are valuable allies for social movements because they have the power to change the social and economic incentive structure in favor of the movement’s goals. Moreover, those representatives and other office holders have access to specific and classified information by using parliamentarian networks. In network analysis terms, the incumbents of political offices are the gatekeepers for social movements to enter the political system (Gould and Fernandez, 1989). Hence, social movements try to influence them in order to succeed via three different ways: public pressure, lobbying and personal overlap.

*Public pressure* summarizes all attempts to influence political parties through the mass media (see figure [1]). The higher the media coverage, the higher the influence is expected to be. Empirical studies that try to explain the amount of media coverage, are based on the theoretical arguments of news factors (Kepplinger and Ehlig, 2006).
Demonstrations are newsworthy events, and the larger they are the more likely media coverage will increase. In other words: the more demonstrators, the better. The effect should be stronger if such protests coincide with related events. Huge demonstrations against nuclear energy production after the catastrophe of Chernobyl in 1986 are one example. But even if there is an effect, its measurable impact is questionable because the social movement depends on the selection criteria of the journalists (called news value in the literature (Kepplinger and Ehmig, 2006)). Furthermore, only if a significant number of voters support its cause, politicians have a reason to react. Media coverage is furthermore driven by daily newsflow and without new events, coverage will rapidly decline.

Figure 1: There are three different ways how social movements may influence political parties. The first option is to create public pressure via the media (1). The second option is to lobby in favor of the movement’s goal (2). The third option is personal overlap (3). The advantage of personal overlap is that the connection is more stable and stronger than public pressure and lobbying.

\footnote{Another way to think about public pressure is to focus on social movement’s pressure on companies. Here, movements concentrate efforts on markets rather than the political arena. Bartley and Child (2011), for instance, describe the impact of anti-sweatshop campaigns on U.S. companies.}
The second way of influence is *lobbying* (again, see figure 1). It is especially common for social movements in which the organizational structures are managed by professionals (Andrews and Edwards 2005). Lobbying aims at an increase of agreement between social movements and the contact persons inside the party structure (see Burstein and Linton 2002 for details). The theoretical concept that captures such connections is *brokerage*. The basic idea is that actors who successfully connect different networks have access to more information and create social capital (Burt 2007). In the next step, the broker uses this capital to promote his goals. In the case of social movements and political parties, interaction between lobbyists and politicians can create mutual agreement between both groups about policy issues.

Lobbying, as a specific kind of brokerage, has a number of advantages for non-party actors in the political system. It can, for instance, be a strong instrument to build up bridges to indecisive actors and to persuade them to support the movement’s goals. However, the efficiency of lobbying depends on a constant and reliable flow of resources. Successful lobbying does not aim at emotional agreement, but at mutual exchange in an instrumental way. If the movement is not able to provide public legitimation or support, politicians have no reason to keep on helping them. As Cornwall et al. (2007) point out in their study, opportunities for mobilization, i.e. public support, do not coincide with opportunities for policy change, because legislators react slower to political context than social movements do. In other words, public support is only weakly linked to policy changes. A clear disadvantage for lobbying.

As a result, politicians will tend to circumvent the broker or cut the connection, depending on how much they gain from the resource flows between both networks. A social movement’s limited possibility to control such relationships means vulnerable

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3There are different propositions in the literature what lobbying is about and what it is not. Following the classification of Hall and Deardorff 2006 I concentrate on exchange theories and lobbying as persuasion. See Hall and Deardorff 2006 for an extended discussion about different understandings of lobbying.
influence and therefore instability. Lobbying might be the only available tool in some cases and a useful supplement in other cases, but a social movement has to ensure support even under worse circumstances in order to accelerate progress towards its goals.

There are two possibilities to do so. The first one is to enhance the relationship between the actors of both networks. Assuming that politicians decide with respect to upcoming elections, this approach may lead to extended investment of resources with few or irrelevant outcomes. A social movement which concentrates its resources on a few actors might gain nothing and lose everything if it is not able to convince them.

The second approach goes beyond the instrumental flow of resources: the integration of politicians into one’s own network. Such a process might start with lobbying or it may be the outcome of ‘infiltration’ of an existing structure by activists. Or activists may take part in the creation of new organizations, either as initiators or participants. Looking at the individuals, the actors in question are members of both networks at the same time. Observing the structure, the two networks start to overlap (see figure 1). I argue that such personal overlap is a strong and stable way of influence.

**Personal Overlap**

Personal overlap is a structural quality of two networks whereby actors are integrated in both networks as full members. Personal overlap differs substantially from lobbying in one aspect: trust. Successful actors are insiders of both networks and closely connected to them. Other members of both networks don’t question their loyalty because they are perceived as ‘one of us’. Such trust is justified, because activists of a social movement, who are also members of political parties are firmly convinced about the movement’s goals. Even if they would risk to lose votes, they will not ignore the interests of their social movement. In fact, they have the intrinsic motivation to pursue
the goals, notwithstanding missing or weak extrinsic incentives. If those central actors succeed in maintaining trust, their advantageous position enables them to recombine diverse resources (Vedres and Stark, 2010). For example, parties can provide valuable information about political processes, while the social movement supplies support. Both resources have a direct effect over personal relations on the micro level. Therefore, embedded activists have more opportunities to influence decisions and to increase likelihood and speed of movements’ success.

However, personal overlap is not a generally available option. Only political actors who are already sympathizers can be included into the social movement’s network. The ideological threshold for overlap is much higher than it is for successful lobbying. Actors have to commit themselves to a movement’s goal and adjust their identity. Hence, the existence of an allied political party is a necessary condition for personal overlap. Here, allies of social movements are political parties that share attitudes towards specific issues. For instance, only parties that speak out in favor of nuclear phaseout are (potential) allies of the antinuclear movement. Without such an ally, personal overlap is not possible and only public pressure and lobbying are available tools.

If an allied party is necessary to use personal overlap, where do it come from? I already mentioned the two possibilities for activists to become members of a party: joining an existing one or taking part in the creation of a new one. However, established parties have a history of complicated negotiations about their program, at least in parliamentarian democracies. New political trends are difficult to embed, because they would disturb the unstable balance between existing political wings. A different situation occurs during the emergence of a new party. No influential group of members exists yet and no program was adopted. In other words, introducing new ideas and proposing emphases is possible. German social movements used such opportunities

\footnote{As Minkoff (1997) points out, political allies are also necessary to extent protest under certain conditions.}
when the Green party was founded. Or, and even better from a social movement’s point of view, the party emerges out from the social movement. Perhaps the most famous examples are the labor parties which were directly connected to preexisting unions.

On the flip side, alliances with political parties involve risks, too. The main risk arises through the institutionalization of protest. One driving force of social movements is their distance to the political establishment and their identity as a legitimate representation. If the intersection with political parties gets too high, activists may interpret that as a reprehensible development. They might react with separation or open conflict to restore the distance between movement and the political system. A feedback effect into the social movement’s internal structure would then also be possible. Furthermore, public perception may change. Just as too much lobbying sheds doubt on the independence of political decision-making, too much overlap subverts the legitimation of the social movement.

Meyer (1993) provides one example how institutionalization bears the risk of losing credibility and reduces opportunities for powerful alliances. He shows in his study how parts of the Nuclear Freeze Movement in the US introduced moderate goals and decided to aim their efforts at the Congress instead of the broader public. Perceiving this shift of politics as backing down, the movement’s majority distanced itself. Remaining resources were not enough to achieve neither the moderate nor any other substantive goals of the movement.

On the micro level, individuals face similar difficulties. At least two role expectations accompany embeddedness into two networks. Roles of an activist and a politician are difficult to represent at the same time, especially if role expectations are connected

\footnote{A less important risk for my analysis is that political parties might exploit social movements. One example is the case study of Ho (2003) about the antinuclear movement in Taiwan. Here, the antinuclear activists were forced into the role of campaigners for the Democratic Progressive Party (DPP). Only a strong DPP could push antinuclear policies and the antinuclear movement had no alternative available.}
with identity. Think, for instance, of a person who starts to participate in a social movement. She already shares the movement’s goals and by taking part in meetings, demonstrations and so on, she develops an identity as an activist. Similar to the study of Zuckerman et al. (2003) about the film labor market, her focused identity is both a result and a prerequisite to become an accepted member of the movement. If she decides to expand her activities into a political party, an adjustment to another identity is necessary. Otherwise, she would not be able to become an embedded member in this new group. As long as she separates her roles in both groups completely, there are no problems to expect. However, she leaves advantages of a connection between both groups unused. Hence, it is likely that she will start to use her connection but starting with it will make the incompatible parts of both roles obvious for others. If tensions increase, resources are tied up to ensure loyalty in both directions or alienation between movement and party is renewed. In both cases, fewer resources are available to pursue the movement’s goals.

Especially important for my analysis is the professionalization of politics. If actors prefer politicians as a role model, their loyalty is concentrated on the party. Most decisions of actors aim at securing their parliamentary mandates. To do this, they have to convince their fellow party members first and in a second step interest groups and voters. Personal overlap is reduced to lobbying, even if there are simultaneous memberships. The structural appearance is an indicator for, but not necessarily identical to personal overlap. Therefore, it is important to keep longterm developments of the political system in mind.

Considering advantages and disadvantages of personal overlap, the subsequent question is: what amount of personal overlap between a social movement and the political system creates the most effective influence? On the one hand, the greater the structural overlap is, the more actors can use their specific connections inside the party to reinforce
their position with mutual support. In addition, more and more connections increase diversity and amount of resources. In this sense, more overlap is always better than less. On the other hand, institutionalization and closeness to the political system work in the opposite direction. Effects are increasingly stronger with higher overlap, because acceptance of alliances will be less and less tolerated by other activists. Positive and negative effects combined, personal overlap and influence should be related in form of an inverted U-shape. Ideally, social movements should try to reach the highest point of this curve or somewhere nearby to maximize their influence (see figure 2).

Figure 2: Personal overlap creates influence until it transgresses a tipping point. After that, influence decreases and the impact of personal overlap on success diminishes.

The main ideas are the following. First, the higher the proportion of activists who are also members of allied parties, the faster successes should take place. Second, personal overlap can lose some of its impact if it transgresses the tipping-point because side effects of institutionalization start to have an effect. Third, if there is a longterm development towards professionalization of politics, the overall effect of personal overlap should decrease.
Case Selection and Historical Background

I take the German antinuclear movement as an example for empirical analysis because of three reasons. First, its issue is clearly definable and therefore, this will facilitate my empirical analysis. The second reason for my choice is the federalistic structure of Germany. Germany’s regions are similar in terms of the regional political structure and their position inside the nationwide context. That is why unobserved heterogeneity between German regions is considerably less likely than between different countries and why it is justified to expect the same mechanisms at work. Comparison between similar regions that vary in the amount of antinuclear successes makes causal inferences possible. Third, the three decades of existence of the antinuclear movement in Germany provide enough data to carry out a reliable analysis.

The German Antinuclear Movement

The antinuclear movement was only one part of a broader development during the 1970s in Germany. United in their opposition against the political system, different movements and political groups shaped public debates about, among other things, women’s rights, peace or environmental protection. Like other movements in this period, the antinuclear one was not squeamish with its choice of methods. Between 1970 and 1997, 11.3 percent of antinuclear demonstrations in Germany included violence and 26.2 percent are considered as confrontational. For instance, a demonstration of 28,000 participants in Whyl led to the occupation of a construction side (Rucht 2008). Another characteristic of antinuclear protests in Germany is the strongly fluctuating number of participants. The incidents of Harrisburg (1979), Chernobyl (1986) and Tomsk (1993) amplified mobilization, but between them, protests diminished sharply (see figure 3). Greens joined the federal government in 1998 and according to Poloni-Staudinger (2009), concentration on political alliances explains the lack of mobilization afterwards. In 2000, the antinu-
clear movement celebrated a huge success, when the coalition of Social Democrats and Greens announced the nuclear phaseout. A temporary change of course in 2010 by the conservative-liberal coalition was canceled just one year later in 2011, right after the earthquake in Japan and the related events in Fukushima. Although nobody knows for sure yet, the antinuclear movement in Germany seems to have finally won its fight after about 40 years of existence.

![Graph showing number of demonstrators](image.png)

**Figure 3:** Number of demonstrators is summed up for each year over all regions by using the PRODAT dataset. Peaks in 1979, 1986 and 1993 are connected to the incidents in Harrisburg, Chernobyl and Tomsk.

Local action groups and informal networks characterize the internal structure of the antinuclear movement (Rucht 2008). At the beginning, the *Bundesverband Bürgerinitiatien Umweltschutz* (BBU) (Federal Alliance of Citizens’ Initiatives for Environmental Protection) played an important role (see Markham (2005) for details). Its aim was to unite different branches of environmental movement organizations like initiatives against water pollution, highway construction or nuclear energy. However, this alliance turned out to be unstable because direction and scope of the aims within the BBU fundamen-
tally differed. New and more successful competitors entered the stage, for instance *Bund Umwelt und Naturschutz Deutschland* (BUND) (German League for Environment and Nature Protection) in 1975, *Greenpeace Germany* in 1980, and *Robin Wood* in 1982. But most important and with a lasting effect on the German political system was the foundation of a new political party: the Greens.

**The Green Party**

The foundation of the Green Party of Germany in 1980 was a reorganization of already existing political lists. Those lists emerged from 1977 on and emphasized either ecological or leftist political agendas. One ecological list successfully took part in the regional elections in Bremen in 1979, marking the beginning of a series of electoral successes on the regional level. In 1983, the Greens made it into the Bundestag (German Parliament). Throughout the 1980s the Greens got involved in heated discussions about the future political orientation. Two wings, the ‘fundamentalists’ (Fundis) and the ‘realists’ (Realos), fought bitterly about how leftist the Greens should be, for instance whether a coalition with the Christian Democrats should be a (theoretical) option or not. While fighting internal battles, the Greens lost the first national elections after reunification in 1990 and missed the necessary five percent voters threshold in West-Germany. Since then, they slowly recovered and in 1998, they formed a coalition with the Social Democrats to form the federal government until 2005. As already mentioned, the coalition finalized negotiations with the energy producers and announced the nuclear phaseout in 2000.

Connections between the Greens and social movements played an important role right from the beginning. The Greens wanted to be a party of the movements and, at the same moment, value their independence. One way of support was financial contribu-

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tion. However, only the women’s rights, the peace and the third world movements actively took part in negotiations. The antinuclear movement wanted to keep its distance to the political system and emphasized its independence. Antinuclear objectives were nevertheless a vital part of the Greens’ political agenda, also in periods in which the antinuclear movement was not able to mobilize a lot of demonstrators. Although the movement and the party always maintained their connections, overlap did not institutionalize. Instead, activists throughout Germany joined the Greens and fought for antinuclear issues as party members. Some of them made it into regional parliaments and the Bundestag. Those actors constitute personal overlap in the following analysis.

Data Collection and Operationalization

Success

External success of social movements is widely discussed in the literature. However, different propositions exist how to measure and understand it. Concepts range from a concentration on enacted laws (e.g. Burstein and Linton (2002)) to broad understandings which include indirect and unintended consequences (e.g. Giugni (1998)). Both approaches share their reference point: the idealistic idea of the social movement.

In the case of the antinuclear movement, the idealistic goal is a world without nuclear energy production. Therefore, every prevented construction or shutdown of a nuclear reactor is an advancement. Those distinguishable steps are related to an understanding of gradual progress instead of an all-or-nothing approach (e.g. Yamasaki (2009)). In the antinuclear case, only an irreversible opting out from the nuclear energy program would be a success. I choose the first approach, because it allows me to disentangle longterm developments into shorter and comparable time periods.
The federalist German political system and the decentralized form of organization of the antinuclear movement suggest an analysis at the regional level. Only regions where success is logically possible, i.e. where plants or projects to build one existed, can be included into the dataset. Of course, every region might have been constantly being at risk of constructing a new plant. However, it is not possible to distinguish success and non-success here without access to much more detailed information about internal decision processes.

Only facilities with a clear commercial background are part of the dataset for practical reasons. Neither nuclear reactors for scientific purpose, nor related infrastructure are included, especially not waste deposal sites (see Sherman (2011) for details about the complex interactions there). After the application of those rules, seven out of 16 German regions remained part of the analysis.

Regions enter the analysis when the first antinuclear demonstration takes place. Of course, some kind of formal or informal structure evolved beforehand. It is however difficult to justify quantitatively how and, above all, when unobservable structures influence political decisions. In contrast, the first demonstrations clearly signal a social movement’s willingness to start participating in public debates. Only successes afterwards are possibly linked to the movement’s efforts. Regions exit the dataset in 2002 or when no (planned) nuclear reactors are left. Time steps are months. Different times of entry and exit result in 115 to 364 months or about 10 to 30 years of observation between 1972 and 2002. The analysis refers to 2,023 clustered data points.

I collected data from two different sources to operationalize success. The International Atomic Energy Agency (IAEA) provides online information about all 30 nuclear power stations which were put into operation in Germany. Eleven of them went offline before 2002 and are therefore considered as successes. My second data source is the official journal of the interest group Deutsches Atomforum e.V. which includes an annual report
about the state of nuclear energy in Germany. I found information about eight projects in it that were planned but never realized completely and are therefore considered as successes. Together with the eleven shutdowns, 19 successes occur between 1972 and 2002. The number of episodes is however lower. One event in Rhineland-Palatinate and two events in Bavaria took place before the first demonstrations of the antinuclear movement. Two projects in Hesse were canceled in the same month, creating only one event. Thus, 15 episodes are available for analysis.

**Personal Overlap**

Personal overlap measures the amount of activists in politics. In my case, that implies the amount of antinuclear activists in regional and national parliaments. I argued that the existence of personal overlap relies on an allied political party. Applied to the empirical case, only the Greens come into question. Other parties, especially the Social Democrats (SPD), changed their views about nuclear energy production, too, but only the Greens can be seen as a reliable ally over the whole period.

To construct personal overlap, I collected the names and periods served in office of all 352 Green Members of Parliament on the regional and national level from official lists and reports of the electoral authorities. The number of actors multiplied with their individual times of office created 21,738 observations. In the next step, I accounted for three different types of sources to identify antinuclear activists: biographical material, party documents and parliamentary documents (see table 1).

Biographies are the most reliable source and I evaluated them first. I refer to the books of Lengemann (1986) (9 actors), Simon (1996) (25 actors) and Vierhaus (2002) (120 actors) and furthermore to information provided by parliaments (52 actors). In 31 further cases, I evaluated homepages of the representatives or of organizations they are connected to. Only actors with clear membership or active participation in the
Table 1: Descriptive overview over data sources for the overlap variable. 328 out of 352 actors are identified either as anti-nuclear activists or not which corresponds to 93.2 percent of the statistical population.

Antinuclear movement were considered as activists. For instance, actors who explicitly joined the Greens because of Chernobyl were considered as activists, while actors who list other reasons were not. In sum, I found biographical material about 237 out of 352 actors which corresponds to 67.3 percent of all actors.

As the second type of source, I used historical documents of the different Green regional associations which are stored by the Archiv Grünes Gedächtnis in Berlin. It is maintained by the party-linked Hans-Böckler Foundation. It collects documents by the party and social movements in Germany in order to make them accessible to the general public. I used the register to look for documents which are clearly linked to single parliamentarian actors and evaluated them with respect to thematic emphasis. 60 additional actors (another 17 percent) could be identified. Table 1 gives an overview of their regional distribution.

Lastly, I used information about parliamentary questions. In the German political system, such questions serve as an instrument for single members of parliament to get
access to information by the government. According to the theoretical argument of this paper, antinuclear activists should show noticeable engagement here. 31 actors or 8.8 percent are classified this way (again, see table 1 for details).

In sum, 328 of 352 relevant actors are captured by the data, which corresponds to 93.2 percent. Considering the number of observations, the coverage is even higher. 21,292 out of 21,738 data points (actors*months in office) or 97.7 percent are available for analysis. 17.4 percent of them are classified as activists. Considering the broad range of movements that the Greens integrated, this number is reasonable.

To rule out bias caused by the underlying sources, I compared the proportion of activists. Among the 237 actors identified by biographical material, 44 (18.6 percent) are classified as antinuclear activists. I evaluated party documents for another 60 actors and 11 of them (18.3 percent) are activists. The proportion from the third group (parliamentarian documents) differs significantly since only 2 of 31 actors (6.5 percent) are antinuclear activists. The deviation is due to the hierarchy of sources, not bias. Only actors who could not be identified by biographies or by party documents were left in the third step. Therefore, the probability that activists are still missing here is lower. For the same reason, unidentified actors are unlikely to be activists although there is no way to know for sure.

Given the information about the actors, personal overlap with the Greens is calculated as the proportion of antinuclear activists for each month per region and graphed in figure 4. Values up to 100 percent in Rhineland-Palatinate and Schleswig-Holstein exist due to the low number of activists there compared to the other five regions. Obviously, there are hardly any values above 50 percent and I will address the issue of interpretation later. Apart from that, variance within regions is high, so personal overlap is not a rather stable regional quality. Values furthermore do not show similar patterns between regions, indicating that general developments on a higher level have no systematic influence on
regional amounts of personal overlap. In addition to the graphical overview, Table 2 includes descriptive information on personal overlap and all other variables that are used in this paper.

Figure 4: Overlap for each region over time from January 1970 to December 2002.

Statistical Analysis

Model

The aspect of timing is crucial for every analysis. For instance, social movements initiate demonstrations or other political actions that do not induce change in the same instant. Only a longitudinal perspective allows for an estimation of how much impact they really have. If demonstrations (or other actions) are decisive factors, results should follow soon. In other words: the more effective a tool of influence is, the shorter should be the time until positive changes occur. I model this acceleration of events
Distribution of Variables

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<th>Variable</th>
<th>Mean (Proportion)</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
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<td>100</td>
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<td>Budget Greenpeace Germany (/million)</td>
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<td>15.999</td>
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<td>38.889</td>
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<td>Demonstrators (/1,000)</td>
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<td>289</td>
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<td>1.572</td>
<td>1</td>
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</table>

\[N = 2023\]

Table 2: Data sources of all variables are described in the text. Media Coverage is measured as the number of articles about one demonstration. The proportion of articles on front page leaves out observations without articles.

Using a event history analysis\(^7\) I apply a parametric approach here, more precisely a Gompertz model. Designed to model mortality data, the Gompertz distribution is a useful approximation for technical devices like nuclear reactors. In short, using a Gompertz distribution implies the assumption that a success gets more and more likely as time goes on. Costs and effort to keep a technical device functioning rise with increasing age. However, results might react sensitively to different specifications of distribution. Therefore, robustness checks can be found in the appendix.

I argued that there should be an inverted U-shaped relation between personal overlap and the overall success of a movement. Consistently, the model includes both a linear and a quadratic term. The linear term is expected to be positive and the quadratic term should be negative. In addition, an time-varying coefficient for personal overlap captures the possible long-term effect of professionalization. If a hidden process alters the effect of overlap over time, the estimated coefficient should be significant.

\(^7\)See Jung (2010) for an extended discussion why event history analysis is the preferable approach to analyze data about social movements.
The theoretical argument partly relies on resource allocation within and between social movement and political party. Mutual support can reinforce each actor’s position inside parliamentary groups. Absolute numbers of activists in parliament might therefore be more important than the proportion of them within the parliamentary group. Another possible source of bias is the relative strength of the Greens in parliament. However, election results are not converted equally into seats in parliament between regions and are therefore no valid measure. Instead, I calculated proportions of seats to capture the effect.

I already described that regions leave the dataset when there is no active reactor left. Without a target, analyzing success makes no sense. However, with more than one target available, time to success might differ. Perhaps each reactor creates an additional opportunity because more people are directly affected. Perhaps more reactors complicate concentrated action because of different priorities of local action groups. One way or the other, it might bias the effect of personal overlap and I therefore included it into the model. The number of active reactors and ongoing projects also indicates how strong a region is oriented towards production of nuclear energy.

The potential danger of nuclear energy production is a pivotal argument of antinuclear movements. Core meltdowns can lead to thousands of years of radioactive contamination, resulting in uninhabitable areas and a sharp increase in cancer and other diseases. The catastrophe Chernobyl 1986 was interpreted as evidence both that meltdowns are possible and that consequences are indeed terrifying (Koopmans and Duyvendak 1995). Although different countries draw very different conclusions out of this incident (Kolb 2007), Chernobyl was subsequently an important reference point in public discussions about nuclear energy production. If Chernobyl raised public aware-

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8 As far as I am aware, there is no available information about the different sources of energy production at regional level for the relevant period.

9 Antinuclear movements in Europe and in the United States differ in this aspect. For the latter, Harrisburg in 1979 was more important because of its local reference (Jasper and Poulsen 1995).
ness about dangers of nuclear energy, time spans till success should be significantly shorter afterwards.

**The Effect of Personal Overlap**

Table 3 shows the estimated hazard ratios (HR) of two models. The first model considers personal overlap, the number of activists in parliament, the Green share of seats, the number of nuclear power plants and projects, and a dummy to distinguish the periods before and after the incident in Chernobyl. The second model provides a benchmark to assess relevance and efficiency of personal overlap. Since there is no statistical measure of explained variance in event history analysis, I calculated the Bayesian Information Criterion (BIC)\(^{10}\). A lower value indicates a more efficient model and a higher explanatory power.

Both significance and direction of the linear and quadratic term support the expected inverted U-shape of the relationship between personal overlap and influence. While the linear effect is clearly positive (HR: 1.230), the quadratic term indicates the existence of a tipping point (HR: 0.997). The estimations of the time-varying coefficient shows that something changed over the analyzed period of time (HR: 0.999). Although it is significant, the effect is however too close to 1 to interpret it substantially.

To provide empirical conclusions, I calculated predicted hazards for all observations in the dataset and sorted them by the amount of personal overlap. In addition, I calculated a simplified function with only the linear and the quadratic terms\(^{11}\). Figure 5 graphs the results. Interpretation (and therefore the graph, too) is limited to values up to 50 percent, because there are hardly observations with higher values. Nevertheless, there is a predicted tipping-point at a personal overlap of 28.57 percent and an analytical

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\(^{10}\)Following the suggestion of Raftery (1995) about the use of BIC in event history analysis, \(n\) is defined as the number of events.

\(^{11}\)\(f(x) = -0.207123 \times x - 0.0025305 \times x^2\)
Table 3: Both models assume a Gompertz distribution, results are reported as hazard ratios (HR) with their 95% confidence interval in brackets below. The second model is calculated as a benchmark for estimating importance of personal overlap. The lower BIC of the first model indicates that the inclusion of personal overlap into the model is efficient. The two most important findings are that there is a significant influence of personal overlap on success and that Chernobyl changed the rules persistently.
tipping point at about 40.93 percent. The exact values must however be interpreted with caution. Missing observations with higher values of personal overlap might bias the estimation. Although the exact turning point cannot be estimated, there is clear evidence for its existence as such, and the range between both tipping points is a reasonable approximation.

But how important is the amount of personal overlap to understand success? If personal overlap were an irrelevant factor, the second model should be more efficient, because it includes less predictors. However, the BIC value of the first model is clearly

Figure 5: Predicted hazards are based on estimations of the first model (see table 3) and ordered by the amount of personal overlap afterwards. Only observations with an overlap of maximal 50 percent are shown, because there are hardly observations with higher values. The dashed curve is calculated with the linear and quadratic coefficient for personal overlap (see text for details). At 28.57 percent, predicted hazards have a visible tipping point, while the tipping point of the analytic function is at about 40.93 percent. Although the exact locations are not interpretable, they describe a reasonable range. Predicted hazards and the analytical function differ because of opposing influences of other variables in the model.
lower (42.615 and 48.539), indicating that personal overlap is an important aspect of antinuclear success.

The analysis furthermore provide evidence that the nuclear catastrophe of Chernobyl marks a turning point in nuclear policies (HR: 25.548 and 30.103). Kolb (2007) argues in his book that Chernobyl led to complex interactions between social movement, public opinion and political actors. Following his line of reasoning, Chernobyl triggered a fundamental shift of political opportunities. Depending on the movement's strength and the institutional setting, nuclear policies were altered. My analysis confirms the overall connection between Chernobyl and consequent decisions about nuclear energy production, but the confidence interval is very broad and the actual amount of this effect therefore not reliable.

Alternative Mechanisms of Influence

Estimations clearly show an influence of personal overlap on social movement’s success. However, the other two ways of influence I mentioned before might have an influence on success as well. I therefore provide models for lobbying and public pressure and compare their results with the previous one. Table 4 contains all models and estimations.

Lobbying The first alternative explanation for social movement’s influence is lobbying. There are two propositions in the literature how to include it into statistical models. Especially studies about political decisions in the United States refer to published amounts of money which were spent during election and other campaigns (e.g. Wright (1990), Baldwin and Magee (2000), Wawro (2001)). Interest groups control so-called political action committees that are allowed to contribute. Carrying out a survey is an alternative way to collect necessary data (e.g. Andrews and Edwards (2005)). Because there is no comparable data for Germany, I contacted the three most important environmental
## Time to Shutdown

<table>
<thead>
<tr>
<th></th>
<th>Lobbying Pressure</th>
<th>Public Lobbying and Public Pressure</th>
<th>Complete Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Overlap (%)</td>
<td>1.246***</td>
<td>1.098-1.412</td>
<td>0.997*</td>
</tr>
<tr>
<td>Personal Overlap (%) Squared</td>
<td>0.997*</td>
<td>0.995-0.999</td>
<td>0.995**</td>
</tr>
<tr>
<td>Time Varying Coefficient Personal Overlap</td>
<td>0.999**</td>
<td>0.998-1.000</td>
<td>0.998-1.000</td>
</tr>
<tr>
<td>Budget Greenpeace Germany (/million)</td>
<td>0.990</td>
<td>0.962-1.012</td>
<td>0.933-1.092</td>
</tr>
<tr>
<td>Demonstrators (/1,000)</td>
<td>1.002</td>
<td>1.002</td>
<td>1.004</td>
</tr>
<tr>
<td>Media Coverage</td>
<td>0.813</td>
<td>0.809</td>
<td>0.795</td>
</tr>
<tr>
<td>Article on Front Page</td>
<td>2.600</td>
<td>2.522</td>
<td>3.134</td>
</tr>
<tr>
<td>Number of Activists in Parliament</td>
<td>0.691</td>
<td>0.419-1.198</td>
<td>0.426-1.400</td>
</tr>
<tr>
<td>Share of Seats (%)</td>
<td>1.092</td>
<td>1.081</td>
<td>1.001</td>
</tr>
<tr>
<td>Post-Chernobyl Period</td>
<td>32.402*</td>
<td>32.570*</td>
<td>32.817*</td>
</tr>
<tr>
<td>Number of Nuclear Projects/Power Plants</td>
<td>1.269</td>
<td>1.269</td>
<td>1.264</td>
</tr>
<tr>
<td>BIC</td>
<td>48.503</td>
<td>47.334</td>
<td>47.274</td>
</tr>
</tbody>
</table>

Table 4: Again, all four models assume a Gompertz distribution and results and their confidence intervals are reported as hazard ratios (HR). Effects of public pressure and lobbying are not significant in any model configuration. All three models without personal overlap are furthermore less efficient. Their BIC values (47.274-48.503) are higher than both the complete model (41.010) and the model that included personal overlap only (42.615).
organizations and asked for their budgets. Robin Wood and BUND were not able to provide financial reports, but Greenpeace Germany was. Hence, I used their numbers (in millions) to model lobbying effects.

In contrast to personal overlap, lobbying has no significant impact on the shutdown or prevention of construction of nuclear power stations in Germany. The absence of an effect should however not be interpreted as a general disproof of the impact of lobbying on politics. Instead, the results indicate that lobbying has limits in its applicability that do not apply to personal overlap.

**Public Pressure** Public pressure via the mass media is the second alternative way how social movements influence political parties. Demonstrations have characteristics of newsworthy events, called *news factors* in the literature. Media coverage creates pressure because public figures in general and especially politicians pay attention to their publicity. In the case of politicians, bad publicity endangers their chances to win elections. Higher rates of mobilization should lead to a higher amount of media coverage that again raises pressure on public figures and makes faster achievements more likely. I control for both mobilization and media coverage by referring to PRODAT, a dataset collected by the *Wissenschaftszentrum Berlin für Sozialforschung* (WZB) about protest events in Germany between 1950 and 2002. Mobilization is operationalized as the number of demonstrators per month and region, divided by 1000, and media coverage is calculated as the number of articles about each demonstration. I furthermore included a dummy into the model to account for front-page coverage. Prominently placed reports about anti-nuclear demonstrations might have a higher effect than less noticeable ones.

Results indicate that public pressure has also no significant impact on success of the antinuclear movement in Germany. Neither the number of demonstrators, nor the amount of media coverage or front-page coverage turned out to be decisive factors. One
possible explanation is that political actors only react to new information about their electorate’s opinion and that demonstrations lose its impact with time (see Burstein and Linton (2002) for a summary and Lohmann (1993) for details). However, a meta-analysis by Uba (2009) suggests that public opinion has no significant effect on policies. Other than that, Gupta (2009) points out that successful mobilization can increase a movement’s ability to fundraise. An investigation of how mobilization had an effect on the German antinuclear movement itself is out of scope of this paper, but certainly worth a detailed analysis.

Comparison and Summary

Table 3 provides evidence for the impact of personal overlap. Table 4 complements those results with a comparison of alternative mechanisms, namely lobbying and public pressure. The results show that there is no model configuration in which lobbying or public pressure has a significant effect on the time till a success of the antinuclear movement. Again, I calculated BIC to compare efficiency. Although estimators of both alternative explanations are not significant, their inclusion into the model increases efficiency.

In sum, results suggest that personal overlap is an important and working mechanism when it comes to a social movement’s influence on the political system. Alternative explanations do not contradict this result. In fact, they strengthen the argument of personal overlap because significance stays stable with additional variables. Furthermore, the catastrophe of Chernobyl changed the rules. Estimations clearly indicate that success was more likely afterwards than before.

Conclusion

The initial question of this paper was how social movements effectively create influence on political parties. I argued that personal overlap is a more stable and stronger instru-
ment of influence than public pressure or lobbying. Following this general statement, I described why personal overlap loses some of its impact if it grows too large. Main arguments were role conflicts and issues of trust. Therefore, success and personal overlap should relate in an inverted U-shaped form in the data.

In spite of some data limitations, event history analyses provided clear evidence that personal overlap works. Its effect is not weakened by alternative explanations or varying model specifications. Caution is required if it comes to the interpretation of the tipping-point. However, I want to stress once again that results indicate its existence, although more precise information about the influence of personal overlap can only be derived by a transfer to other empirical settings. For instance, Uba (2009) showed how legitimacy, stability and type of regime are important to evaluate influence of social movements and outcomes. A presidential democracy might follow other rules than a parliamentarian one because there are other accesses to political decisions (e.g. Burstein and Hirsh (2007)).

Such a transfer is one way to further investigate underlying mechanisms. Conditions were very advantageous in the case of antinuclear movement and the Greens. Problems of ideological threshold, for instance, are not likely to occur here. If there is more distance between social movements and political parties in general, personal overlap might not be equally effective or, as mentioned at the beginning, not possible at all.

As a result of this paper, there are some connecting factors with the existing literature. First, it is suggested that political parties have stronger influence on political decisions than social movements (Burstein and Linton 2002). The concept of personal overlap opens up another possibility. Instead of separating two different kinds of actors, personal overlap accounts for their interaction. Second, the role of alliances is widely discussed (e.g. Giugni 2007 or Wang and Soule 2012). This concept can be translated into micro-level interactions by applying personal overlap on it. If it is possible
to identify individuals like I did in this paper, we are able to get a deeper understanding of the very basic mechanisms of social movement’s influence. To some extent, my approach complements recent studies, which emphasize the importance of individuals to understand social movements (e.g. Dorius and McCarthy (2011), Opp and Brandstetter (2010) and Meyer (2006)). Third, personal overlap is one way to explain why social movements seem to be more powerful, if they concentrate on non-public activities (Yamasaki 2009).

In sum, personal overlap as a theoretical concept can be empirically tested and was provisionally confirmed in this paper. I am confident that it will allow us to gain further insights into social movements and how some of them achieve more success than others.
Appendix - Alternative Modeling and Robustness Checks

There are two parts of the statistical model which might bias the results. One is concerned with the identification of activists in parliament and the inclusion or exclusion of unintentified actors into the model. It is possible that an exclusion of missings systematically overestimated the amount of personal overlap. Another source of missing robustness is the choice of an appropriate base hazard. There are several base hazards to choose from and I provide a comparison between them to check for differences between estimations due to this choice.

Personal Overlap

24 out of 352 members of parliament could not be identified via biographical material, party documents or parliamentarian documentation. As I argued before, it is unlikely that those missings were ‘hidden activists’, because we would expect an activist to attract attention one way or the other. Nevertheless, I calculated personal overlap without accounting for those missings. Maybe, this procedure overestimated personal overlap and it would be more appropriate to assume the missings to be non-activists. I therefore provide a comparison of both approaches in table 5.

There are only slight differences between both models. If the amount of personal overlap is overestimated in the first model, its effect would be underestimated. The conclusions in the main text therefore rest on the more conservative estimations.

Different Base Hazards

In table 6 I summed up estimations of the full model with different assumptions about the base hazard of the underlying process. All variables are included identically into the models. The only exception is the semi-parametric Cox model. Here, the three variables about public pressure are omitted. Cox models are based on sequential order of events
Different Amounts of Personal Overlap

<table>
<thead>
<tr>
<th></th>
<th>Missings not used for Calculation</th>
<th>Missings treated as Non-Activists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Overlap (%)</td>
<td>1.246*** (1.098-1.415)</td>
<td>1.360*** (1.253-1.475)</td>
</tr>
<tr>
<td>Personal Overlap Squared (%)</td>
<td>0.997** (0.995-0.999)</td>
<td>1.015* (0.998-1.000)</td>
</tr>
<tr>
<td>Time Varying Coefficient Personal Overlap</td>
<td>0.999** (0.998-1.000)</td>
<td>0.999 (0.993-0.998)</td>
</tr>
<tr>
<td>Budget Greenpeace Germany (/million)</td>
<td>1.009 (0.933-0.92)</td>
<td>1.015 (0.936-1.101)</td>
</tr>
<tr>
<td>Demonstrators (/1,000)</td>
<td>1.004 (0.997-1.010)</td>
<td>1.004 (0.998-1.010)</td>
</tr>
<tr>
<td>Media Coverage</td>
<td>0.795 (0.492-1.286)</td>
<td>0.799 (0.493-1.297)</td>
</tr>
<tr>
<td>Article on Front Page</td>
<td>3.143 (1.170-5.797)</td>
<td>2.981 (1.159-5.956)</td>
</tr>
<tr>
<td>Number of Activists in Parliament</td>
<td>0.772 (0.426-1.400)</td>
<td>0.889 (0.353-2.237)</td>
</tr>
<tr>
<td>Share of Seats (%)</td>
<td>1.001 (0.834-1.200)</td>
<td>0.973 (0.810-1.168)</td>
</tr>
<tr>
<td>Post-Chernobyl Period</td>
<td>23.878* (1.690-337.468)</td>
<td>23.328* (1.654-329.105)</td>
</tr>
<tr>
<td>Number of Nuclear Projects/Power Plants</td>
<td>1.264 (0.829-1.928)</td>
<td>1.272 (0.810-1.998)</td>
</tr>
</tbody>
</table>

Table 5: As mentioned in the text, it is possible that all actors with missing information are not activists. If that is true, personal overlap would be overestimated. Therefore, I calculated the complete model from table 4 again, this time assuming that missings are non-activists. Effect of personal overlap over time is less significant than before while significance of the squared term increases. Apart from that, there are some deviations between coefficients, but these findings do not suggest relevant bias in the data.
and do not use information between those events. Since there were no demonstrations and therefore also no media coverage in the months of antinuclear successes, there is no variance in the data which could be used for estimation.

There are three main findings. First, although the amount of impact varies, the effect of personal overlap is robust against other specifications. Significance of the quadratic term vanishes in the exponential model \((p = 0.054)\), which is likely due to the already mentioned lack of observations with more than 50 percent personal overlap. Second, the effect of Chernobyl is largely robust, too. And third, the Gompertz model is the most efficient parametric model measured by BIC. Cox models are calculated with partial likelihood and can therefore not be compared the same way. In sum, results are consistent with the theoretical reasoning above.
### Estimations with different Base Hazards

<table>
<thead>
<tr>
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<th>Gompertz</th>
<th>Weibull</th>
<th>Exponential</th>
<th>Cox</th>
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</thead>
<tbody>
<tr>
<td><strong>Personal Overlap (%)</strong></td>
<td>1.246***</td>
<td>1.271***</td>
<td>1.231**</td>
<td>1.134**</td>
</tr>
<tr>
<td>(1.098-1.415)</td>
<td>(1.108-1.458)</td>
<td>(1.067-1.421)</td>
<td>(1.045-1.231)</td>
<td></td>
</tr>
<tr>
<td><strong>Personal Overlap Squared (%)</strong></td>
<td>0.997*</td>
<td>0.997*</td>
<td>0.998*</td>
<td>0.998*</td>
</tr>
<tr>
<td>(0.995-0.999)</td>
<td>(0.995-1.000)</td>
<td>(0.995-1.000)</td>
<td>(0.996-1.000)</td>
<td></td>
</tr>
<tr>
<td><strong>Time Varying Coefficient Personal Overlap</strong></td>
<td>0.999*</td>
<td>0.999**</td>
<td>0.999*</td>
<td>0.999*</td>
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<td>(0.998-1.000)</td>
<td>(0.998-1.000)</td>
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<td></td>
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<tr>
<td><strong>Budget Greenpeace Germany (/million)</strong></td>
<td>1.009</td>
<td>0.962</td>
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<td>(0.933-0.92)</td>
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<td>(0.981-1.008)</td>
<td>(0.889-1.281)</td>
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<td><strong>Demonstrators (/1,000)</strong></td>
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<td>1.001</td>
<td>1.003</td>
<td>1.076</td>
</tr>
<tr>
<td>(0.997-1.010)</td>
<td>(0.994-1.009)</td>
<td>(0.996-1.011)</td>
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<tr>
<td><strong>Media Coverage</strong></td>
<td>0.795</td>
<td>0.777</td>
<td>0.797</td>
<td>0.797</td>
</tr>
<tr>
<td>(0.492-1.286)</td>
<td>(0.442-1.366)</td>
<td>(0.512-1.244)</td>
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</tr>
<tr>
<td><strong>Article on Front Page</strong></td>
<td>3.134</td>
<td>2.657</td>
<td>2.690</td>
<td>2.690</td>
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<td>(0.170-57.979)</td>
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<tr>
<td><strong>Number of Activists in Parliament</strong></td>
<td>0.772</td>
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<td>0.446</td>
</tr>
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<td>(0.426-1.400)</td>
<td>(0.465-1.429)</td>
<td>(0.469-1.443)</td>
<td>(0.133-1.495)</td>
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</tr>
<tr>
<td><strong>Share of Seats (%)</strong></td>
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<td>0.952</td>
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<td>(0.773-1.171)</td>
<td>(0.905-1.307)</td>
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<td><strong>Post-Chernobyl Period</strong></td>
<td>23.878*</td>
<td>22.641*</td>
<td>18.21*</td>
<td>17.831</td>
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<td>(1.690-337.468)</td>
<td>(1.943-263.850)</td>
<td>(1.921-172.619)</td>
<td>(0.740-429.819)</td>
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<td><strong>Number of Nuclear Projects/Power Plants</strong></td>
<td>1.264</td>
<td>1.160</td>
<td>1.097</td>
<td>1.266</td>
</tr>
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<td>(0.829-1.928)</td>
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<td>(0.747-1.609)</td>
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</tr>
<tr>
<td><strong>BIC</strong></td>
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<td>42.304</td>
<td>44.198</td>
<td>omitted</td>
</tr>
</tbody>
</table>

*** p<0.001   ** p<0.01   * p<0.05

Table 6: All four models in this table are reestimations of the complete model in table 4. Demonstrations and media coverage could not be used in the Cox model, because there is no variation between points of time with events. The linear effect of personal overlap is robust for all specifications. The quadratic term miss significance when an exponential base hazard is assumed. As the exponential model is the less efficient one, this difference is negligible.
References


