



2011

2012-01-18

**Party Influence on Nuclear
Power Opinion in Sweden**
Sören Holmberg
Per Hedberg

Report 2011:5
Swedish National Election Studies Program
Department of Political Science
University of Gothenburg



Impact of Party

Theories purporting to explain public attitudes to nuclear power tend to overflow.¹ As with nuclear weapons, studies on nuclear power opinions have a proliferation problem. There are too many models in a crowded marketplace of theories pointing at, for example, the importance of economic self-interest, psychological traits, gender differences, post-materialist values, knowledge levels, media coverage, belief systems and occupation. Paradoxically, the perhaps most important explanatory variables tend to get lost. They are the political variables and the opinion molding by the political parties.

The conflict over nuclear power is primarily a political phenomenon, not a social or psychological phenomenon. Like most other political issues, the conflict over nuclear power was politicized at a specific point in time - in the early 1970s in the Swedish case – then experienced periods of intensive and not so intensive dispute, and will eventually be depoliticized. Or maybe the conflict will be repoliticized time after time after more or less dormant periods. After all, it will take time before all high level radioactive waste is harmless.

An often overlooked driving force in processes like this is different elite groups – especially political parties in systems with strong cohesive parties. Usually, instead, an idealistic opinion forming model is presupposed. Conflicts and opinions are supposed to originate from below - from the people – and be formed by self-interest, socioeconomic factors, basic values and different individual traits. In a socio-psychological model like this, the role of political parties is to aggregate and articulate opinions coming from below. The role of parties is not to form opinions from above.

A more realistic model acknowledges the fact that in all democracies various elite groups, among which political parties and candidates are the most noticeable, engage themselves in trying to influence public opinion. This process of opinion molding from above is occasionally dismissed as somewhat suspect and not really belonging to the democratic family. Given the historic experience of party propaganda it is an understandable reaction, even if it is erroneous. However, in democracies with freedom of expression, opinion formation executed from above by candidates and parties are an integral and legitimate process. We can not have a system where everybody is allowed to speak, but political parties and candidates.

In this article Sweden and the thirty five year long conflict over nuclear power will be used as a case in point. The impact of party will be analyzed based on data from mass surveys. Changes in opinion across time as well as differences between parties will be highlighted. Results from commercial polls are used, but most of the analysis draws on data gathered by the Swedish National Election Studies (SNES) and by the annual surveys done by the SOM-Institute at the University of Gothenburg (Oscarsson and Holmberg 2008; Holmberg and

¹ Parts of this article is inspired by and follows closely *The Impact of Party on Nuclear Power Attitudes in Sweden* (Stockholm: SKN Report 48 1991) by Sören Holmberg. A first draft of the present article was presented at a conference in Mannheim, April 24-25 2009.

Weibull 2008). The period covered will be from 1973, when nuclear power began to become politicized in Sweden, through 2008/2009 when there are signs of nuclear power once again becoming repoliticized after having been more or less a semi-dormant issue ever since the referendum in 1980.

The Formative Years

It all commenced in concord. In the beginning of the 1970s all political parties supported a *Riksdag* decision to build eleven nuclear reactors in Sweden. At the time energy policies were a topic for experts and a limited number of politicians. Mass media was silent and the general public ignorant.

The tranquillity was abruptly broken in the years 1973/74. The Center Party (formerly the Agrarian Party) suddenly ended the unity among the parties by declaring itself against a nuclear buildup. A politicization process started fueled by the international oil crises. Nuclear power as well as other energy issues became front page news. Political parties, environmental groups and the power industry started information campaigns. An opinion forming process began which in terms of scope and intensity is unmatched in modern Swedish history (Vedung 1979, Jasper 1990, Sahr 1985, Holmberg, Westerståhl and Branzén 1977).

The first opinion polls in the beginning of the politicization process revealed large proportions of no opinions and a majority in favour of expanding nuclear power in Sweden. Very soon, however, already in late 1974 or early 1975 (useful polls are scarce) public opinion shifted drastically under the influence of the intensive debate. Anti-nuclear sentiments were augmented while no opinions and pro-nuclear views decreased. A majority of the public came to support a no to a nuclear buildup. The anti-nuclear majority among the public was to prevail until after the parliamentary election of 1976.

On the elite level, the politicization process was brought to a close in 1975 when all parties took clear positions on the nuclear issue. The conflict pattern that emerged was very unusual for Swedish politics. Traditionally in Sweden, most political issues are structured by the dominant left-right cleavage. That was not the case for the nuclear power issue, however. The lineup of the parties was different from the usual left-right ordering. The Center Party was joined by the Left Party Communists and by the Christian Democrats (not represented in parliament at the time) in opposing a nuclear expansion, while Social Democrats, Liberals and Conservatives all favored a buildup – Social Democrats and Conservatives more so than Liberals. Consequently, Social Democrats and the Center Party ended up far apart and in different camps. On most left-right issues the two parties are usually positioned adjacent to each other in the middle.

The new and unusual lineup of the parties quickly had an impact among the public. Previously, before the parties positioned themselves in the new way Conservative voters were most pro-nuclear and, most interesting, Social Democratic and Center Party

sympathizers had very similar views. However, after the politicization in the spring of 1975, Social Democratic and Center Party supporters went their separate ways. Social Democratic voters followed their party and became (or remained) in favour of a nuclear expansion while Center Party voters adjusted their views in accordance with the new party line and became negative to a nuclear buildup.

Social Democratic leaders were less successful in this opinion forming process than the leaders of the Center Party. A substantial minority of Social Democratic followers was still anti-nuclear after the process. Among Center Party sympathizers attitudes were more unanimous. This situation was to remain through the years, i.e. Social Democratic followers being most often more divided on nuclear power than supporters of the Center Party.

The trend toward increasing opposition to nuclear power among the general public did not continue after the 1976 election. Opposition to the buildup of nuclear power had been one of the decisive factors behind the Social Democratic loss in the election. In the campaign leading up to polling day, the two pro-nuclear non-Socialist parties – the Liberals and the Conservatives – kept a very low profile on the nuclear issue not to disturb the Center Party in its critique of the pro-nuclear policies of the Social Democratic government. It was a tactic that paid off. The Social Democrats, but not the Liberals and the Conservatives, lost at the polls because of the party's pro-nuclear position (Holmberg, Westerståhl and Branzén 1977, Holmberg 1978).

After the election win, Liberals and Conservatives came out forcefully in favour of nuclear expansion. In the newly formed non-Socialist government they “forced” Prime Minister Thorbjörn Fälldin of the Center Party to activate a reactor, despite that he personally had promised not to in the election campaign. A drawn-out discussion ensued on deceit and broken promises. The credibility of Fälldin and the Center Party was seriously hurt and the anti-nuclear movement lost momentum.

Effects on public opinion were dramatic. Anti-nuclear sentiments started to plummet while pro-nuclear attitudes became more frequent. The pro-nuclear opinion shift was visible across all political and social groups, but it was especially noticeable among followers of the Liberal and Conservative parties. The revitalized opinion molding in favour of nuclear power from the Liberal and the Conservative parties were effective. A Sifo poll in early 1977 showed that opposition to nuclear power since the election had dropped by an astounding 27 percentage points among Conservative followers and by 29 points among sympathizers of the Liberal Party.

The downward slide of anti-nuclear views was not to stop until late 1978. Once more it was something occurring on the elite level of politics that triggered the turn around. In October the Fälldin three-party government fell apart because they could not agree on how to handle the nuclear issue. The Center Party left the government and stopped compromising with the Liberals and the Conservatives. This gave new life to the debate and instilled new hope into

the anti-nuclear movement. Opposition to nuclear power began to increase again, especially among followers of the Center Party.

In the spring of 1979, the anti-nuclear movement received another boost caused by the Three Mile Island accident in the USA. Negative attitudes to nuclear power increased immediately by about 5-10 percentage points. The change was noticeable in all segments of the public. Among party supporters the shift was most pronounced among followers of the Social Democrats. A reason for that was that a few days after the TMI-accident, Olof Palme and the Social Democratic leadership were the first among the pro-nuclear parties to yield to an old demand by the anti-nuclear movement to hold a referendum. This change was perceived as being anti-nuclear. When the Social Democratic leaders "changed" their position many of their supporters followed suit.

However, the opinion gain accrued by the anti-nuclear movement because of the Harrisburg accident were not to last. It disappeared very fast in the spring and summer of 1979. When the parliamentary elections were held in the fall of 1979 public opinion was back to about an even split between support and opposition to nuclear power.

As soon as the elections were over everybody geared up for the referendum in March 1980. Social Democrats, Liberals, and Conservatives argued for an expansion of nuclear power before an eventual phase out (alternative 1 and 2 in the referendum). The Center Party together with the Communists and the Christian Democrats opposed the nuclear buildup and favored a fast phase out of existing reactors in ten years (alternative 3). At the time alternatives 1-2 were considered pro-nuclear and alternative 3 anti-nuclear.

The pro-nuclear alternatives 1-2 won the referendum with 58.0 percent of the vote. The anti-nuclear alternative 3 got 38.7 percent with 3.3 percent returning a blank ballot. Turnout was lower than in parliamentary elections but nevertheless relatively high. It was 75.6 percent. The victory for the pro-nuclear side had a catch, though. On the ballot papers of alternative 1 (supported by the Conservative) as well as alternative 2 (supported by Social Democrats and Liberals) it was stated that nuclear power would be phased out in Sweden sometime in the future. Consequently, it was a strange referendum. You could not vote but for phasing out nuclear power. Alternative 1 was perceived as the most pro-nuclear position but even alternative 1 did talk about an eventual phasing out of nuclear power in Sweden.

As a follow up on the referendum the Riksdag decided that all Swedish nuclear reactors should be shut down by the year 2010, by the latest. Sweden had adopted a nuclear phase-out policy. All parties except the Conservatives accepted 2010 as the last year for nuclear power in Sweden.

The pro-nuclear side did not win the referendum in the spring campaign leading up to the vote. They won it earlier in the fall of 1979. It was then, under the influence of party campaigns that positive sentiments to nuclear power pulled ahead of anti-nuclear attitudes. Opinion forming originating from the parties was very successful in the referendum. A substantial majority of all opinion shifts that occurred during the campaign happened among

voters who originally had different nuclear opinions than their own parties. They followed cues from their party and changed their nuclear vote. Of all opinion shifts on nuclear power between the 1979 election and the 1980 referendum, about 80 percent involved voters who changed their views to that of their preferred party. Among the parties, the Center Party and the Communists were most successful in mobilizing their followers in the referendum. Social Democrats and Conservatives were somewhat less successful, while the Liberals were least successful in getting their own supporters to vote according to party (Holmberg and Asp 1984).

All in all, 75 percent of the voters in the referendum voted for an alternative that their own party supported. Among Center Party and Communist followers 90 percent voted the party line. The comparable figure for the Social Democrats is 74 percent, for the Conservatives 67 percent, for the Christian Democrats 77 percent, and for the Liberals 45 percent. It is no exaggeration to conclude that the 1980 referendum was a party election as well as a vote on nuclear power. The political parties played a major role in influencing how people voted.

Between Referendum and Chernobyl

After the referendum, nuclear power quickly lost its dominant position on the public agenda. In the lead up to the referendum in the elections of 1976 and 1979 nuclear power was named the most important election issue by 21 and 26 percent of voters, respectively, and ranked number 1 on both occasions. Since then the comparable proportion of voters mentioning nuclear or energy issues as important for their vote has been much smaller - between 1-3 percent in the elections in 1982-2002, but with a little upturn to 5 percent in the election of 2006.

However, the nuclear power issue was not completely depoliticized after the referendum, but it became less politicized. In media other topics like the general strike/lock out of 1980 and the economic problems of Sweden replaced nuclear power on front pages. To a large extent the parties withdrew from the fight. As could be expected these changes had an effect on the public opinion. The campaign-induced pro-nuclear feelings of the referendum period began to fade somewhat. Negative attitudes to nuclear power regained their strength from before the referendum. A majority of voters who changed to an anti-nuclear standpoint after the referendum were Social Democratic followers who in 1979 were negative to nuclear power, but voted for the party line (alternative 2) in the referendum. As soon as the party pressure had eased they return to being anti-nuclear.

After the referendum and the return-to-normalcy effect that followed, public opinion on nuclear power did not change much for a number of years. If there were a trend in those years, it was a small one favoring nuclear power. The stillness, however, was drastically changed by the Chernobyl disaster in April 1986. Like in many other countries, the accident sent pro-nuclear attitudes downwards in Sweden. The immediate effect was huge. Attitudes to nuclear power became 10-20 percentage points more negative depending of what measure

we use. The dramatic effect was only temporary, however. In some data the spike in anti-nuclear sentiments was still visible two years after Chernobyl, but for the most part the impact was gone within a year of the catastrophe.

One consequence of the accident, however, that did not disappear as quickly was the impact on the Swedish political agenda. Nuclear power made a comeback in the media and the degree of politicization began to increase once more. When to start closing down reactors became a disputed issue as well as whether the phasing-out process should be completed in 2010 as decided by the Riksdag or prolonged. Among the parties, the Conservatives intensified their old opposition to dismantling nuclear power while the Greens (a new party founded after the referendum), the Communists and the Center Party argued for an even faster phasing-out period ending before 2010. Social Democrats and Liberals were more split, although the official position was to uphold the decision to phase-out all reactors by the year 2010. Within both parties there were vocal pro-nuclear groups. In the Social Democratic Party the pro-nuclear voices were especially strong among some trade unionists.

Not surprisingly, the rebirth of the nuclear issue affected public opinion. Starting already before the elections of 1988, but intensified after, pro-nuclear opinions became more prevalent. In the 1991 elections when the non-Socialist parties won a decisive victory pro-nuclear support soured. The increase in support for nuclear power occurred among followers of all non-Socialist parties, including among Center Party and Christian Democratic voters, but also among Social Democratic supporters. It was only among supporters of the Greens and the Communists that the pro-nuclear trend was resisted. Their voters did not become more in favour of nuclear power going into the election of 1991.

The 1980s was a rollercoaster for the nuclear issue in Sweden. The decade started with the referendum in 1980 and the decision to phase-out nuclear power, ran into the Chernobyl disaster in 1986 and ended up in the election of 1991 with a new non-Socialist government and increasing public support for using nuclear power.

In the following we will leave the historical account of how the conflict over nuclear power has evolved in Sweden among parties and in public opinion. Instead we will concentrate on analyzing more concrete data from mass surveys focusing on the question of the potential influence of party on nuclear power attitudes. The historical overview indicated that party played a decisive role in forming mass attitudes to nuclear power, especially during the formative years in the 1970s. The question we will address is if and how the impact of party on nuclear sentiments has changed in the less politicized period of the 1990s and early 2000s.

Swedish Opinion on Nuclear Power 1976-2008

The results in Figures 1 and 2 summarizes Swedish mass attitudes to nuclear power since the issue was first politicized in the mid 1970s. In Figure 1 nuclear opinion is measured using a subjective self-classification question with three explicit response alternatives – mainly in favour of nuclear power, mainly against nuclear power or no decided opinion. The question

wording is: “There are different views on nuclear power as an energy source. What is your view? Are you mainly in favour or against nuclear power or don’t you have any decided opinion?”

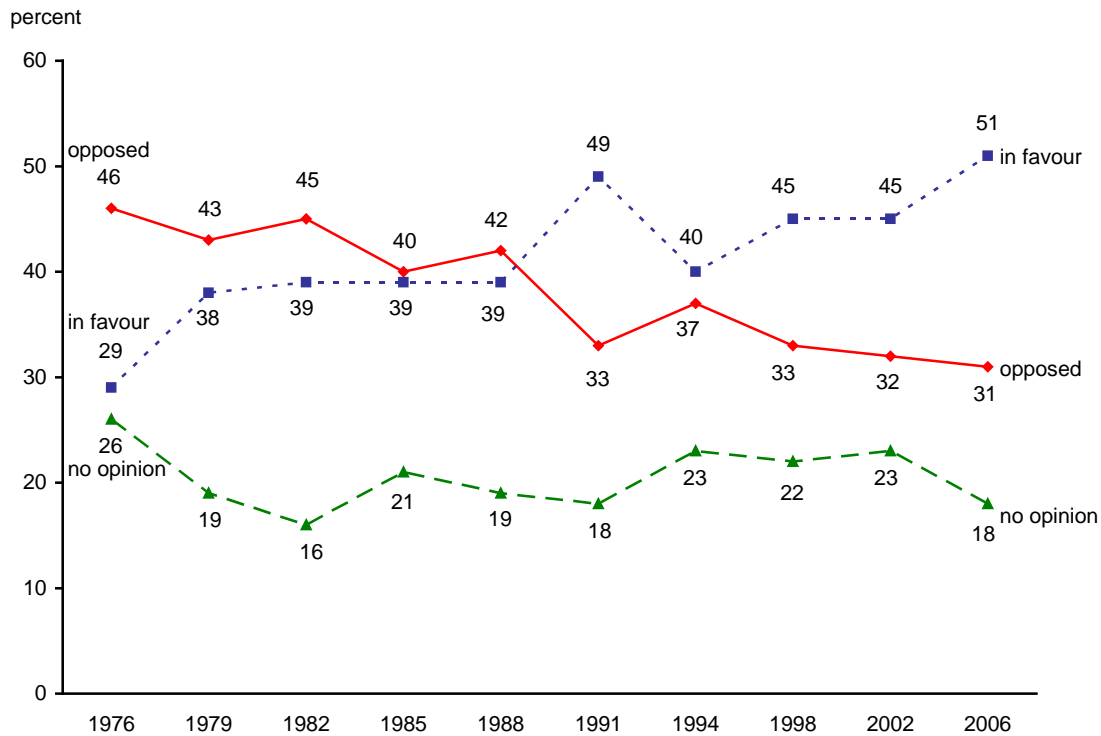
The advantage as well as the drawback of a simple self-classifying question like this is that it lacks any specific policy content. In that sense it resembles the classic left-right question. It measures some kind of ideological self-identification. That makes it possible to use the self-classifying question across time even though the nuclear power discussion might shift focus. The drawback is equally obvious. The question lacks policy content. Policy wise, the meaning of being for or against nuclear power might change over time.

In contrast, our other measurement series in Figure 2 is based on a question specifying a number of more specific policy options regarding the long term use of nuclear power in Sweden. The question wording has been the same through the years but the exact formulation and number of response alternatives has changed somewhat over time. The question is: “What is your view on the long term use of nuclear power as an energy source in Sweden?” The explicit response alternatives have been five in the most recent studies: “Abolish nuclear power very soon; Abolish nuclear power, but not until our present reactors are worn out; Use nuclear power and renew/modernize the reactors, but do not build any more reactors; Use nuclear power and build additional reactors in the future; No definite opinion.” In Figure 2 the results have been classified into three opinions – in the long run *abolish* nuclear power, in the long run *use* nuclear power and *no decided opinion*.

The longest time series in Figure 1, based on people’s self-classification of themselves, show that opposition to nuclear power was strongest in the election of 1976 and that people identifying themselves as against nuclear power were more numerous than the number of people supporting nuclear power up until the 1988 election. After that, starting in 1991, people classifying themselves as in favour of nuclear power have been more numerous than people opposing nuclear power; most decidedly so in the last election in 2006. Thus, the long term trend has been in favour of nuclear power. Swedes classifying themselves as in favour of nuclear power have increased from 29 percent in 1976 to 51 percent in 2006. At the same time, the proportion of Swedes identifying themselves as against nuclear power has gone down from 46 percent in 1976 to 31 percent in 2006.

Our other time series starting in 1986 and based on a more specific policy-based question show the same trend. Support for using nuclear power long term has increased in Sweden from 30 percent at the time of the referendum in 1980 and from 12 percent immediately after the Chernobyl accident in 1986 to 51 percent in 2008. During the same period, support for the contrary view that nuclear power in the long run should be abolished has diminished from 66 percent in 1980 and 75 percent in 1986, after Chernobyl, to 31 percent in 2008. The relative majority among Swedes has changed from supporting phasing-out nuclear power up until 2001 to supporting retaining nuclear power from 2003 and onwards.

Figure 1 Swedish Opinion on Nuclear Power 1976 – 2006 (percent)



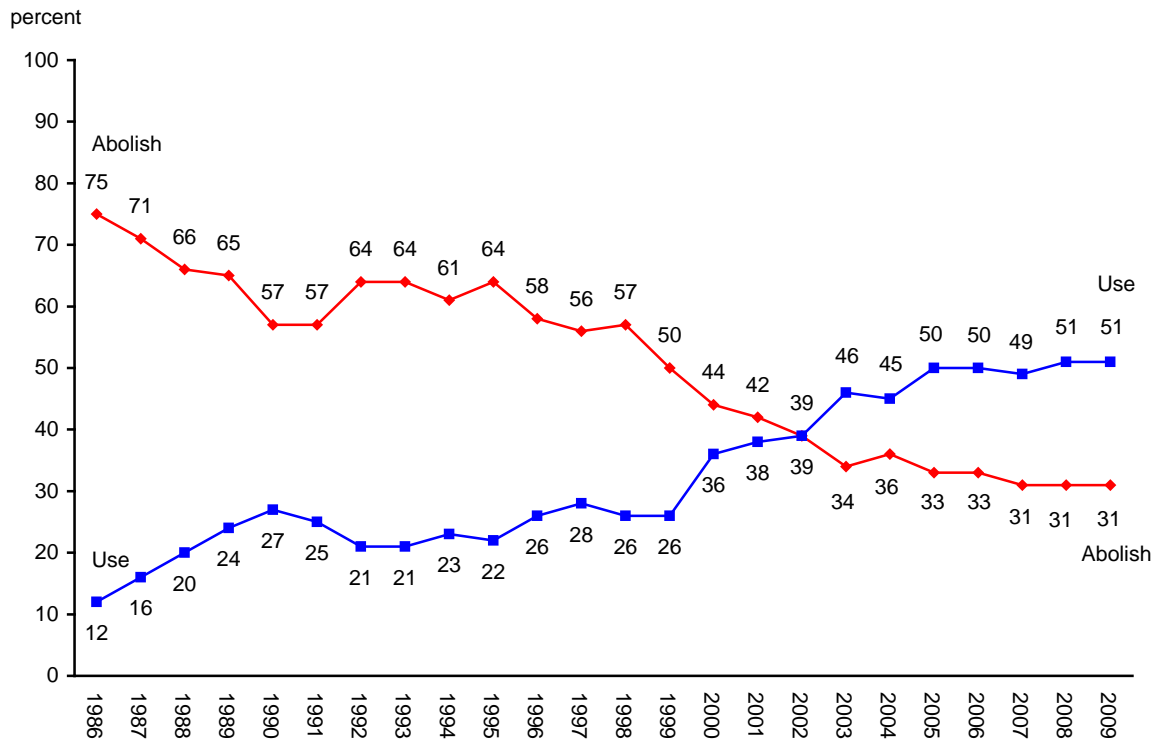
Comment: The results for 1976 come from Holmberg et al *Väljarna och kärnkraften* (1977). The results in 1979 – 2006 come from The Swedish National Election Studies (SNES). Percentages are computed among all respondents. **Question:** "There are different opinions on nuclear power as an energy source. What is your view? Are you mainly in favour or mainly opposed to nuclear power or don't you have any decided opinion?"

Ironically, most of this opinion change happened when Sweden actually started to phase-out nuclear power in the period 1999-2005 when the two reactors at Barsebäck just outside Malmö were closed. In 1998 before the closing of reactor I in Barsebäck, 57 percent supported the phase-out plan. In 2005 after the shutdown of reactor II only 33 percent still supported abolishing nuclear power. Neither of the two decisions to shutdown the reactors had a majority support in the public opinion.² On the contrary, at the time, most Swedes

² In 1998 the SOM Institute asked when the nuclear phase-out should start. A majority (52 percent) answered never or later than in the decided period 1999-2002. Only 29 percent were in favour of the decided early decommissioning (Holmberg 1999). In the fall of 2004 Temo, a polling institute, asked whether Swedes thought it was good or bad to shut down Barsebäck II, which was planned to happen in the spring of 2005. Bad answered a majority (60 percent). A minority of 29 percent said it was good. Among party sympathizers only

opposed the closing of the reactors, included most followers of the Social Democratic government who took the decisions with the support of the Center Party and the Left Party (Holmberg 2000).

Figure 2 Swedes on the Use of Nuclear Power as an Energy Source (percent)



Comment: The data come from the SOM institute, based on annual nationwide surveys in Sweden; Sample size 3 000 persons 15-85 years old; Mail questionnaires with an average response rate of 65 percent. *Question:* “What is your view on the long term use of nuclear power as an energy source in Sweden?” Five response alternatives; “abolish nuclear power very soon; abolish nuclear power, but not until our present reactors are worn out; use nuclear power and renew/modernize the reactors, but do not build any more reactors; use nuclear power and build additional reactors in the future; no definite opinion.” In 1986 the “Don’t know” response was left out; therefore the results for this year have been adjusted. The actual results were 84 percent “abolish”, 13 percent “use” and 3 percent no answer. All respondents are included in the percent calculation.

In terms of self-identification the pro-nuclear movement in Sweden secured support from a relative majority of the people already in the early 1990s. However, in policy terms, whether

supporters of the Left Party and the Greens more often answered good than bad. All other party followers more often answered bad than good, including supporters of the Center Party and the Social Democrats.

Sweden in the long run should phase-out or not phase-out nuclear power, the same relative majority did not materialize until the early 2000s, after the phase-out phase actually started. Today, an absolute majority of Swedes are identifying themselves as in favour of nuclear power and want Sweden to use nuclear power, not phase it out.³

In a comparative perspective, Swedish public opinion is one of the most pro-nuclear in Europe. In a Eurobarometer survey in 2008, among all twenty seven member states, Sweden was ranked as number 5 in terms of support for nuclear power among its citizens. Lithuania, Czech Republic, Bulgaria and Hungary were ranked slightly ahead. But among West European nations Sweden was number 1, ahead of other nuclear using countries like Finland, France, United Kingdom and Germany.

Swedes are not nuke averse anymore. Swedes today are nuke accepting, if not nuke embracing. A majority want to use nuclear power in the long run. But it is only a minority so far who want Sweden to build more reactors than the present ten. In the 2008 SOM Study only 21 percent indicated that they wished more reactors built. Present day Swedish opinion is conservative. Use what we have as long as possible. Do not phase out. But do not expand.⁴

Opinion Changes Among Different Party Sympathizers

The results in Tables 1 and Tables 2 document how attitudes to nuclear power have evolved among sympathizers with different parties since the 1970s in Sweden. In Table 1, the development based on the self-classifying question can be found. Table 2 presents the comparable results for the policy-based question. In Figures 3 and 4 - in a more pedagogical manner - we highlight what has happened by using multi-colored graphs indicating how different groups of party sympathizers have changed their views over time. In the graphs we

³ On the individual level there is a semi-strong positive correlation between our self-classifying and our policy based nuclear opinion measures. However, in the 1980s and 1990s, the aggregated level estimates looked quite different. Anti-nuclear answers were less common and pro-nuclear answers were more common using the self-classifying question. The policy-based question produced more anti-nuclear responses and less pro-nuclear answers. This meant that a fair number of people classified themselves as in favour of nuclear power but they did not want nuclear power used in the long run. They wanted a phase-out, but they wished to use the existing power plants as long as possible. This difference between the two measures does not exist anymore in the 2000s. Self-classification and policy view go more hand in hand today.

⁴ In February 2009, the non-Socialist four party government opted for a new nuclear policy. The phase-out law should be abolished and it should be possible to build new reactors on the sites of the old ones when they are worn out. However, not more than ten reactors could be constructed replacing the present ten. The Center Party and the Christian Democrats, who had been supporting the phase-out plan since the referendum, signed on to the compromise. So did the Liberals, but the Liberal Party quit supporting the phase-out plan already in the middle of the 1990s. Less surprising is that the Conservatives signed on as well - they have never "really" supported any phase-out of nuclear power in Sweden. Now their position since thirty years is to be the law of the land. The three opposition parties - Social Democrats, Greens and the Left Party (former Communists) - are still true to the old plan of phasing-out nuclear power in Sweden; but only very slowly not to hurt industry and welfare and provided that renewable energy sources are at hand.

focus on the slow downturn in opposition to nuclear power. Sympathizers with all parties have become less anti-nuclear over the years; but more so for some parties than for others.

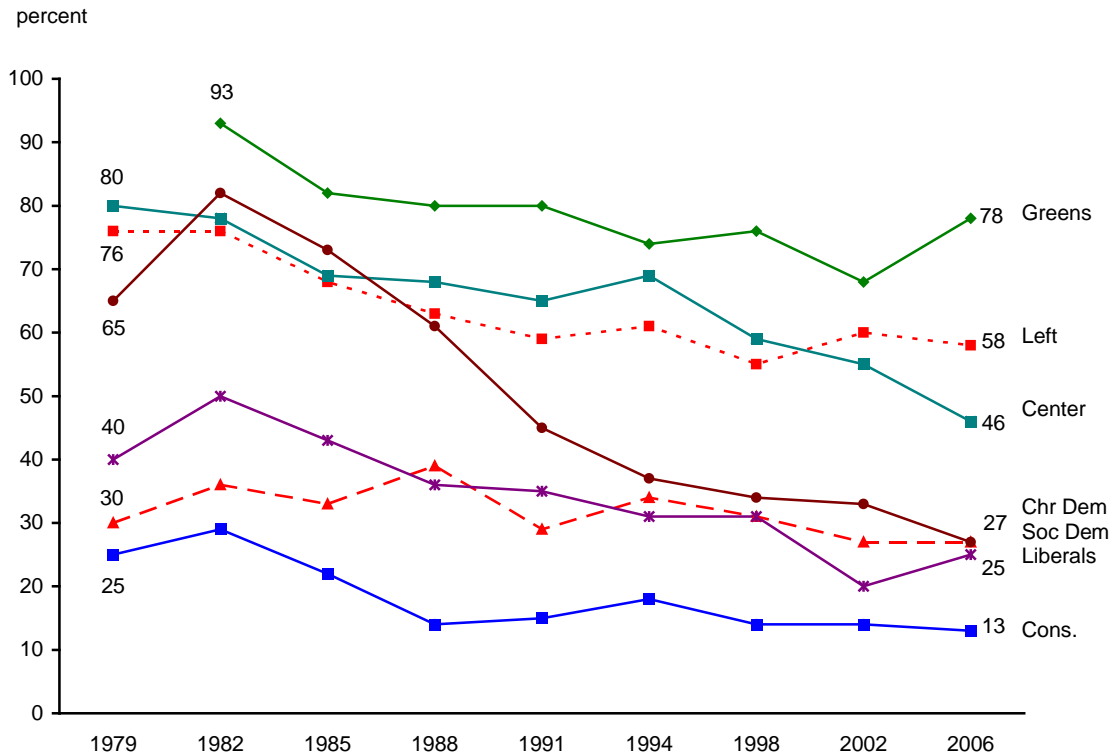
Table 1 **Opposition to/Support for Nuclear Power Among Party Voters in Sweden 1979 – 2006 (percent)**

Party	1979	1982	1985	1988	1991	1994	1998	2002	2006
Left Party	76/16	76/18	68/21	63/23	59/28	61/20	55/24	60/19	58/28
Social Democrats	30/48	36/44	33/43	39/39	29/50	34/40	31/46	27/45	27/49
Greens	-	93/7	82/14	80/12	80/7	74/11	76/17	68/17	78/14
Center Party	80/8	78/13	69/15	68/19	65/21	69/17	59/24	55/21	46/40
Liberals	40/38	50/38	43/38	36/46	35/53	31/49	31/48	20/62	25/60
Christian Democrats	65/15	82/11	73/12	61/23	45/36	37/40	34/45	33/49	27/53
Conservatives	25/55	29/60	22/61	14/74	15/71	18/66	14/75	14/73	13/74
New Democrats	-	-	-	-	19/66	-	-	-	-
Sweden Democrats	-	-	-	-	-	-	-	-	23/46
all	43/38	46/39	40/39	42/39	33/49	37/40	33/45	32/45	30/51

Comment: See Figure 1 for the question wording. The results show percent respondents answering that they oppose/are in favour of nuclear power. Party is operationalized as party vote in the Riksdag elections. Results broken down by party is not available for the 1976 election.

Starting by looking at Figure 1, the party line up on nuclear energy in the 1970s and 1980s and in the referendum is clearly visible among party voters. Supporters of the anti-nuclear parties (alternative 3-parties in the referendum) - the Center Party, the Communists, the Christian Democrats and the Greens – are decidedly more against nuclear power than supporters of the more nuclear-positive parties, especially compared to followers of the Conservative Party (an alternative 1-party 1980), but also in comparison with supporters of the Social Democrats and Liberals (alternative 2-parties in the referendum).

Figure 3 Opposition to Nuclear Power Among Voters for Different Swedish Parties 1979-2006 (percent)



Comment: See Figure 1 for the question wording. The data come from SNES. The results for New Democrats in 1991 were 19 percent opposed. For Sweden Democrats the percent opposed were 23 percent in 2006. Social Democrats depicted as 4 - - - - 4 and Christian Democrats as)-----).

The decline in opposition to nuclear power has occurred across all party groups but at a different pace. If we compare opinions at the elections in 1979/82 with the situation at the last election in 2006, the proportion of voters answering that they are against nuclear power has gone down most drastically among sympathizers with Christian Democrats (-38 percentage points) and the Center Party (-34 points). The comparable downturn is around -10 to -20 points among followers of the most anti-nuclear parties, the Greens and the Left Party (former Communists), as well as among supporters of the most pro-nuclear parties, the Liberals and the Conservatives. Supporters of the Social Democratic Party have changed considerably less. Among them self-identification as a person against nuclear power has always been a minority position, but it has only diminished by -3 points between 1979 and 2006.

The result for the Social Democrats is interesting and could be perceived as a bit awkward for the party. Since the referendum the party has been supporting a nuclear phase-out policy while at the same time most supporters have identified themselves as in favour of nuclear power. It is not a paradox, however. To some extent it is a result of image building at the time of the referendum. Alternative 2 meant first building up nuclear power than phase it out slowly. Two messages were deliberately sent. Social Democrats and alternative 2 were in favour of nuclear power in the short and intermediate perspective, but against in the long run. It was a successful strategy in 1980. It helped alternative 2 to be the winner in the referendum and it kept the Social Democratic Party together.

Looking at relative majorities across time for all parties in Table 1, it is interesting to note that in terms of self-identification most party groups have not changed their majorities over the years. More followers of the Conservative Party and the Social Democrats have always classified themselves as in favour of nuclear power rather than against.⁵ More so among Conservatives than among Social Democrats, however. In a comparable fashion, most followers of the Center Party, the Greens and the Left Party have also always identified themselves in a stable manner, but in this case as against nuclear power. Center Party followers are close to switching side in the election of 2006, but not quite. Two party groups have switched side, though. Most Liberal followers changed from classifying themselves as opposing nuclear power to supporting it in 1988 and have stayed nuclear supporters ever since, most decisively in 2002 and 2006. Christian Democratic voters took the same route but a little later. Starting in 1994, most supporters of the Christian Democrats have been identifying themselves as pro-nuclear, most evidently in the election of 2006.

Now, moving over to look at how the more policy-based opinions have changed among different party groups, it is apparent that most developments look the same (see Figure 4). Support for phasing-out nuclear power has dwindled among followers of all parties. Most dramatically for sympathizers with the Liberals. Among them the old phase-out plan has lost backing from 79 percent in 1986 down to only 19 percent in 2008, a change of -60 percentage points. The comparable result is around -45 points for the followers of the Conservatives, the Christian Democrats, the Center Party and the Social Democrats. The loss of support for the phase-out plan is somewhat less dramatic among followers of the Green Party and the Left Party – down by -23 points among Greens and by -27 points among Leftists.

Looking more closely at the latest results from 2008, one notices that the phase-out plan is only supported by relative majorities among sympathizers with three parties – the Greens, the Left Party and the Center Party (only barely). Most supporters of the other four parties are in favour of using nuclear power. Most evidently for Conservative and Liberal followers, but also for supporters of the Social Democrats and the Christian Democrats.

⁵ In the election of 1988, Social Democratic voters split evenly between being in favour or being against nuclear power. Thirty nine percent supported each position. The remaining 22 percent had no opinion.

Table 2 **In the long run, abolish or use nuclear power in Sweden**
(percent abolish/use)

Party	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Left Party	83/5	73/15	84/12	75/22	72/19	75/14	84/9	84/10	76/14	78/13	58/18
Social Democrats	79/9	73/15	67/19	69/19	59/22	59/24	66/17	67/16	62/20	65/21	58/22
Greens	85/7	83/9	83/4	85/5	74/14	92/0	94/0	89/0	85/5	80/9	73/12
Center Party	89/1	88/2	78/11	82/12	75/17	78/9	87/4	86/4	75/12	69/12	76/8
Liberals	79/10	73/16	64/24	67/24	59/27	68/17	70/19	70/21	64/25	60/25	53/28
Christian Democrats	73/16	89/0	84/4	67/17	62/21	67/15	76/7	66/18	67/24	69/15	57/16
Conservatives	63/25	50/38	51/43	45/47	44/48	40/47	52/37	49/41	47/42	50/41	41/42
New Democrats	-	-	-	-	-	45/33	49/35	58/25	45/36	-	-
Sweden Democrats	-	-	-	-	-	-	-	-	-	-	-
all	75/13	71/16	66/20	64/24	57/27	57/25	64/21	64/21	61/23	64/22	53/24

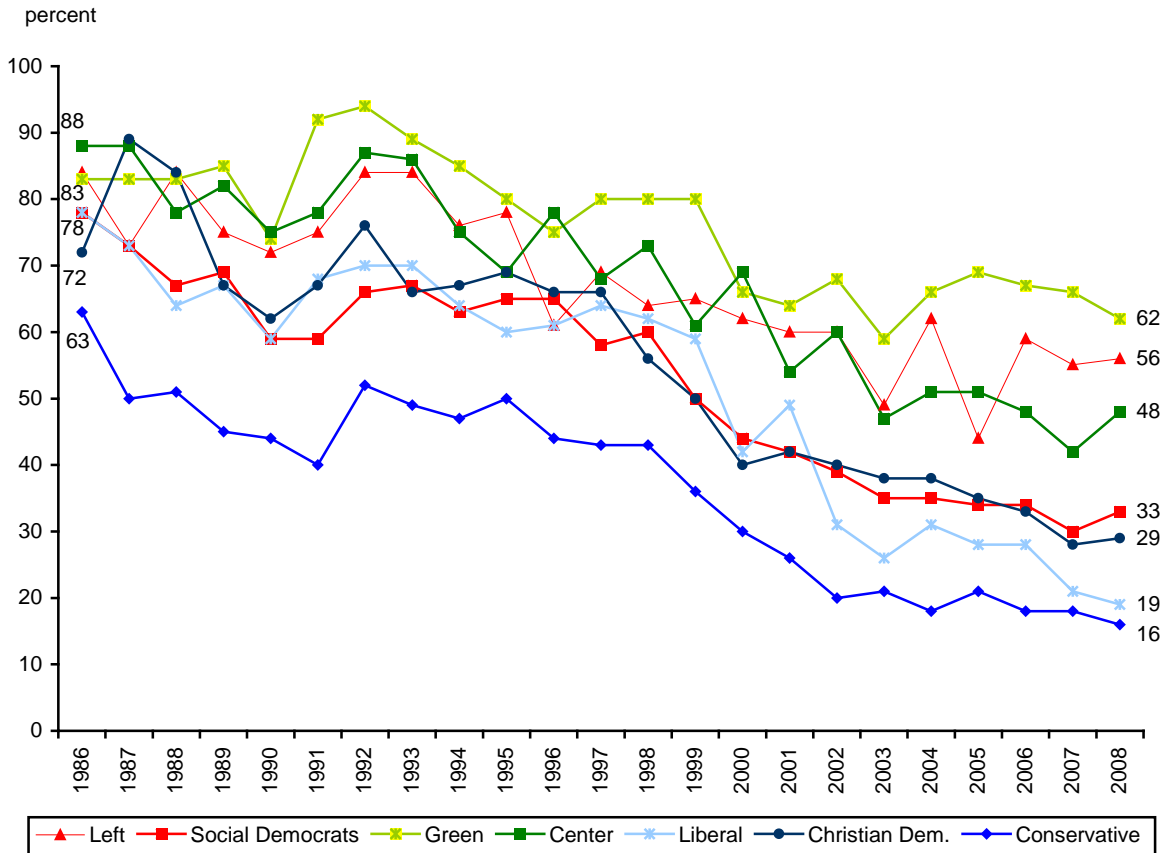
Party	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Left Party	67/12	64/18	65/14	62/23	60/24	60/18	49/28	62/27	44/37	59/29	55/27	56/29
Social Democrats	54/25	60/21	50/24	44/33	42/34	39/37	35/43	35/43	34/47	34/49	30/47	33/47
Greens	71/5	80/8	80/4	66/14	64/17	68/19	59/18	66/13	69/15	67/20	66/22	62/23
Center Party	61/12	73/12	61/14	69/18	54/30	60/21	47/41	51/37	51/43	48/39	42/45	48/37
Liberals	63/22	62/27	59/24	42/38	49/42	31/52	26/57	31/59	28/57	28/59	21/63	19/65
Christian Democrats	56/16	56/24	50/29	40/41	42/43	40/43	38/51	38/39	35/56	33/51	28/51	29/54
Conservatives	41/43	43/46	36/47	29/58	26/61	20/65	21/69	18/69	21/69	18/68	18/68	16/73
New Democrats	-	-	-	-	-	-	-	-	-	-	-	-
Sweden Democrats	-	-	-	-	-	-	-	-	-	11/78	18/65	22/62
all	51/26	57/26	50/26	44/36	41/38	39/39	34/46	36/45	33/50	33/50	31/49	31/51

Comment: See Figure 1 for the question wording. The results come from annual surveys done by the SOM Institute at the University of Gothenburg. The question also includes a none opinion response alternative which is included in the percentage base together with no answers. See Holmberg and Weibull (2009). *Trends in Swedish Opinion 1986-2008*.

Going back to the time of the Chernobyl disaster, results in Table 2 reveal that clear majorities of followers of all parties, chocked by the accident, favoured a nuclear phase-out in Sweden. Since then four party groups have changed their relative majorities and become opposed to a nuclear phase-out. Conservative supporters have been split very long but most of them switched over to opposing a phase-out, first in 1989-1991 and than again more permanently in 1996. Most Social Democrats became against the phase-out plan later, in the year 2003. Liberal sympathizers changed their relative majority about the same time, more specifically a year before in 2002. Most Christian Democrats, finally, switched over even

earlier than that. In 2000, a relative majority of Christian Democratic followers were abandoning the phase-out plan.

Figure 4 Percent in Favour of Abolishing Nuclear Power Among Swedes With Different Party Sympathies (percent)



Comment: See Figure 2 for the question wording.

Most followers of the three other parties have stayed loyal to the old phase-out plan all across the years. Most decisively among Green Party supporters, but also among followers of the Left Party. The results for the Center Party are somewhat less clear cut, however. The relative majority in support of the phase-out plan has been rather slim since 2003 and on one occasion, in 2007, the relative majority actually flipped over and showed more support for *not* phasing out nuclear power.

Knowledge of Party and Voter Positions

One obvious prerequisite for parties being able to “rationally” influence voter attitudes, is that party positions are known to the general public. Irrational influence through wrongful perceptions and wishful thinking is always a threat but if parties want their own real positions to have an impact they better make their standpoints known to the voters. In the Swedish case we have studied how well voters know the nuclear positions of the political parties at three occasions – at the 1976 election, at the referendum in 1980 and in a special study in 1989. Regrettably, more recent studies have not been made. The results in Tables 3, 4 and 5 show the outcome of the three investigations.

Table 3 **Perceptual Accuracy – Swedish Voters’ Knowledge of the Political Parties’ Positions on Nuclear Power Before and After the Election in 1976 (percent)**

	Left		Center		Soc Dem		Lib.		Cons.	
	B	A	B	A	B	A	B	A	B	A
Correct perception	43	70	89	95	88	92	50	57	58	70
Incorrect perception	20	10	4	1	3	3	27	31	18	17
Don't know	37	20	7	4	9	5	23	12	24	13
Sum percent	100	100	100	100	100	100	100	100	100	100

Comment: The results show how all eligible voters perceived the nuclear power positions of the five parties before (B) and after (A) the election in 1976. Data come from a special election study done by SIFO in cooperation with Holmberg, Westerståhl and Branzén (1977). The Left Party and the Center Party were against expending nuclear power in 1976 while the three other parties were in favour.

The level of accurate knowledge was highest at the referendum. Among all voters no less than between 75 to 90 percent could correctly pinpoint the positions of the five parties then represented in parliament. In 1976, perceptual accuracy was on the same level for the two main contenders the Social Democrats and the Center Party. They scored 92 and 95 percent correct perceptions respectively after the election. For the other three parties the comparable figures were somewhat lower, although still an impressive 57 to 70 percent accurate perceptions. The results for 1976 also reveal that all parties were effective in spreading their nuclear messages during the election campaign. Correct knowledge about all parties’ nuclear positions was better after the campaign than before. On average for the five parties, the campaign resulted in an increase in the proportion of accurate perceptions by 11 percentage points. Campaigning parties matter.

Table 4 Knowledge of Which Alternative the Political Parties Supported in the 1980 Nuclear Power Referendum Among Eligible Voters Just After the Campaign

Perception	Left	Soc Dem	Center	Lib.	Cons.
Party supported Alt. 1	2	5	1	10	<u>86</u>
Party supported Alt. 2	3	<u>86</u>	3	<u>75</u>	4
Party supported Alt. 3	<u>85</u>	2	<u>90</u>	3	1
Don't know	10	7	6	12	9
Total	100	100	100	100	100

Comment: Like in Table 3 the results are based on a set of closed-ended questions, asking the respondent about each party's position. The accurate perceptions are underlined.

Table 5 Accurate perceptions of Party Positions on Nuclear Power Phase-Out Among Eligible Voters in 1989 (percent)

	Percent Accurate Perceptions of Phase-Out positions	Percent Accurate Perceptions of a Don't Phase-Out position
Left Party	29	--
Social Democrats	63	--
Greens	62	--
Center Party	68	--
Liberals	26	--
Christian Democrats	4	--
Conservatives	--	60

Comment: The results are based on data from a series of open-ended questions. The percentages show the proportion of all eligible voters who voluntarily named the respective parties' nuclear power positions correctly.

The outcome of the 1989 study is a little difficult to compare with the results from 1976 and 1980 since the 1989 study is based on a series of open-ended questions while the other two studies are based on closed-ended questions asking the respondents for each party's position. Taken at face value, however, the results in 1989 also indicate high levels of knowledge of party standpoints, although maybe not as high levels as previously during the formative years in the 1970s. The nuclear positions of the major parties, Social Democrats and Conservatives, as well as of the two most profiled anti-nuclear parties, the Greens and the Center Party, were correctly known to some 60 percent of all grown-up Swedes in the late 1980s. That is not all that bad. Actually, it is quite good. It is difficult *not* to argue that Swedes' knowledge of the parties' nuclear positions in the 1970s and 1980s were quite satisfactory for the purpose of making it possible for the political parties to have an influence on the nuclear attitudes of the voters.

It is more simple for political parties to conduct campaigns and mold opinions if they know what voters think. Movement is always easier and more effective if the terrain is known. In Sweden, we have twice measured how well leading politicians (members of parliament) are aware of their own voters' position on the nuclear issue. It was done in the Riksdag Studies of 1985 and 2006 (Brothén and Holmberg 2009). The result was very similar (see Table 6). Members in all parliamentary parties are very knowledgeable about their own voters' nuclear attitudes. On average about 80 percent of the members can accurately locate the majority position of their voters on the nuclear issue – somewhat better in 1985 (82 percent) than in 2006 (76 percent).

Table 6 **Members of the Swedish Parliament Perceive What Their Own Voters Think About Nuclear Power in 1985 and 2006 (percent)**

	Percent Members of Parliament Who Correctly Perceive the Majority Position on the Nuclear Power Issue Among Their Own Party's Voters	
	1985	2006
Left Party	100	76
Social Democrats	72	60
Greens	--	89
Center Party	97	89
Liberals	63	92
Christian Democrats	--	58
Conservatives	96	89
All Members	82	76

Comment: The results come from the Swedish Riksdag Studies in 1985 and 2006 (Brothén and Holmberg 2009). The response rate among members were above 90 percent on both occasions. For details see Holmberg and Esaiasson 1988:120 and Holmberg 2009.

The conclusion is pretty clear. Available evidence on the elite as well as on the mass level indicates that the potential for party influence on citizens' nuclear attitudes has been quite good in Sweden, at least in the 1970s and 1980s.

Party Driven Opinions

At the time of the referendum in 1980 a clear majority of Swedes had the same attitude to nuclear power as their preferred party. In the referendum, only a small minority of on average 16 percent voted against their party's position. Most voters followed their party (80 percent on average). To a large degree that was the effect of successful party molding. Panel data for the period 1979-1980 indicate that voters who in 1979 did not have any decided nuclear attitude or had an opinion different to that of their preferred party had a strong

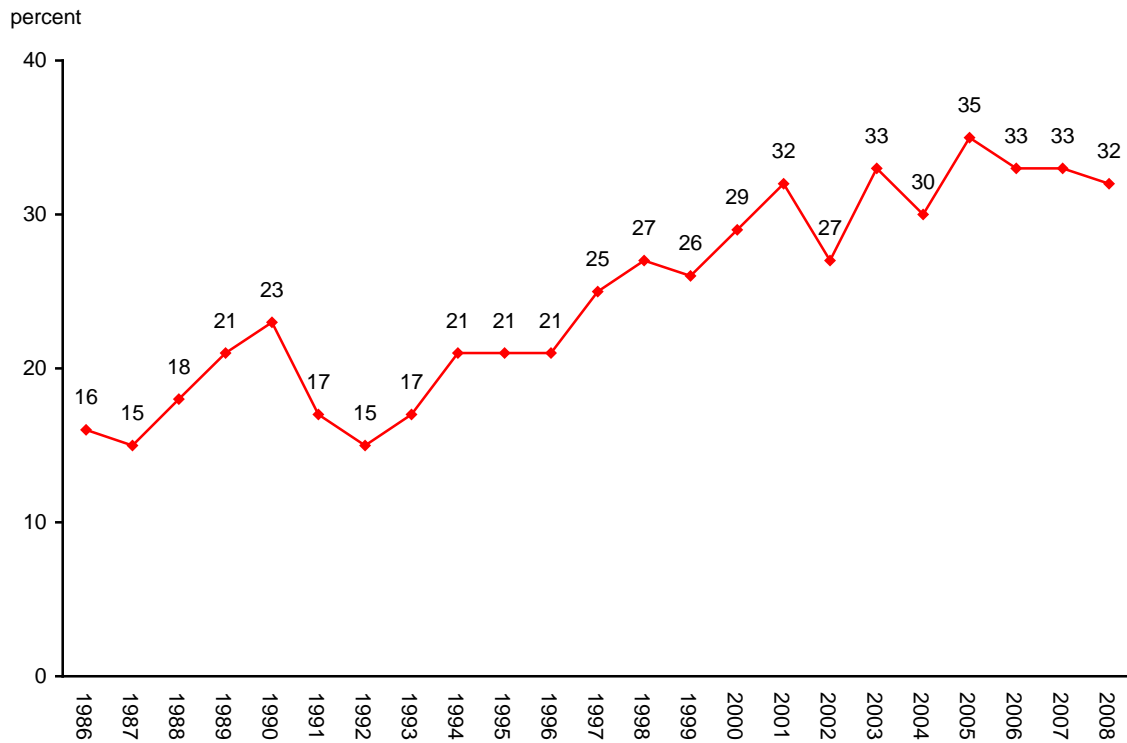
tendency to change their nuclear attitude toward that of their party (Holmberg 1991, Holmberg and Asp 1984). Among all people who changed their opinion on nuclear power, the proportion who did it in accordance with their own party's position was 71 percent in the 1979-1980 election panel. The comparable result for the panel 1976-1979 is 62 percent. Party clearly had an impact on the forming of nuclear attitudes in Sweden during the formative years in the late 1970s.

The interesting question is to what extent this changed when the nuclear issue became less politicized after the referendum. A first indication that the impact of party has diminished is that panel data covering the elections in the 1980s reveal fewer people changing their nuclear attitudes to be in line with their party's. In the Swedish National Election Study (SNES) election panels of 1979-1982, 1982-1985 and 1985-1988 only about 40 percent of all attitude changers on the nuclear issue change their point of view in accordance with their own party. In the formative years the comparable result was between 60-70 percent.

Another indication of the lessening impact of party on nuclear attitudes is that the proportion of Swedes who have a different opinion than their own party has steadily risen since the referendum and the mid 1980s. The proportion of Swedes who on average across six or seven parties differ from their party's position on nuclear power was 16 percent in the referendum and still about that same proportion immediately after the Chernobyl accident. Since then, however, the proportion of party dissenting Swedes on the nuclear issue have gone up considerably to around 25 percent in the mid and late 1990s and to somewhat over 30 percent in the early 2000s (see Figure 5). Most Swedes still think as their party on the nuclear issue, but the deviating minority has grown larger over the years.

Yet another very revealing bit of evidence supporting the finding that the influence of party on mass level nuclear attitudes was strong in the 1970s in Sweden, but that the impact of party has weakened since then, can be found if we study individual level attitude changes on the nuclear issue in the election panels of the Swedish National Election Studies (SNES). Specifically, we have looked at instances of attitude changes in the direction of where the voters' party stand on nuclear power. Among stable party voters and among party switchers what are the proportions of people who change their nuclear opinion to that of their own stable or new party between time 1 and time 2? The hypothesis is that the proportion of opinion changers in the direction of their own party's standpoint was larger in the formative years in the 1970s, than has been the case since. Parties have become less effective as opinion molders when the nuclear issue is no longer a hot issue among voters. The attitude changes measured via an index in Figure 6 show the outcome of the analysis for seven panels covering the elections between 1976 and 2006. The index runs from -1.0 (all possible attitudes changes are going in the wrong direction, away from the standpoint of the preferred party) to +1.0 (all possible attitudes changes are going in the right direction, toward the position of the preferred party).

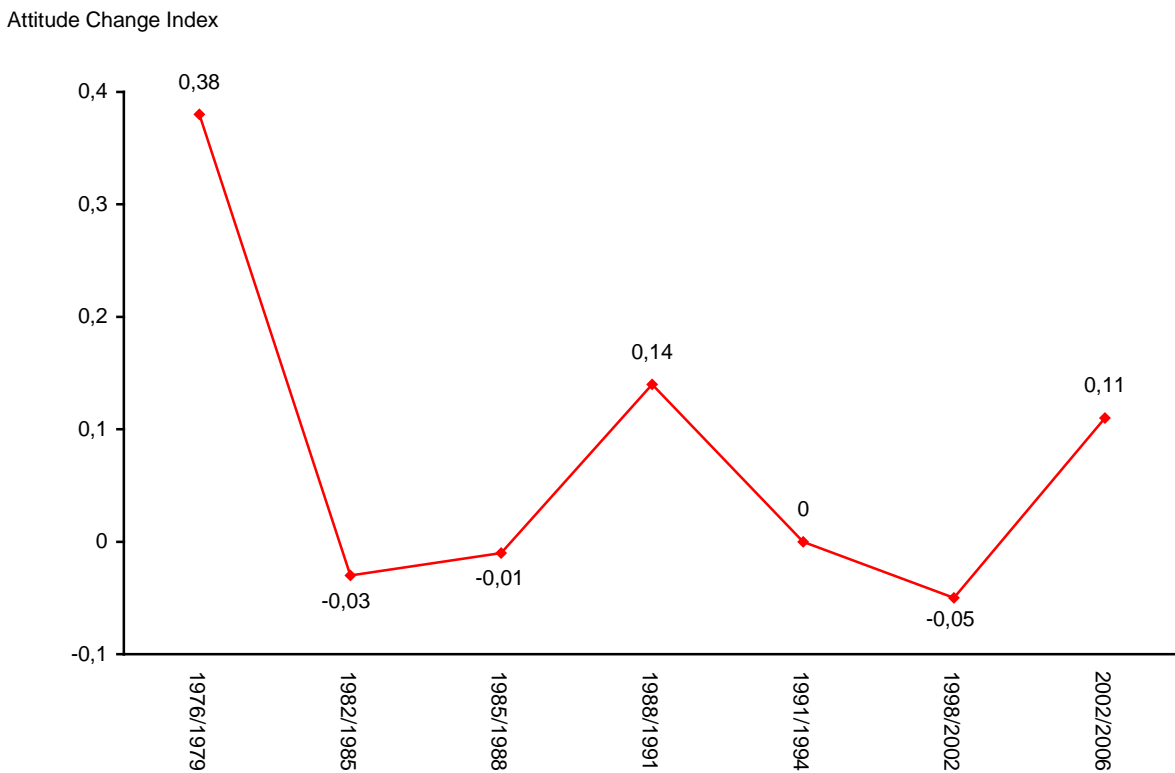
Figure 5 Proportion of Party Sympathisers With a Different Nuclear Opinion Than Their Own Party 1986-2008 (percent)



Comment: The data come from the annual SOM studies. The results are means for seven parties and based on the computations in Table 2. Phase-out nuclear power has all the years been defined as the party standpoint for the Left Party, Social Democrats, Greens, Center Party, Christian Democrats and Liberals (1986 – 1996). Not phasing-out nuclear power is classified as the Conservative Party line all years and for the Liberals since 1997.

The results give a nice and illustrative support to our hypothesis. Between elections, in the late 1970s, the average rate of opinion shifts among stable party voters and party switchers in the direction of the preferred party was $+0.38$ on our index. In the later election panels in the 1980s, 1990s and early 2000s, the rate of comparable attitude changes in the direction of a preferred party's standpoint have been much less frequent varying between on average of -0.05 to $+0.14$ with an average of $+0.03$ for the whole 1982 – 2006 period.

Figure 6 Change in Attitudes to Nuclear Power Potentially Induced by Party (panel data; change towards (+) or away (-) from the standpoint of a preferred party)



Comment: The results are based on panel data from the Swedish National Election Studies (SNES). The computations show, via an index, the average rate of attitude changes in the direction of the voters' stable or new party's standpoint (+) or away from the voters' stable or new party's standpoint (-) among stable party voters and among party switchers in seven two-election panel studies. The index runs from -1.0 (all possible changes are going in the wrong direction, away from the standpoint of the preferred party) to $+1.0$ (all possible changes are going in the right direction, toward the position of the preferred party).

If we restrict the analysis to only stable party voters, excluding party switchers and thus eliminate the possibility of attitudes influencing the choice of party, the results stay the same. Among stable party voters in 1976-1979, the rate of average opinion shifts in the direction of the party line was $+0.22$. A bit lower than previously, but still in support of the hypothesis. In the election panels between 1982 and 2006, the rate of attitude shifts toward the position of a preferred party were much more seldom hovering between -0.11 and $+0.16$ with an average of ± 0 for all the six panels. There can be no doubt, the impact of party on nuclear attitudes was

much stronger in the 1970s than it has been since. The parties' grip over their voters' attitudes have slackened on the nuclear issue. Parties were more in control in the 1970s and at the referendum.

Forming or Following Mass Opinions

One obvious interpretation of our result is that less conflict and politicization means less effective opinion molding on the part of the political parties. If and when the nuclear issue makes its comeback as a hot and disputed topic on top of the voters' agenda, the parties will be back in business again molding mass opinions. However, another possible reading of the result could be that today's parties overall are less good at forming voter opinions than was the case twenty or thirty years ago.

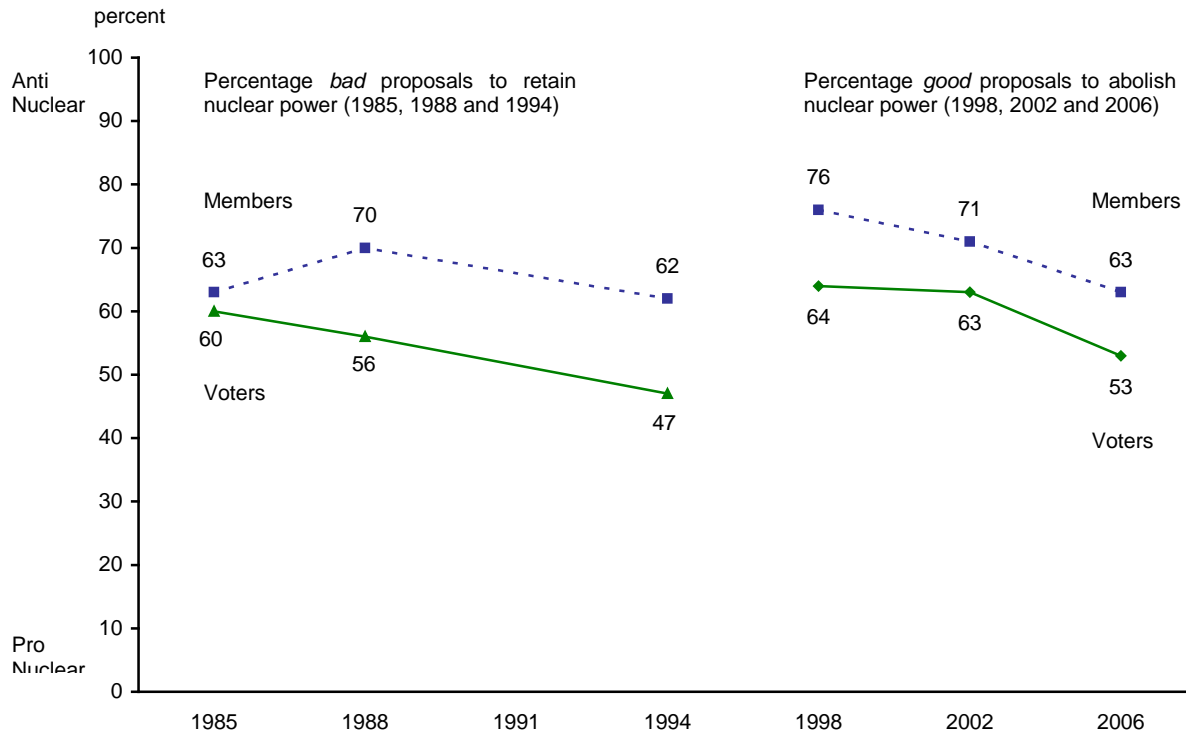
Voters in the 2000s are more volatile and independent-spirited, and less identified with their preferred parties, than was true in the 1970s. In Sweden the proportion of party switchers between the elections of 1976 and 1979 was 18 percent. Between the elections of 2002 and 2006 the comparable number was 37 percent. At the same time the proportion of party identified voters has declined from 59 percent in 1979 to only 31 percent in 2006 (Oscarsson and Holmberg 2008). Consequently, the prerequisites for successful opinion molding are less advantageous for today's Swedish parties than thirty years ago. If this is true, what has happened in the nuclear area is not unique to that area. Parties have across the board become less effective as opinion molders on all political issues.

One last bit of evidence further strengthening our case that in the last twenty years parties and political elites have become less successful in forming mass level nuclear attitudes, can be picked up from a series of Swedish studies on political representation. Starting in 1985 Swedish members of parliament have been asked some of the same survey questions on nuclear power as the voters. Over the last twenty years we can systematically follow the development of nuclear attitudes in the Riksdag as well as among the electorate.

In a dynamic fashion we can study whether members' opinions have tended to lead the way and voters followed suite or if the process has been the reversed with member opinion following voter opinion over time. In the first case we talk of representation from above. Voters' attitudes are potentially formed from above by the parties and their leaders. In the second case we talk about representation from below. Members' opinions follow voters'. In Sweden, most issues tend to fall into the category of being cases of representation from above (Holmberg 2009). The nuclear issue, however, is an exception (see Figure 7).

Ever since our first study in 1985, members of the Swedish Riksdag have on average been more negative to the use of nuclear power than the electorate. But as the voters, members have over time become more positive to nuclear power.

Figure 7 Policy Representation in Sweden – Attitudes on Nuclear Power Among Members of Parliament and Eligible Voters in 1985 – 2006 (percent)



Comment: The results come from the Swedish National Election Studies (Oscarsson and Holmberg 2008) and the Swedish Riksdag Studies (Brothén and Holmberg 2009). Members stand for members of the Swedish parliament and voters for eligible voters. Percentages have been calculated among respondents with explicit opinions, excluding don't know and middle of the road-answers ("neither good nor bad"). See Holmberg 2009.

However, never becoming more positive, or as positive as the electorate. Members' opinion has followed public opinion in slowly accepting the long term use of nuclear power in Sweden. We have a nice case of representation from below. Potentially, members' nuclear attitudes have been influenced by what the voters think. In the 1970s it was the other way around. Then, to a large degree, party elites formed what voters thought about nuclear power.

Today, those glory days of powerful opinion forming parties are gone – at least in Sweden and in the nuclear field.

References

- Brothén, Martin and Holmberg, Sören (2009). *The Swedish Riksdag Study*. Göteborg: Department of Political Science.
- Holmberg, Sören (1978). Pressen och kärnkraften. En studie av nyhetsförmedling och debatt i 20 tidningar under 1976 års valrörelse. *Statsvetenskaplig tidskrift* nr 4, 1978.
- Holmberg, Sören (1991). *The Impact of Party on Nuclear Power Attitudes in Sweden*. Stockholm: SKN.
- Holmberg, Sören (1999). Kärnkraftsopinionen på tröskeln till 2000-talet. I Holmberg, Sören och Weibull, Lennart (red) *Ljusnande framtid*. Göteborg: SOM-institutet.
- Holmberg, Sören (2000) Kärnkraften – en stridsfråga även under 2000-talet? I Holmberg, Sören och Weibull, Lennart (red) *Det nya samhället*. Göteborg: SOM-institutet.
- Holmberg, Sören (2009). *Dynamic Representation From Above*. Göteborg: Department of Political Science.
- Holmberg, Sören och Asp, Kent (1984). *Kampen om kärnkraften*. Stockholm: Publica.
- Holmberg, Sören och Esaiasson, Peter (1988) *De folkvalda*. Stockholm: Bonniers
- Holmberg, Sören, Westerståhl, Jörgen och Branzén, Karl (1977). *Väljarna och kärnkraften*. Stockholm: Publica.
- Holmberg, Sören och Weibull, Lennart (red) (2008). *Skilda världar*. Göteborg: SOM-institutet
- Jasper, J. (1988). The Political Life Cycle of Technological Controversies. *Social Forces* 1988: 357-377.
- Oscarsson, Henrik och Holmberg, Sören (2008). *Regeringsskifte*. Stockholm: Norstedts Juridik.
- Sahr, R. (1985). *The Politics of Energy Policy Change in Sweden*. Ann Arbor: University of Michigan Press.
- Temo (2004). *Opinionsmätning om stängningen av Barsebäck II*. Stockholm: Temo/Synovate.
- Vedung, Evert (1979). *Kärnkraften och regeringen Fälldins fall*. Stockholm: Rabén & Sjögren.
- Vedung, Evert (2002). *The Politics of Swedish Energy Policies*. Uppsala: Department of Government.