

External shocks and governmental responsiveness to public opinion. A case study of nuclear energy policy after the Fukushima disaster¹

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Abstract: To what extent are democratic governments responsive to citizens' demands and preferences between elections? Are governments more likely to be responsive to the expression of public opinion through surveys or to collective and publicly voiced opinion – generally in the form of protests? The main objective of this paper is to propose a new way of analysing the dynamics by which governments become more or less responsive to different expressions of the public opinion (as conveyed in opinion polls and through collective action) between elections. To this aim we study how governments react and respond to various (and sometimes contradictory) expressions of the preferences and demands of the public after an 'external' shock, in this case the nuclear accident in Fukushima after the tsunami of March 11, 2011.

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INTRODUCTION

Students of politics and democratic government have long been interested in the dynamics of democratic responsiveness to public opinion. In political science, a large and increasing body of scholarship focussing on how much attention governments pay to opinion polls and to the public mood expressed through surveys has developed (cf. for a summary Manza et al., 2002, Lax and Phillips, 2012, Hakhverdian, 2012). A parallel body of research, primarily conducted by sociologists, has concentrated on studying the influence of social movements – and collective action more generally – on policy making (Giugni, 1998, Giugni et al., 1999, Sawyers and Meyer, 1999, Meyer, 2005, Meyer et al., 2005, Tarrow, 1994, Kriesi et al., 1995, Giugni, 2004, Amenta et al., 2010, Uba, 2009). However, only a few studies have studied the interactional influence of protests and public opinion on policy responsiveness (Agnone, 2007, Giugni, 2007), and there has been no systematic and comprehensive attempt yet to connect these two areas of research that look at similar phenomena from different angles and theoretical lenses.

Studying the extent to which democratic governments are responsive to citizens' demands and preferences between elections requires paying attention to the multi-faceted nature of the 'preferences' being expressed, their meaning and directionality, and the way they are expressed. Are governments more likely to respond to the expression of public opinion through surveys or to collective and publicly voiced opinion – generally in the form of protests? When does one or the other type of expression prevail as a mechanism to foster governmental responsiveness? What happens when both forms of expression of the public mood are in clear contradiction?

This paper constitutes a first (and preliminary) attempt at addressing these questions with a comparative study of governmental reactions and responses to multiple forms of expression of the public's views and preferences. In this paper we analyse preliminary data from a pilot study within the larger ResponsiveGov project that focuses on governmental responsiveness to public opinion about nuclear energy policy after the March 2011 Fukushima nuclear accident.

Our approach to the subject of governmental responsiveness is novel in a number of ways. Firstly, we focus on responsiveness between elections. Much of the previous

work in political science has focused on how public preferences before a given election were translated into policy-making or policy direction in the term after the given election. How governments react and respond to the public's views and demands between elections is a much less studied subject.

Secondly, as mentioned above, we focus on a range of forms of expression of the public's preferences and demands. To our knowledge, there is no systematic comparative consideration of how governments respond to both forms of expression of the views and demands of the public. We collect and analyse our data in such a way that we can track the multiple ways in which 'the public' — or, rather, various segments of it — express their preferences and demands. Thus, we analyse governmental reactions while taking into account the mood of the public as expressed in surveys, various other forms of verbal statements from a range of individual and collective actors, protest events and election-related events.

Thirdly, we take into consideration a wide range of actors that intervene in the public sphere and map — to the extent possible — the interactions between them. Thus, we consider institutional actors (at various levels of government, including supranational and international ones), political parties, the media, a wide range of civil society organisations and social movements, and the fuzzier 'general public' as reflected by surveys. Our analyses, thus, try to understand how the public interventions of these actors lead to different reactions and responses from governments.

Finally, and consistent with the previous aims, our study is novel in the way it structures data collection. Unlike the prevailing approach to this subject in political science — that looks at the dynamics of governmental responsiveness using aggregate time-series data — we use an event sequence/history approach that allows us to track various events on a daily basis in the relevant period between elections. In order for this to be manageable, we focus on a limited number of policy-making junctures, in this case the nuclear energy policy juncture after the Fukushima accident in March 2011.

We consider the post-Fukushima nuclear energy policy juncture an interesting case study, since public opinion polls showed an increase in acceptance of nuclear power before the accident in Fukushima (Pidgeon et al., 2008: 72). After the Fukushima

incident, several European governments decided to rethink their agenda toward nuclear power. For example, in Germany, seven reactors were shut down immediately for three months and later on it was decided that the whole nuclear programme was to be phased out by 2022 (Jahn and Korolczuk, 2012). The Italian government decided in May 2011 to reverse their previous decision to revive the nuclear energy programme (which had been closed by 1990 after a series of referenda on the matter in 1987). At the EU level, there were also important reactions and the European Commission agreed with the organisations that group the nuclear energy regulating agencies (ENSREG and WENRA) to implement safety stress tests in May 2011. However, in several other European countries no policy changes took place. Moreover, the policy changes (or policy stability) were preceded by varying mobilization around the issue. In Germany up to around 250,000 persons took their demands — to shut down nuclear power plants — to the streets.² In contrast, only around 1,000 protesters were counted in France and even less in other European democracies. Were the policy changes concerning nuclear power across Europe due to citizens' protests? Or was this due to an increase in public rejection of nuclear power? And if so, does the impact of protest demands vary across political systems?

This paper addresses these questions (preliminarily) with (provisional) data that tracks the dynamics of public expressions of citizens' demands and preferences and governmental reactions. The study will include data from 13 countries but we can present preliminary information for 12 cases: Belgium, Britain, Canada, Finland, France, Germany, Italy, the Netherlands, Spain, Sweden, Switzerland and the US.³

² <http://www.spiegel.de/politik/deutschland/rekord-demos-in-deutschland-atomstreit-trifft-koalition-mit-voller-wucht-a-753371.html>

³ The data collected so far includes data for the whole relevant period for Belgium (except the editorials of one newspaper), Canada, Italy, Finland (except the editorials for both newspapers), France, Germany, the Netherlands, Spain, Sweden, Switzerland and the United Kingdom. For the US it is not complete yet and only includes data for part of the period.

WHEN WILL GOVERNMENTS BE RESPONSIVE TO THE PUBLIC OPINION?

Representation, responsiveness and 'unexpected' policy-making junctures: normative issues

Democratic representative government requires responsiveness (Dahl, 1971). In fact, Pitkin (1967) argued that representative government can be defined as such only when the institutional design is such that there is 'a constant condition of responsiveness, of potential readiness to respond' (p. 233).

Pitkin's ground-breaking analysis of the conceptual and theoretical tensions in the concept of representation identifies at least three conceptual and theoretical problems that also affect any empirical approach to the conditions and dynamics of governmental responsiveness to public opinion.⁴ First, in relation to the expectation of the actions of the representatives there is the mandate vs. independence controversy. If responsiveness is required for democratic representative government to exist, but it is also a matter of degree and not a constant activity, how often should we expect representative governments to respond to the public's wishes and in which circumstances?

The second problem is related to the definition of the constituents: who is the 'public' or the represented that the governments should respond to? Here the main difficulty is the diversity of the constituents: the multiplicity of views, preferences and interests. As Pitkin rightly points out, the 'principal' is never a single homogeneous actor and making the fiction that it is results in misleading assumptions and conclusions.⁵ Given that the public is a heterogeneous group, to whom should governments pay attention? The section of the public who have voted for the government and who directly elected

⁴ As this study is concerned only with the responsiveness of national governments, for simplification we will refer to governments as the 'representative', even though Pitkin (1967) analyses the problem of representation for a wider range of situations and relations.

⁵ An equally problematic assumption that Pitkin does not address fully is that the 'agent' or representative is a single actor, or at least one with homogeneous interests and preferences.

it as their representative? The public as a whole? When there are conflicting views among different sectors of the citizenry, to whom should governments respond? Aggregating a heterogeneous set of preferences into a 'general' will is highly problematic if not impossible.

The third problem is related to the way in which the government is supposed to learn accurately about the views, interests and preferences of its constituents (Pitkin, 1967: 220). The widespread availability of surveys reduces somewhat the magnitude of this problem, yet it does not make it go away fully (Stimson et al., 1995). On the one hand, surveys are not omnipresent and they are certainly not infallible. There are many situations and issues for which no survey data is available, and often surveys will capture non-attitudes and non-opinions if they force respondents to position themselves on issues to which they have not given much thought or about which they do not care much (Converse, 1973, Delli Carpini and Keeter, 1996). On the other hand, public opinion, or at least a segment of it, is also expressed through other means. Collective action – in its several forms – is another way for the public to voice their views, demands, and policy preferences. Those citizens who bother to express their views through individual or collective action are likely to hold strong preferences and to be better informed about the issues than the average (passive) citizen (Schumaker, 1975). Moreover, individual and collective action frequently is undertaken by pairs of opposing 'camps' (e.g. movements and counter-movements). The views expressed by the 'median' voter through surveys can, of course, coincide with those expressed by the 'vocal' voter (either due to public consensus around the issue among the public or because the two opposing views about it follow similar distributions among 'median' and 'vocal' voters); but in fact, very often we find that the views of the public expressed in opinion polls are at odds with the views voiced in the streets (or in the lobbies) through collective action and protest. What should governments do in these situations?

In relation to this third problem, some scholars argue that governments should not be expected to be responsive to public opinion's demands and preferences between elections, as citizens have their chance to influence policy-making through the electoral process (Schumpeter, 1943, Mansbridge, 2003). In the *promissory* form of representation, politicians are expected to reflect citizens' preferences in their

electoral platforms because they want to win elections, and thus responsiveness in policy-making should emanate from elections if governments keep their promises. Following this logic, between elections, this conception of representative government assumes that citizens have already attributed a representative mandate to elected legislators and governments and, hence, the latter do not need or require further ‘instructions’. If a mandate exists – or, at the very least, if elites perceive a mandate to exist (see Peterson et al., 2003) – then, why should we expect governments to be responsive to public opinion’s preferences and demands between elections?

This relationship between mandates, representation and responsiveness is crucial from a democratic theory perspective. In the presence of electoral mandates, between-elections responsiveness might be detrimental to the process of democratic representation. Nevertheless, both the normative and the empirical scholarship on the subject suggest that *anticipatory* forms of representation are quite common (Mansbridge, 2003), and it is ultimately an empirical question whether anticipatory or promissory forms of representation dominate in contemporary politics, to what extent one or the other prevail and how well they are able to represent the constituents’ interests. Our aim is to illuminate this aspect with our study.

However, the existing normative debate does not reflect much on situations when elections cannot be thought of as providing a clear message about policy direction on a specific issue or matter.⁶ What happens when no mandate on specific issues or policy-making junctures can be claimed? There are numerous occasions in which unexpected situations emerge or ‘external shocks’ happen that question the existence of a mandate even if the political parties in government might have previously (publicly) expressed their views on the issue. How should governments act (and how

⁶ The nature and meaning of electoral ‘mandates’ deserves a separate and lengthy discussion that we cannot accommodate in this paper. Firstly, often, governments and legislators need to legislate on issues that cannot be thought of as counting with an electoral mandate, as they were not discussed in electoral manifestos on the previous election because they were not salient enough. Secondly, it is questionable that an electoral vote gives a mandate on all and every policy proposal contained in the manifesto of the winning party or coalition parties. It is problematic to assume that votes express clear preferences — as opposed to opinions (Sartori, 1973) — for specific individual policies (Dahl, 1956).

do they act) when unexpected situations or decision-making junctures emerge? In these situations, responsible governments have a choice between following their own policy preferences – as legitimate representatives of the citizenry – or following the public opinion – the responsive choice. Furthermore, when the policy issues become publicly contested at these unexpected junctures, governments must choose which side to take or how to balance contending views.

The analysis of decision-making processes around such unexpected junctures constitutes the core focus of this paper. This approach helps us reduce the normative problem of expectations of autonomy of democratic governmental representatives — given that mandates are more difficult to claim —, at the same time that it should also help us limit the problems of endogeneity of public opinion with regard to policy-making. Unexpected junctures have the virtue of providing situations in which something closer to “true and independent” policy preferences emerge within public opinion. And they also limit the problems posed by politicians’ anticipation of public opinion (Jacobs and Shapiro, 1996: 11).

Responsive to whom? The median voter and the vocal voter

The previous discussion has unpacked the complexities of dissecting the chain of representation and responsiveness, both theoretically and empirically. The internal diversity of the constituents or the ‘public’ to which democratic representative governments need to respond is such that governments often face a cacophony of voices and demands rather than a clear and unequivocal single message. Politicians then need to combine and weigh the different signals and pieces of information into some sort of ‘index’, which is in itself difficult and problematic (Jones and Baumgartner, 2005).

Lifting the assumption of a single homogeneous ‘public’ to a division of the public between the ‘median’ voter (as expressed by opinion polls) and the ‘vocal’ voter (who engages in collective action) does not necessarily solve the problem. On the one hand, these two categories still assume homogeneity within them. This is, obviously, a simplification, as a range of opinions is invariably expressed in surveys; and collective actors that choose to protest or lobby are also heterogeneous in their

preferences and demands. Hence, if governments pay attention to the ‘median’ voter, they are likely to pay more attention to the sectors of the electorate that are closer to their voting base. Equally, if they pay attention to the ‘vocal’ voters they will weigh the multiple expressions of individual and collective action, mostly lobbying and protest from all sides of the spectrum and decide which to listen to.

On the other hand, beyond the intrinsic potential diversity of messages that governments might receive, this heterogeneity introduces a further problem for the aggregation of preferences that even responsive governments will strive to achieve: the clarity of the messages and of the content of the preferences they receive from the multiple sectors of the public is extremely different. While public opinion expressed through surveys is generally ambiguous, the public opinion expressed through collective action is usually clearer and specific – regardless of how representative the active few are of the inactive majority (cf. Schumaker, 1975). This introduces important uncertainties about the real preferences of the ‘silent’ median voter, including the median ‘core’ voter of the government party/coalition. How much they care about the issue and how stable and formed their opinions are will be issues that governments will take into consideration when weighting the views expressed in surveys and through political action.

While heterogeneity in public demands presents a serious challenge in relation to developing normative expectations of governmental responsiveness, homogenous signals should contribute to more solid expectations of governmental reaction and responsiveness. In this regard, expectations about the impact of protesting minorities should probably be conditional on the views of the silent masses – the public opinion. As Agnone (2007: 1597) suggested, changes in public opinion might have a stronger effect on governmental actions if they are accompanied by favourable protests, and vice versa. This is what he calls the ‘amplification’ mechanism. Thus, the silent masses might need the support of the ‘noisy’ protesters to make themselves heard, and certainly the reverse will also lead to expectations of greater responsiveness. In a way, we could view the protesters as the vocal segment of an ‘issue public’ (Krosnick, 1990). The amplification mechanism thus will depend on how large the issue public is to start with, and whether the public at large converges with the positions of the issue public and with the importance attributed to the issue.

Obviously – as Giugni (2004; 2007: 54) outlines – these ‘amplification mechanisms’ also depend on potential allies within the political arena. Such allies do not necessarily have to be in government, but might force the government to react in favour of the public claims due to their changing perception of vulnerability in future elections. As a result, studying in detail the interaction between different publicly expressed demands should be crucial for our understanding of governments’ responsiveness to its people.

When are governments likely to be responsive?

Beyond the normative issues of when governments *ought* to be responsive or of when is it reasonable that we *expect* them to be so, the question remains of when are they *likely* to be responsive between elections. In other words, if in most cases governments will have a ‘preferred’ policy — the one formulated in their party manifestos or in their policy agreements — under what conditions are they likely to ditch it and follow the alternative path suggested by the public?

Multiple studies suggest that electoral competition and the risk of vote losses is crucial for politicians to adapt strategically to voters’ preferences and demands (Page, 1978, Przeworski, 1991, MacKuen et al., 2003, Hobolt and Klemmensen, 2008). Through Friedrich’s mechanism of anticipated reactions (1963), politicians anticipate voters’ electoral reactions to not providing the desired policies, and therefore, if parties/candidates are likely to lose office through electoral accountability, responsiveness will be more likely. These are Mansbridge’s (2003) *anticipators*. Of course, this anticipating behaviour rests on the assumption that citizens vote retrospectively (Fiorina, 1981), but in most cases parties are uncertain about the exact mix of retrospective and prospective considerations that voters will use when casting a ballot. Hence, governments are likely to decide on a situation-by-situation basis how likely are voters to punish them at election-day for not having followed their (expressed) wishes on a given issue. This connects with Jones and Baumgartner’s (2005) notion that the threshold at which policy-makers react to signals is contingent.

The anticipation of voters’ electoral punishment is also closely related to the relevance of the issue or policy domain in citizens’ minds (Soroka and Wlezien, 2010,

Page and Shapiro, 1983): voters are more likely to punish unresponsive or poor performance in areas they really care about and will disregard the remaining policy issues. Previous research shows that different policy issues foster different levels of responsiveness (Miller and Stokes, 1963, Hobolt and Klemmensen, 2005). Differences in attention affect how much feedback or ‘signaling’ the public sends to politicians about their preferences with regards to policy making in each domain, so that the public ‘thermostat’ is not equally sensitive to variations in policy ‘temperature’ (Soroka and Wlezien, 2010). The consequence is that politicians will have more incentives to follow or listen to the public in those policy areas for which citizens care the most and are, hence, more likely to take into account when casting their votes.

The ‘caring’ about the issue and the ‘signaling’ might be demonstrated in multiple ways. Citizens can verbalise this importance they attribute to certain issues when they are asked in surveys. They can also signal their strong preference about an issue by organizing in collective or concerted action. The more people signal their interest one way or the other the clearer the signal that politicians perceive will be and clarity is of the essence as policy-makers receive many ambiguous signals. Therefore, if a given issue is constantly at the top of the public’s priorities (as expressed in opinion polls) or if large critical masses take it to the streets, then public demands that are divergent from the government’s positions should be expected to carry more weight in triggering a responsive move than in the absence of such salience or mobilization.

In summary, the electoral incentive is thus very important in bringing about a responsive dynamic. Adams et al. show that parties will respond when movements in the opinions of the public are in a direction that is electorally disadvantageous for the party (Adams et al., 2004).⁷ This means that, if pandering happens (Jacobs and

⁷ Both Adams et al.’s (2004) work and Jones and Baumgartner’s (1993) imply a ‘shift’ in public views, opinions or images. We are not persuaded that the change in the views themselves is necessary as such, though it helps; it is probably enough that something else changes in terms of how the public behaves. If they give more weight to their views in a certain policy issue to make electoral choices or are more keen to take it to the streets, a change in the underlying views, images or opinions will not be necessary to propel (some) governments to react responsively.

Shapiro, 2000), we should expect it when the electoral loss produced by not being responsive is reasonably thought to be considerable, and also the closer to election-day. Thus, the electoral vulnerability that both aspects (size of the opinion shift/position and closeness to elections) incorporate should be taken into account empirically.

Electoral incentives notwithstanding, governments are not always able or willing to defer to public demands. To start with, governments are not unconstrained in their capacity to change course. First, policy-making inertias, legislative constraints and various other factors limit the possibilities of immediate responsiveness to public demands even if governments were willing to react to them. Friction and punctuated equilibria characterise the policy-making process (Baumgartner and Jones, 1993, Baumgartner et al., 2009).

These are constraints inherent in the policy-making process. A second set of constraints is related to external limits to responsive policy shifts imposed by the voters and other external political agents (e.g. foreign governments, international organisations or treaties, multinational corporations, etc.). Governments cannot always respond to public demands without reputation (or contractual) penalties, either imposed by the voters or by other external agents (Bernhardt and Ingerman, 1985, Enelow and Munger, 1993, Kartik and McAfee, 2007, Jensen and Johnston, 2011). Dramatic policy shifts are even less likely when a party owns an issue. Thus, often, governments are not completely free to change policy course or they need to balance the multiple costs of being responsive to public demands.

Finally, governments and the parties that form it also face a number of internal constraints. On the one hand, they may hold strong convictions about the policy issue and not be willing to react responsively no matter how strong the demands and how clear the signals. Thus, on matters where ideological views by the parties in government are very prominent we should expect less responsiveness. On the other hand, changing policy course can sometimes open up the Pandora box of internal dissent and factionalism within the party. These internal constraints have been illustrated in the study of the tensions facing Social Democratic parties and centre-right parties in relation to the immigration issue and the EU, particularly for British parties (Bale, 2008, Bale et al., 2010, Smith, 2012, Guinaudeau and Persico, 2013).

An equivalent logic needs to be applied to issues that can break up governmental coalitions. Hence, governments will be reluctant to respond to public pressures on issues that are divisive either for the (major) party in government or for the government coalition.

These behavioural expectations can be summarised in the following hypotheses:

1. In the absence of protest (or with minimal protest in terms of frequency and following), governments will have no incentive to change their preferred (original) policy position.
2. If there is substantial protest (either in terms of frequency and/or following), but the protest is inconsistent with the majority position expressed in surveys, governments' reaction will be conditional on a number of additional factors. If it is a single party government, it will have little incentive to change their preferred (original) policy position unless the protesters' views are in line with the majority views of its own core voters (2a). If it is a coalition government, it will be more likely to change its policy position in all cases (2b) and especially so if the views of the core electorate of any of the coalition partners are in line with the demands of the protesters (2c).
3. If there is substantial protest (either in terms of frequency and/or following), and the protest is consistent with the majority view expressed in surveys, governments will be much more likely to change their preferred (original) policy position.
4. The above conditions (1-3) will be expected to affect differently governmental responsiveness depending on how close election day is.
5. Equally, the effect of public opinion and protest pressures will depend on external (or contractual) constraints (5a) and on how divisive the issue is within the party/coalition (5b).

We are certainly not able to test all of these hypotheses with the preliminary data available for this draft of the paper, but they will guide our future analyses of the data we continue to collect.

CASE SELECTION, DATA AND METHODS

Due to the fact that the different types of expressions of public opinion identified above cannot be measured with surveys only, we collect the majority of the data by coding the content of the (main) national news agency in each country and complement it with exhaustive and systematic searches in opinion poll sources, legislation databases and parliamentary archives.

Case selection

Only countries where nuclear energy policy is a relevant policy-making domain are included in the study. Therefore, we only collect data for those countries where nuclear energy is produced and/or where there was a debate about using nuclear energy in the near future prior to the Fukushima accident (cells 1, 2 and 3 in Table 1). Countries that do not produce nuclear energy and were not considering it in 2011 (cell 4) are excluded from this case study.

As outlined in Table 1, our study on nuclear energy policy after Fukushima includes 13 countries, out of which 11 were producing nuclear energy in 2011 and 2 were or had been debating nuclear energy production (see Table 1). In these latter countries the debate around the adoption of nuclear energy was on-going at the moment and, as such, this debate might have been influenced by the events in Fukushima.

Table 1. Criteria and classification for case selection

		Substantial debate prior to Fukushima	
		YES	NO
Nuclear energy prior to Fukushima	YES	(1) Belgium Germany Spain Switzerland	(2) Canada Finland France Netherlands Sweden United Kingdom United States
	NO	(3) Australia Italy	(4) Austria Cyprus Denmark Greece Ireland Iceland New Zealand Malta Norway Portugal

Sources: Kriesi (2013); Aarts and Arentsen (2013); Swyngedouw (2013); Bern and Winkel (2013); Country reports of the World Nuclear Association; ReponsiveGov data collection.

In 2006, the Howard government in Australia had an extensive investigation — the Switkowski report — into the merits of nuclear energy in their country. The discussion of nuclear energy adoption in Australia has continued since. Some discussions took place in Cyprus in 2008, though no major party espoused a pro-nuclear position and hence we classify the Cypriot case among those with no major debate.⁸ Italy withdrew from any nuclear plans after a series of referenda had been held in 1987 one year after the Chernobyl accident. However, the Berlusconi government undertook efforts for a nuclear energy revival in 2008, and plans were proposed for ten new reactors and agreements were reached with the French EDF for the building of four, although the nuclear sites discussion was still open.

Of all the nuclear energy-producing countries five had plans to stop nuclear energy and successive governments withdrew from, postponed or at least tried to reverse these plans. Sweden (1980), Spain (1983), the Netherlands (1994), Germany (2000) and Belgium (2003) had phase-out plans in place on the dates shown (Franchino, 2012). While Spain decided to stop the construction of any new plants in 1983 and had a phase-out plan as well with the last reactor due to close in 2018, this plan was modified under the second Zapatero cabinet in 2011 with the introduction of a new wide-ranging economy act (the Sustainable Economy Act, *Ley de Economía Sostenible*) that allowed for the extension of the operation life of nuclear plants beyond the 40 years initially foreseen with extraordinary permits. In Germany, chancellor Merkel reversed the moratorium that had been decided by Schröder's government. Merkel's government extended the lifetime of German nuclear reactors: the seven oldest reactors got an extension of eight years more and the remaining ten of fourteen years more. In Belgium the first and only time Écolo and Agalev (the

⁸ See <http://www.hurriyetdailynews.com/default.aspx?pageid=438&n=8216nuclear-plant-can-meet-cypriot-energy-demand8217-2011-07-20> and <http://www.cna.org.cy/webnews.asp?a=7f02f7e1075a486a959ddc0409079744#sthash.tOvWWfQB.dpuf>

Greens) participated in a government — from 1999-2003 — ended with a phase-out law for nuclear energy. As Swyngedouw (2013) outlines, in 2010 the coalition government of Christian Democrats, Liberals and Francophone Democrats tried to reverse that decision but never brought a bill to parliament due to a government crisis (Swyngedouw, 2013: 3). France – as the country with the highest share of nuclear production in its energy mix worldwide (Bern and Winkel, 2013: 284) – was at the forefront of political support for nuclear energy, with French presidents having been the leading advocates for nuclear energy (Szarka, 2013: 649), and Nicolas Sarkozy was not an exception to this tradition. Last but not least, the governments in the United States, Canada and United Kingdom seem not to face a high salience of the nuclear issue. There seems to be more or less a political consensus on the support for nuclear energy in these three countries.

Main variables and data sources

Given our interest in responsiveness and change in policy positions, a key variable of this research is the *government's initial policy position*, which measures the nuclear energy policy position of each national government at the beginning of the juncture (prior to the Fukushima accident). The initial policy position is coded on an ordinal scale from -2 (very progressive: completely against nuclear energy) to +2 (very conservative: strongly in favour of nuclear energy). In the case of coalition governments, the primary source for governments' initial policy positions is the coalition agreement of the government prior to the start of the policy juncture. In the case of single-party governments, we rely on party manifestos to code the government's initial policy position at the start of the policy juncture (see Lühiste and Morales, 2013 for more information).

The period covered in our data collection goes between 11 March, 2011 and 31 March, 2013. However, if the government responds to the public opinion before 31 March, 2013, the date of the responsive action by the government marks the end of the juncture (i.e., in Italy, the coding period ends on 20 April, 2011, because on that date the Senate passed a governmental amendment to a previous decree that effectively meant abandoning the nuclear plans), or if there are general elections taking place a minimum of 6 months after the start of the juncture, the date of the general elections marks the end of the juncture. During the time period of the policy

juncture, we code (i) all news stories in national press agencies newswires related to nuclear energy policy, (ii) all survey reports in which public opinion about nuclear energy policies is presented, (iii) all parliamentary questions and answer sessions and changes in legislative acts related to nuclear energy policies, and (iv) all newspaper editorials from one ‘progressive’ and one ‘conservative’ broadsheet newspaper, covering nuclear energy policies in each country (see Lühiste and Morales, 2013 for more information).

Information on most of the variables is primarily collected from national press agencies newswires. We rely on the national press agencies newswires, rather than on national newspapers, because we aim to capture what is happening in the real world with as little as possible ‘mediation’ of editorial views or framing. National newspapers are only used to retrieve editorials in order to measure editorial positions and the overall salience of the issue.

We use a set of keywords to retrieve all the juncture-related newswires, survey reports, legislative documents, and newspaper editorials to be coded. The keyword dictionary (see Lühiste and Morales, 2013 for more information) lists both general subject-specific search terms, such as “nuclear”, “nuclear energy”, “Fukushima”, “energy policy”, etc. and more country-specific words, such as the names of nuclear power stations in the relevant country. We code only newswires and documents that directly discuss nuclear energy policy (including nuclear waste management, accidents in nuclear power stations, etc.).

The unit of coding and analysis is an *event* (claim, declaration, action). For each event, we measure *the type of event*. In this paper, we distinguish seven broad categories of events: (1) political decisions; (2) verbal statements; (3) meetings / parliamentary sessions; (4) direct democratic action; (5) protest events (legal vs. illegal and non-confrontational vs. confrontational); (6) elections; and (7) any other types of events.

For each event, up to three *actors* and their policy positions are coded in relation to the government’s initial policy position. An actor can be both an individual and an institution/organisation. The actor that appears first in the news story / document coded is “Actor 1”, the actor that appears second is “Actor 2”, and the actor that

appears third is “Actor 3”. If more than 3 actors are mentioned as participating in an event, at least one of the actors is coded from the governmental side (if applicable) and at least one of the actors is coded from the opposition / collective action side (if applicable). We distinguish seven different *types of actors*: (1) governmental actors; (2) legislative actors; (3) other institutional actors (incl. representatives of regional, local, and EU level); (4) collective action and public sphere actors; (5) survey respondents; (6) business and company actors; and (7) any other actors.

We also measure *each actor’s policy position* in relation to the government’s initial policy position. We distinguish four categories: (0) actor explicitly opposes the government’s position; (1) actor supports the government’s position; (2) actor is a priori neutral by institutional design; and (3) actor does neither support nor oppose the government’s position. If an actor opposes the government’s initial policy position, we also measure how more progressive or conservative his/her position is from the government’s position.

Our final variable of interest is *the final outcome of the policy juncture*. This variable measures any change in the government’s policy position and/or issue salience. We measure the final outcome with a five-category categorical variable: (0) no reaction and no change in attention or in position; (1) increased attention to the issue by the government but no change in position; (2) rhetorical responsiveness (e.g. consultation process, setting up an expert panel, opening up deliberations in parliament or other bodies, etc.) without substantive change in policy; (3) moderate policy responsiveness (e.g. delay of a specific implementation, closure of a specific power plant but not all of them, increase in certain regulatory aspects, change in some non-core legislation, etc.); and (4) substantial policy responsiveness (U-turns in relation to initial policy positions or proposals, or when major legislation is enacted).

Although we are interested in the reactions of national governments to different expressions of the public opinion, any ‘event’ that occurs in the country – regardless of the level of government or geographical area where it happens – is coded.

Table 2: Nuclear Energy Policy in Comparison

Country	Government in place on March 11, 2011	Share of Nuclear Energy in own production	Status quo prior to the Fukushima accident	Initial governmental policy position on nuclear energy	Final outcome after Fukushima
Australia	ALP (Gillard)	None	Debated. Pro-nuclear proposals by the John Howard-led coalition	Very Progressive	No policy change
Belgium	PS, MR, CD&V, CDH (Letenne, caretaker)	54%	Moratorium on new plants. Phase-out in 2003 law by 2015	Progressive	Policy change: extension of phase-out date to 2025
Spain	PSOE (Zapatero)	20%	Moratorium on new plants. 40 years maximum operation, but no phase-out date given	Progressive	No policy change
Germany	CDU/CSU, FDP (Merkel)	18%	Reversal of Schröder's phase-out plan by 2023-24 by Merkel's govt. Moratorium on new plants	Conservative	Policy change: immediate closure of 8 plants and phase-out by 2022
Sweden	MSP, FP, C, Kd (Reinfeldt)	40%	Only replacement of existing reactors allowed, maximum 10 reactors	Conservative	No policy change
Canada	CP (Harper)	15%	1 new reactor planned	Very Conservative	No policy change at the federal level
Finland	KESK, KOK, VIHR, RKP-SFP (Vanhanen)	28%	1 in construction, 2 planned	Very Conservative	No policy change
France	UMP, NC (Fillon; Sarkozy)	75%	Plans for a new EPR reactor. Extension of life of reactors beyond 40 years (60 proposed)	Very Conservative	No policy change
Italy	PDL, LN, MPA (Berlusconi)	None	Nuclear programme closed, re-introduction proposed by Berlusconi government	Very Conservative	U-turn: Abrogation of nuclear plans and referendum rejecting nuclear energy
Netherlands	VVD, CDA (Rutte)	4%	Building of one reactor postponed	Very Conservative	No policy change
Switzerland	SVP-UDC, SP-PS, FDP-PRD, CVP-PDC, BDP (Schneider-Ammann)	40%	10-year moratorium on new plants and pro-nuclear outcome of referendum	Very Conservative	Policy change: phase out by 2034
United States	DEM (Obama)	20%	4-6 new reactors planned	Very Conservative	No policy change
United Kingdom	CON, LD (Cameron)	16%	Up to 8 new reactors planned	Very Conservative	No policy change

Source: Authors' own, based on information of International Atomic Agency, World Nuclear Association, OECD Nuclear Agency & ResponsiveGov codes on the initial government position. *Note:* The Premier's party is underlined in the case of a coalition government. Countries are ordered by initial governmental policy position and alphabetically.

THE SALIENCE AND NATURE OF NUCLEAR DEBATE AFTER FUKUSHIMA

We start with a descriptive overview of the magnitude of the attention attracted by the issue of nuclear energy from all sorts of actors for the whole period in the eleven countries for which we have completed data collection thus far. Figure 1 shows the considerable difference in the number of events and statements about nuclear energy that were produced, on the one hand, in Germany, Italy, Switzerland, France and Spain, and in Belgium, Britain, Canada, Finland, the Netherlands, Sweden and the US, on the other.⁹

In Belgium, the Fukushima disaster coincided with Leterme's caretaker government after the June 2010 elections. Partly because of the constitutional impediments for a caretaker government to make any substantial policy decisions, and partly because the status quo was the planned phase-out of nuclear plants in Belgium by 2015 established by the 2003 Act, the debate around nuclear energy was very muted. The public in general, but also environmental organisations, were relatively quiet after Fukushima. The main debate happened among several political parties and the energy companies, including a parliamentary debate (see Figure 2). The Flemish Socialist Party (SP.A) seemed to be the one with the most anti-nuclear energy positions, sometimes even more so than the Greens (Groen!). However, after the first week, these reactions calmed down completely and the issue was not discussed again until April, when discussions around the nuclear stress tests decided at the EU level brought it back to the agenda.

In Britain, the Fukushima accident unfolded just a few months after the inauguration of the first coalition government in decades. The Conservatives had long advocated for nuclear energy, whereas the 2010 LibDem manifesto had explicitly opposed the building of a new generation of nuclear power stations on the basis of its higher costs compared to alternative energy sources and to energy conservation. Interestingly, the Secretary of State for Energy and Climate Change at the time was the LibDem Chris Huhne, which might have triggered divisions within the coalition in the wake of Fukushima. Yet, the days immediately after the accident did not see too much debate

⁹ In the appendix we include the figure dividing between high and lower salience cases for easier visualization of the dynamics in the low-salience countries.

on the matter, beyond a few calls for solidarity with Japan by the Government, calls to calmed debate by Huhne, and opposing but relatively moderate statements by environmental organizations against the British nuclear energy expansion plans. The debate was, partly, deflected by the involvement of the Chief Nuclear Inspector — who was commissioned a report — in the decision to build or not eight new nuclear reactors in the UK, and by the pro-nuclear statements of the advisory Committee on Climate Change. The Labour party did not oppose nuclear plans either, given that they had also pledge a programme of nuclear energy expansion in the 2010 manifesto. The few protests that took place were poorly attended. After a few weeks, the debate on nuclear energy is shifted towards a discussion about public subsidies for the new nuclear plants.

In the case of Canada, the first days are marked by concern for the expatriates in Japan. Afterwards the debate turns towards radiation safety in relation to the accident in Fukushima. The little public debate that took place after Fukushima was dominated from the beginning by the Canadian Nuclear Safety Commission (CNSC) and the energy-producing companies, which tried to reassure the public that Canadian nuclear power plants were safe. On the anti-nuclear front, only Greenpeace Canada was active in the debate since the beginning and their statements were buried by the dominance of the nuclear companies. Parties at the national level did not join the debate. Overall, Canadian nuclear policy remains an issue debated mostly at the provinces where nuclear energy is produced or might be produced in the future. The federal government was not active in the debate either.

In the Netherlands, the public did not mobilise after the Fukushima accident, like they did after Chernobyl.¹⁰ Although a silent anti-nuclear march was organised March 16 in Middelburg — close to the Borssele nuclear plant —, only a few hundred demonstrators participated and there were no immediate follow-up protests. A small

¹⁰ The peak after week 40 is due to the fact that (i) nuclear waste transport took place and Greenpeace tried to obstruct the nuclear waste transport, so a number of statements were made, and (ii) the first results of the stress tests in the Borssele plant were presented by the government. The stress tests found 15 points where improvements could be made.

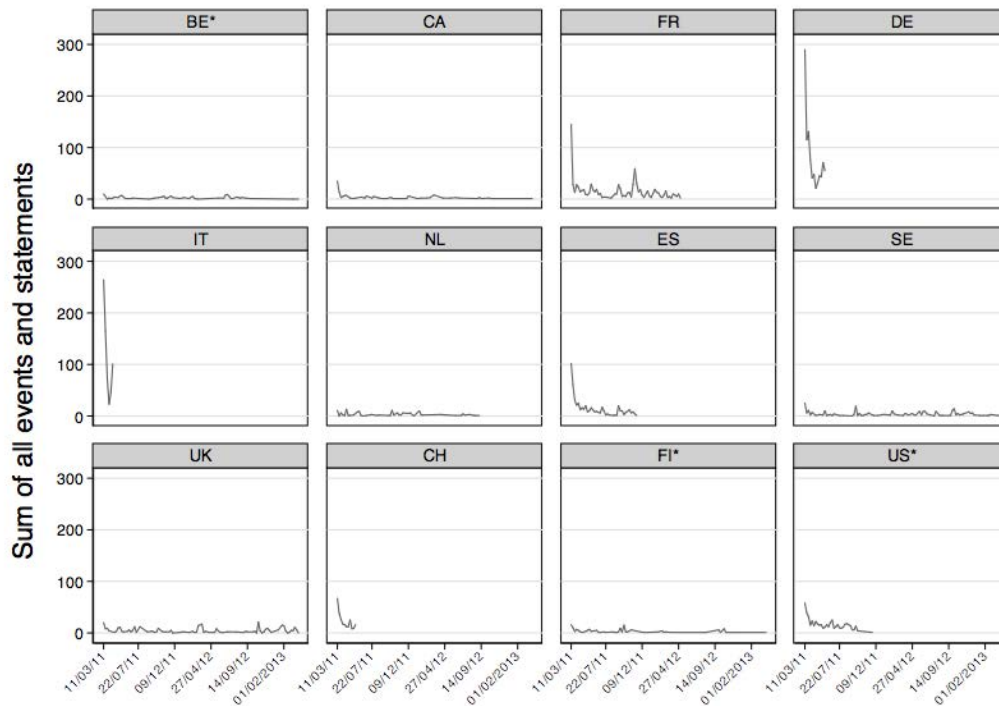
local peak of attention on March 30 (see Figure 2) was due to Greenpeace announcing a demonstration for April 16, 2011, and also in relation to their collection of signatures for a petition to stop nuclear energy in the NL. However, there was not much coverage of the actual protest on April 16, and in general protest is very limited at the beginning of the juncture and it fades away almost completely after April.

The case of Sweden is slightly different, as we see substantial discussion of nuclear energy the week immediately after the Fukushima disaster, which almost completely fades away in the following weeks (see Figure 2). Protest was, however, even rarer than in Belgium, Canada or the Netherlands. The juncture was, thus, dominated by the debate within the political elite, with very little presence of civil society actors. As a consequence, the debate gradually dropped due to the German decision to shut down a number of reactors for three months and the government's assurance to reconsider its position.

In Finland the Fukushima disaster coincided with the last few weeks of Kiviniemi's centre-right coalition government, which included Green cabinet ministers. Despite this fact, and Finland's plan to build additional nuclear reactors, the reaction to the disaster was relatively muted. The first few weeks after the accident saw only a limited number of statements, primarily by governmental actors, but very few protests. The low salience of the issue continued around the April, 2011, elections and the coalition formation negotiations, which run until late June, 2011.

In the US the accident came after the Obama administration had promoted the formation of the Blue Ribbon Commission on America's Nuclear future in January 2010, and had announced their intention to expand the civil nuclear programme with two nuclear reactors in February 2010. Despite this, and prior major nuclear accidents in the US (Three Mile Island) the reaction after the accident was not as intense as one might have expected given the juncture at which nuclear energy policy-making stood.

Figure 1. The evolution of the public debate around nuclear energy throughout the whole period, by country



* Data incomplete

In contrast, the issue immediately caught fire in Germany, Italy, Switzerland, France and, to a smaller degree, in Spain, though the number of events drops significantly after the first week in all countries (see Figure 2), with another few peaks in April in Italy. The overall maximum number of events in a single day is 81 on March 14th in Germany and 81 on March 15 in Italy.

In Italy the public debate is immediately extremely active because the nuclear issue is intertwined with two other pre-existing matters of debate: renewable energies policy¹¹ and the referendum against nuclear energy proposed in 2010. Berlusconi's government plans to build new nuclear plants becomes even more salient with the Fukushima disaster. The opposition, the environmental organisations, the committee

¹¹ Before Fukushima, the government eliminated the incentives for renewable energies. After Fukushima, the opposition and the environmental associations demanded that the government gave up its nuclear plans and reintroduced the incentives for renewable energies.

for the referendum against nuclear energy and most regional governments become very visible and pressing since March 11. Initially, the government defends its position and then announces a pause for reflection of about a week. However, threatened by the forthcoming local elections of May, on March 23 it establishes a one-year moratorium, followed by an amendment to a previous decree approved at the end of April withdrawing its nuclear plans, which meant a u-turn in its policy on nuclear energy. Nevertheless, the referendum still took place on June 12-13 settling the matter fully.

In Germany, the first anti-nuclear protest had already been planned before Fukushima took place. As such, the debate on nuclear energy had already been salient before the accident in Fukushima. After the first news on Fukushima were picked-up by German politicians, the opposition (SPD, Greens and The Left) strengthened their (already) anti-nuclear positions and attacked the government. The first strategy by the government was to reassure the public that reactors were safe and accusing the opposition of exploiting the accident of Fukushima for their political gain. After the government announced it would pause their nuclear lifetime extension law (*Laufzeitverlängerung deutscher Kernkraftwerke*, formally “*die elfte Änderung des Atomgesetzes*”) for three months and shut down the seven oldest reactors temporarily on 14th of March, discussions among other things started to focus on the possible illegality of this decision. However, the debate continued and the government faced the largest anti-nuclear protest in Germany ever. Furthermore, after the epic loss in the provincial election in Baden-Wuerttemberg – where the CDU was in government since 1953 – voices in the governmental parties urged the government for a faster phase-out plan.

In Switzerland the intensity of the debate was considerable, given the population size of the country, with weekly protests during the first four weeks and considerable attention by all types of actors, particularly national and cantonal governmental actors. The discussion turned very early on to the safety of nuclear plants in Switzerland and their capacity to resist strong earthquakes. At a very early stage (14 March, 2011), the government announced a suspension of any new applications and the freezing of the existing ones to allow for safety checks. This decision was, surprisingly, met with limited negative reactions from the nuclear industry. The Socialist party (SP) used this

opportunity to insist on a complete nuclear phase-out in Switzerland. Given Switzerland's unusually inclusive formula of coalition governments, disagreements within the cabinet followed, which sparked a lively debate about nuclear energy in the federation. The FDP changed its initially pro-nuclear energy position relatively early on to a more flexible one, to reflect the direction of the opinion mood and of the public debate. The 'threat' by the SP to call a referendum on renewable and nuclear energies, the recurrent protests, and the surveys signalling an anti-nuclear mood led the government, already by 23rd March, 2011, to signal its willingness to consider a phase-out plan and to make a decision on this matter by June, 2011. The SP remained a strong advocator of the phase-out option, and several cantonal governments and assemblies requested formally against nuclear energy or nuclear reactors in their vicinity. Cantonal election results in Zurich, in which the Green party made some gains, were read in the light of each party's position on nuclear energy and protests intensify in April. Shortly after a quite large demonstration (22nd May, 2011), the Federal Council announced on 25th May, 2011, its intention to start phasing-out nuclear energy by 2034.

Figure 2. Number of events by event type for the first 6 months, per country and week

Event Type	BE*						CA						FR												
	11/03	08/04	06/05	03/06	01/07	29/07	26/08	22/09	11/03	08/04	06/05	03/06	01/07	29/07	26/08	22/09	11/03	08/04	06/05	03/06	01/07	29/07	26/08	22/09	
DE																									
Elections	1	3																							
Protests	11	6	3	1	2	1	5	1	3	1	7														
Meetings/debates	18	17	4	5	7	5	1	3	3	9	5														
Surveys	7		2	3	2	2		1		1															
Statements	24	48	13	25	7	26	40	13	27	41	37	50	42												
Political decision	9	2	1	3																					
IT																									
Elections																									
Protests	7	6	3	1	2																				
Meetings/debates	14	9	11	3	7	7																			
Surveys	5	9			1	2																			
Statements	23	37	14	19	35	88																			
Political decision	5	4	4	1	2	2																			
ES																									
Elections																									
Protests	4	4	4	3	1	1		1																	
Meetings/debates	8	8	2	1	4	2	4	3	2	1	1	2	1												
Surveys	6		2	2		1		3	3	1															
Statements	85	38	19	17	16	9	10	13	5	7	18	6	5	8	4	5	12	8	1	3	2	1	2	1	17
Political decision	5	4	5	2	2	2	1	1		1															1
SE																									
Elections																									
Protests	2	1	3	1	2	1	1	1	1	1															
Meetings/debates	2	1	3	1	2	1	1	1	1	1															
Surveys	2																								
Statements	22	3	8	1	4	1	1	10	1	1	4	1	4	1											3
Political decision																									1
UK																									
Elections																									
Protests	2																								1
Meetings/debates	6	2																							2
Surveys	1																								2
Statements	14	3	9	3																					9
Political decision																									1
CH																									
Elections																									
Protests	1	1	3	2	3	1	2	2																	
Meetings/debates	3	2	2	2	2	1	1																		
Surveys	2		2	1																					
Statements	57	24	19	10	7	8	7	22	7	5	13														
Political decision	6	9	2	2	7																				
FI*																									
Elections																									
Protests	1	1	1	1	1																				
Meetings/debates	1	1	1	1	1																				
Surveys	1	1	1	1	1																				
Statements	15	10	2	8	4																				
Political decision	1																								
NL																									
Elections																									
Protests	2	1	1	1																					1
Meetings/debates	1																								1
Surveys	2																								1
Statements	9	4	1	1	5																				1
Political decision																									
US*																									
Elections																									
Protests	1	1	1	1	1	2	1	1																	1
Meetings/debates	5	4	6	1	3	1	6	1	2	1	3	1	2	1	3	2	1	1	3	2	1	1	3	2	1
Surveys	1																								
Statements	52	20	22	9	12	6	7	5	11	10	7	7	10	6	14	20	7	12	8	7	5	8	10	15	12
Political decision	1	4	3	3	6	5	7	8	2	3	2	1	3	1	6	1	3	2	2	1	1	2	2	1	1

Note: the numbers indicate how many events per type (on the rows) happened each week. * Data incomplete

In France, the opposition — and particularly the Greens (*Europe Ecologie Les Verts*) — and environmental organisations (Greenpeace and the anti-nuclear organization *Sortir du Nucléaire*) immediately reacted stirring public opinion against nuclear energy. The Greens call for a referendum on nuclear energy and press the Socialist party (PS) to change their position on the issue. The PS supports the calls for a debate on nuclear energy in the days following the Fukushima disaster but are reluctant to position themselves against nuclear energy, while Sarkozy and all the representatives from centre-right parties and the National Front (FN) insist on the need to continue with nuclear energy and frame the debate as one exclusively about improving nuclear safety. Protests are very common in the first two weeks of the juncture, though their number decrease sharply from the third week (only to peak again on the seventh week by the end of April). Some of these protests, interestingly, are initiated by PS members to put pressure on their own party so that they reverse their traditional pro-nuclear position. Overall, however, the heated debate of the nuclear issue only lasts for the first few weeks in France.

In Spain, since March 11, environmental groups (Greenpeace, *Ecologistas en Acción* and *Tanquem Cofrentes*) capitalize on the accident to give their anti-nuclear stance salience. The nuclear industry and the Spanish national security council (CSN) react immediately to counterbalance these messages and reassure the public that nuclear plants in Spain are safe. Up until March 14 the strategy of the governing PSOE was to keep as silent as possible about nuclear energy, but from March 19 they cannot avoid talking about it any longer and some key ministers start trying to reassure the population further. By coincidence, months earlier a law proposal had been put forward by the government to parliament on private companies' liabilities for nuclear accidents or nuclear waste. On March 15 this proposal was voted in parliamentary committee and approved, and naturally the debate in the committee was sharply shaped by the Fukushima disaster. This coincidence in the legislative process multiplied the visibility of the issue and gave a platform for the anti-nuclear opposition parties in parliament (IU, ICV and to a certain extent ERC). Throughout the rest of the period the Socialist government held to their initial policy position of a gradual closure of the existing nuclear plants with possibilities of extending their operation permits if safety reports were satisfactory.

Figure 2 also shows that the intensity in mobilization of the issue in Germany, Italy, Switzerland, France and Spain is not only related to the number of events happening but is also reflected in the much wider range of events taking place. In particular, protests are much more common during the first three weeks in these four countries, almost inexistent in Britain and Sweden, and only sporadic in Belgium, Canada and Finland, with the US constituting an intermediate case of moderately frequent protest. This heightened interest in the issue in the former five countries is reflected also in the production of surveys taking the pulse of the public, which are regularly published throughout the period of the policy juncture in these countries, and much less so in the other six.

In Britain, Canada, Germany, Finland, Italy, Spain and Switzerland, some form of election also takes place during the first 12 weeks after Fukushima. However, while the electoral debate around nuclear energy is intense in the two southern countries, Germany and Switzerland, it does not alter the lack of public debate in Britain and Canada. In Italy, the campaigns for the referendum in Sardinia against nuclear energy, with an unequivocal success (97.1%), and the local elections (both held in May 15-16), in which the government was eventually heavily defeated, sent clear messages to the government that the position on nuclear energy was vastly unpopular.

In Spain, local and regional elections took place on May 22 and nuclear energy was, even if not dominant due to the centrality of the economic crisis, somewhat prominent. Interestingly, the governing PSOE used nuclear energy to attack their main opponent, the centre-right PP, for their pro-nuclear position, whereas the radical left IU and the left-green ICV attacked both of them for not wanting to terminate once and for all the Spanish nuclear energy programme. The PSOE lost both the local and regional elections to the PP by a wide margin but nothing suggests that this had anything to do with their reluctance to reconsider their nuclear energy policy.

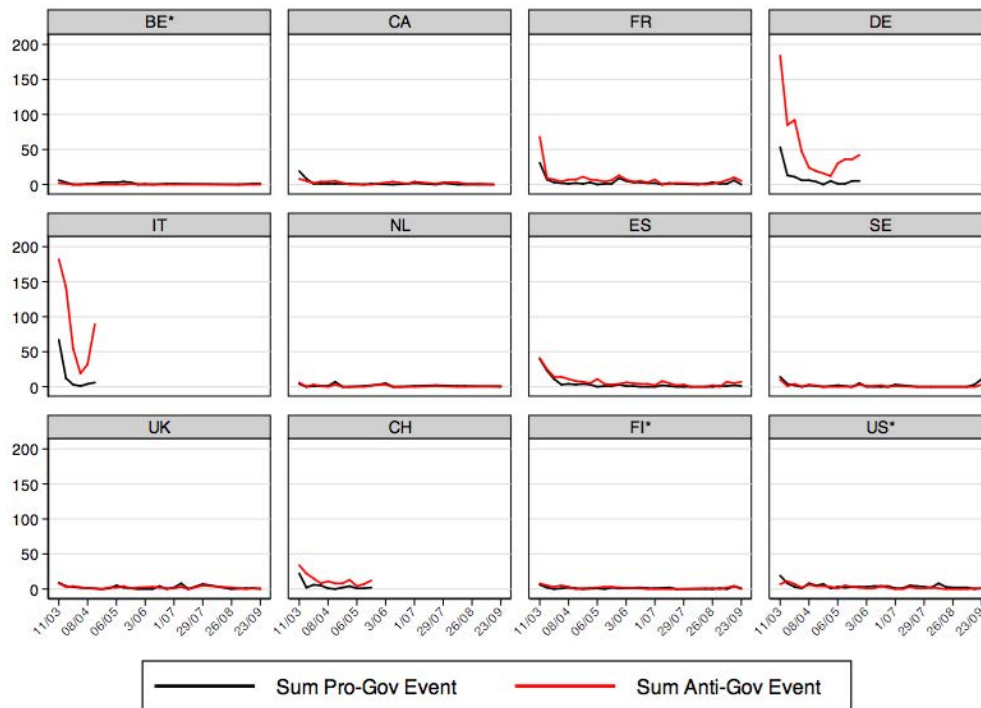
While the first regional election in Germany in Sachsen-Anhalt on 20 March resulted in a continuation of the CDU in government, the epic loss in Baden-Wuerttemberg resulted in a harsh cut in the government's perceived public support. Above all, the FDP was also significantly defeated in the regional elections on 27 March in Rhineland-Palatine. Therefore, voices in the FDP urging to significantly rethink the government's position on nuclear energy became louder towards the end of March.

This was also affected by the election of the first Green minister president in a German Bundesland, in Baden-Wuerttemberg. And the cantonal elections in Zurich had a similar effect on the electoral reading around the nuclear energy debate in Switzerland.

Turning to the direction of preferences expressed in the various events (Figure 3), Germany, Italy and Switzerland are the only countries in which anti-government events dominate throughout the whole period (see also separate figures in Appendix).¹² In the case of Spain, France and the US there are some periods when anti-government positions slightly outnumber the pro-government ones but often the pro- and anti-government positions are similarly visible. Thus, only in the former three we find a combination of very high salience and politicization of the nuclear energy issue coupled with a clear dominance of the anti-nuclear positions.

Figure 3. Evolution of pro- and anti-government events in the first 6 months, per country and week

¹² In Finland anti-government positions dominate during the brief period of the Kiviniemi government until the April, 2011, elections; but this is no longer the case during the caretaker government tenure or the new Katainen government period.



THE VIEWS OF THE VOCAL VOTER AND THE MEDIAN VOTER ON NUCLEAR ENERGY AFTER FUKUSHIMA

We turn now to our main focus: the consistency of messages and views of the public expressed through opinion polls (the median voter) and those expressed through protests (the vocal voter).¹³ In Figure 4, we can appreciate the divergence in the situations for Germany, Italy, Switzerland and the other countries. While in all countries protests are exclusively anti-nuclear (as we could have expected), their following is very high in Germany, especially, in the first month of contention but also in Italy — with events of around 100,000 demonstrators in Berlin in the first

¹³ The types of protest we covered include a wide range of forms of collective action: expressive and demonstrative actions (e.g. petitions, demonstrations, online actions, etc.), confrontational protests (e.g. boycotts, hunger strikes, disturbance, strikes, etc.), violence-free illegal confrontational protests (e.g. blockades, occupation of buildings, etc.), and violent illegal confrontational protests (e.g. bomb threats, symbolic violence, physical violence, etc.). Hence, not all protests were demonstrations; many were petitions and online actions, for example.

three weeks and an event of around 300,000 demonstrators in Rome on March 26. Although a gathering of 10,000 demonstrators in Switzerland might not seem too numerous, it actually is a sizeable demonstration given the population size. To put this in perspective, the best-attended protest event gathered 2,500 protesters per million inhabitants in Germany, 5,000 in Italy and 1,750 in Switzerland. In contrast, the protests in France, Spain and the US were numerous and frequent (more so in the two European countries) but much less followed than those in the former three countries;¹⁴ Finland experienced only a small number of protests, but they were successful in congregating on average more people than those in France and Spain; while the protests in the remaining countries were considerably smaller in number and/or following (see also Figure 2).

In relation to the views of the public expressed in opinion polls, for a survey to be considered ‘anti-government’, at least 50% of the respondents had to clearly object to nuclear energy. If, for example, 40% opposed, 30% supported and 30% were indifferent, then the survey was not considered anti-government or pro-government. In this case too, we find interesting differences across countries. In Canada, France, Spain and Sweden there is an interesting shift in the overall public opinion measured by surveys. While at the beginning of the juncture more surveys did not reflect opposition to the governmental position on nuclear energy, as time passed, more polls reported that the general public was getting closer to the protesters in opposing the government’s views. In Belgium, Britain, Finland and the Netherlands the overall public opinion did not oppose the government’s positions, usually in contrast with the protester’s views. However, later in the process (around week 35 and out of the period shown in Figure 4), in the Netherlands the public opinion had moved closer to the protesters’ positions.

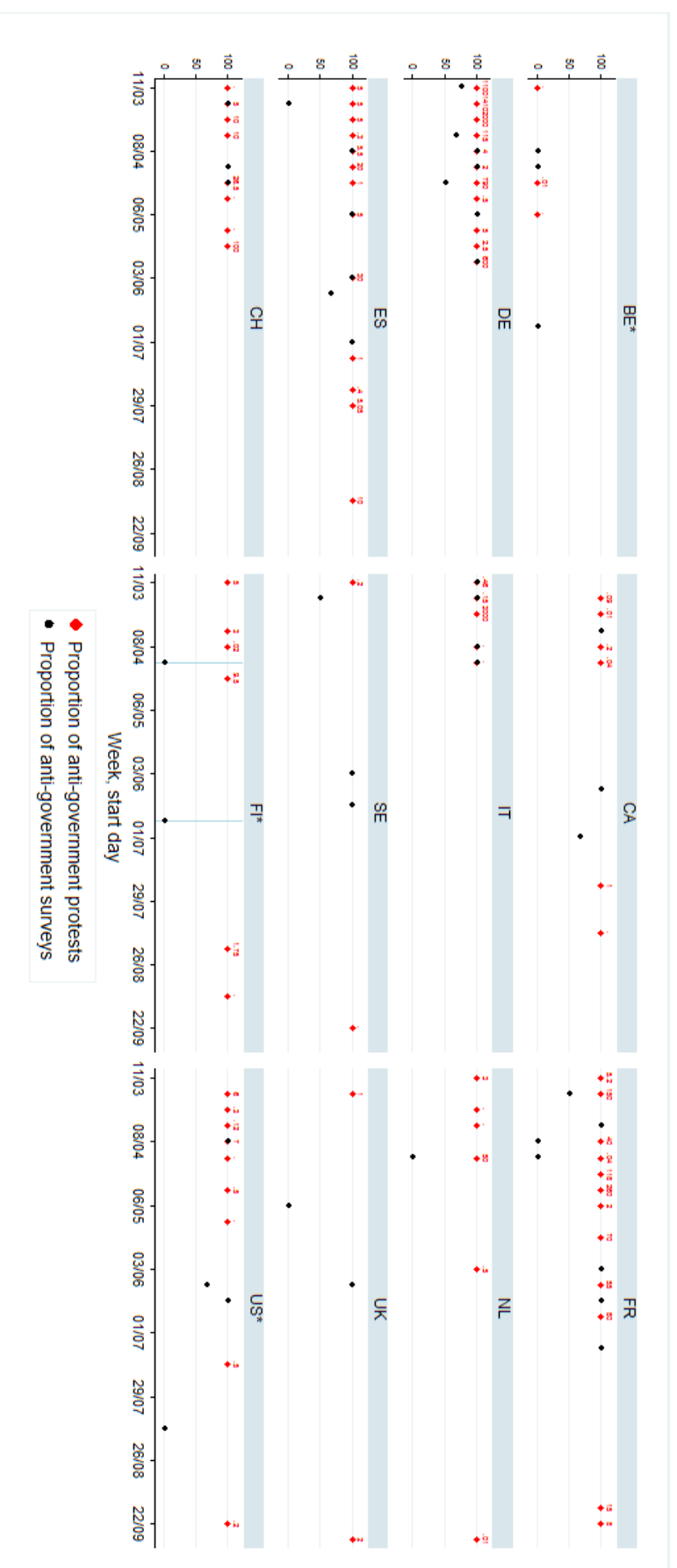
In France and the US there is a wealth of opinion polls published about the subject and the results clearly indicate that the median voter is not very sure about their position on nuclear energy, as the pro- and anti-government siding of citizens’

¹⁴ The mean number of protesters per million inhabitant of each protest event was: 634 in Italy, 259 in Germany, 265 in Switzerland, 41 in France, and 19 in Spain. In all other countries they were well below the 10 protesters per million inhabitants.

responses is volatile and depending on survey question wordings. In France, if asked directly about support of nuclear energy, respondents tend to answer negatively; but if asked if they support the proposals by the environmentalists of getting rid of nuclear energy, they also answer negatively, whereas answers about phase-out proposals vary depending on the exact wording. In the US, the public is also very ambivalent, often expressing an overall support to nuclear energy and an opposition to phasing out plans in the next 10 years, but also expressing a wish to stop building new nuclear plants. Overall, the public opinion expressed through surveys is quite ambiguous and complex and does not serve to amplify the protesters' demands in the French and US cases.

Instead, in Italy, Germany and Switzerland the overall public opinion does not differ much from the protesters' opposition to the government's position from the beginning of the period. It is only in these three countries that we see clearly Agnone's 'amplification' mechanism at work: both the vocal voter and the median voter coincide in their opposition to the government's positions and they strengthen each other in getting this message across loudly and clearly.

Figure 4. Nuclear energy policy position of protesters and general public during the first 6 months, per country and week



Note: the symbols mark the percentage of each type of event that held an anti-government position, while the numbers for protest events indicate the maximum participation in any given protest in that week, in 100s (e.g. 50 is 5000 maximum participants in any single protest event that week).

In summary, we find intense protest in Italy, Germany and Switzerland, which is highly consistent with the views of the public expressed through surveys; moderate protest in Finland, France and Spain that is inconsistent with surveys in Finland and sometimes consistent with surveys but not unequivocally throughout the period in France and Spain; and small or negligible protest in Belgium, Britain, Canada, the Netherlands, Sweden and the US that is often not even consistent with the views of the median voter.

PRELIMINARY CONCLUSIONS

We now take stock of the indicative results we have been able to gather so far and how they map into our original expectations. Table 3 presents the relevant findings for our core initial hypotheses, by summarising the patterns found in relation to the intensity and following of protests, the agreement between the views of the ‘vocal’ and the ‘median’ voter, and the final outcome in relation to governmental responsiveness.

Table 3. Patterns of protest and consistency of the vocal and median voters, and responsiveness outcomes

Protest	Consistency vocal & median voter	Case	Outcome
Intense	Yes	<i>Italy</i> <i>Germany</i> <i>Switzerland</i>	Substantial policy responsiveness (4) Substantial policy responsiveness (4) Substantial policy responsiveness (4)
	No		
	Fluctuating		
Moderate	Yes		
	No	Finland	(Pending: but only moderate policy change for Kiviniemi’s govt)
	Fluctuating	<i>Spain</i> France	Rhetorical responsiveness (2) Rhetorical responsiveness (2)
Small/Negligible	Yes	Belgium Sweden	Counter-responsive move Increased attention to the issue (1)
	No	<i>Britain</i> Netherlands	Increased attention to the issue (1) Increased attention to the issue (1)
	Fluctuating	<i>Canada</i> US	No reaction (0) TBC (coding pending but no policy change)

In Italics, countries where local/regional elections took place just a few months after March 11, 2011.

In relation to the effect of protests (H1), we found moderate or negligible protest in Belgium, Britain, Canada, Finland, France, the Netherlands, Spain, Sweden and the US, and consistent with our expectations the governments of these countries did not substantively change their original policy positions on nuclear energy. However, we find some moderate policy change by the Kiviniemi cabinet in Finland shortly after the accident, and rhetorical responsiveness in Spain and France. These moderately responsive reactions coincide with cases of somewhat greater intensity in mobilization than the other five countries. Only in Germany, Italy and Switzerland did we find substantial protests, both in terms of their frequency and their following. The Italian government made a U-turn in its policy position of seeking to re-open the nuclear energy programme, and the German and Swiss governments embarked in a substantial policy shift that resulted in the immediate closure of eight reactors and the phase-out of nuclear energy by 2022 in the former, and the phase-out of nuclear energy by 2034 in the latter.

Our second hypothesis expected that protests would not be effective if they are inconsistent with the majority position expressed in surveys, unless the protesters were in line with the core voters of the party in government or (some of) the coalition parties; and hypothesis 3 expected governments to change their policy if the protests are supported by the majority view in the surveys. Our preliminary findings suggest that agreement between the vocal and the median voter is not relevant when the protests are not substantial, and we did not find any cases of disagreement between protesters and surveys in the presence of intense protest. In the German, Italian and Swiss cases, the popular view (as expressed in the surveys) was overwhelmingly opposed to the government's pro-nuclear positions. Thus, the change of heart of these three governments is also consistent with these expectations.

Hypothesis 4 expected the above conditions (1-3) to affect governmental responsiveness differently depending on how close election day is, while hypothesis 5 expected the effects of public opinion and protest pressures to depend on external (or contractual) constraints (5a) and on how divisive the issue is within the party/coalition (5b). In the Italian case, two main factors brought the government to change its mind: the fear of losing the forthcoming local elections, on the one hand, and the decisions taken at the European level suggesting that nuclear energy plans needed to be

rethought and approving the stress tests in the all European nuclear plants by the end of the year, on the other. The closeness to nation-wide elections in the Italian case seems to have contributed to the U-turn, as expected. External or contractual constraints in the Italian case were relatively minimal, as no nuclear plant had been built as yet and the contractual agreements with EDF were not of an amount that could not be forfeited. Internal dissent within the government coalition, in this case, seems to have contributed to the U-turn instead of preventing it, as several members of the coalition parties (especially at local and regional level) became meditative and critical against nuclear energy immediately after Fukushima, while Lega Nord was mostly silent but also included diverging views.

In the German case, the issue of nuclear energy had already been on the agenda of political actors prior to Fukushima. The accident in Fukushima further inflamed the debate and resulted in significant electoral losses of the government at the regional level. As such, regional elections played a crucial role for the government's policy position change. The clear cut distinction between the opposition's viewpoint and the two government parties also helped the anti-nuclear front in the sense that the opposition acted as a joint force against the government's policies.

In Switzerland, anti-nuclear protest after Chernobyl had also been considerable, and opposition to nuclear energy after the Fukushima accident was not necessarily a surprise. The active role of the SP and the Greens, and the perception that their position on nuclear energy had benefitted especially the latter in the Zurich cantonal elections was a matter of concern for some of the parties represented in the Federal Council. The pressure of cantonal governments and assemblies also seemed to play a role in the final decision to announce a phase-out of nuclear energy. Given that the major Swiss parties do not 'loose' elections at the federal level — at least in terms of government formation consequences — cantonal elections are very important signals for political parties.

However, local or regional elections also took place in the first 2-3 months of the juncture in Britain, Canada and Spain, but in these countries we saw no substantive policy change on nuclear energy at the national level. Hence, the role of elections is unclear and seems to be conditional on the existence of considerable protest and public opposition.

In the case of Germany and Switzerland, their decisions did indeed have important contractual consequences with the nuclear industry, and the industry made this very clear in the German case, but this did not seem to deter the governments from changing their policy course.

Overall, these preliminary findings suggest that the research avenue initiated with this study is promising and can contribute to improve our knowledge about the conditions by which democratic governments respond to the pressures of the public and how they react to them. In future drafts of this paper we will complete the data collection and analyse the results in a more systematic way (probably with fuzzy set QCA).

APPENDIX

Figure 1 distinguishing high and lower salience cases.

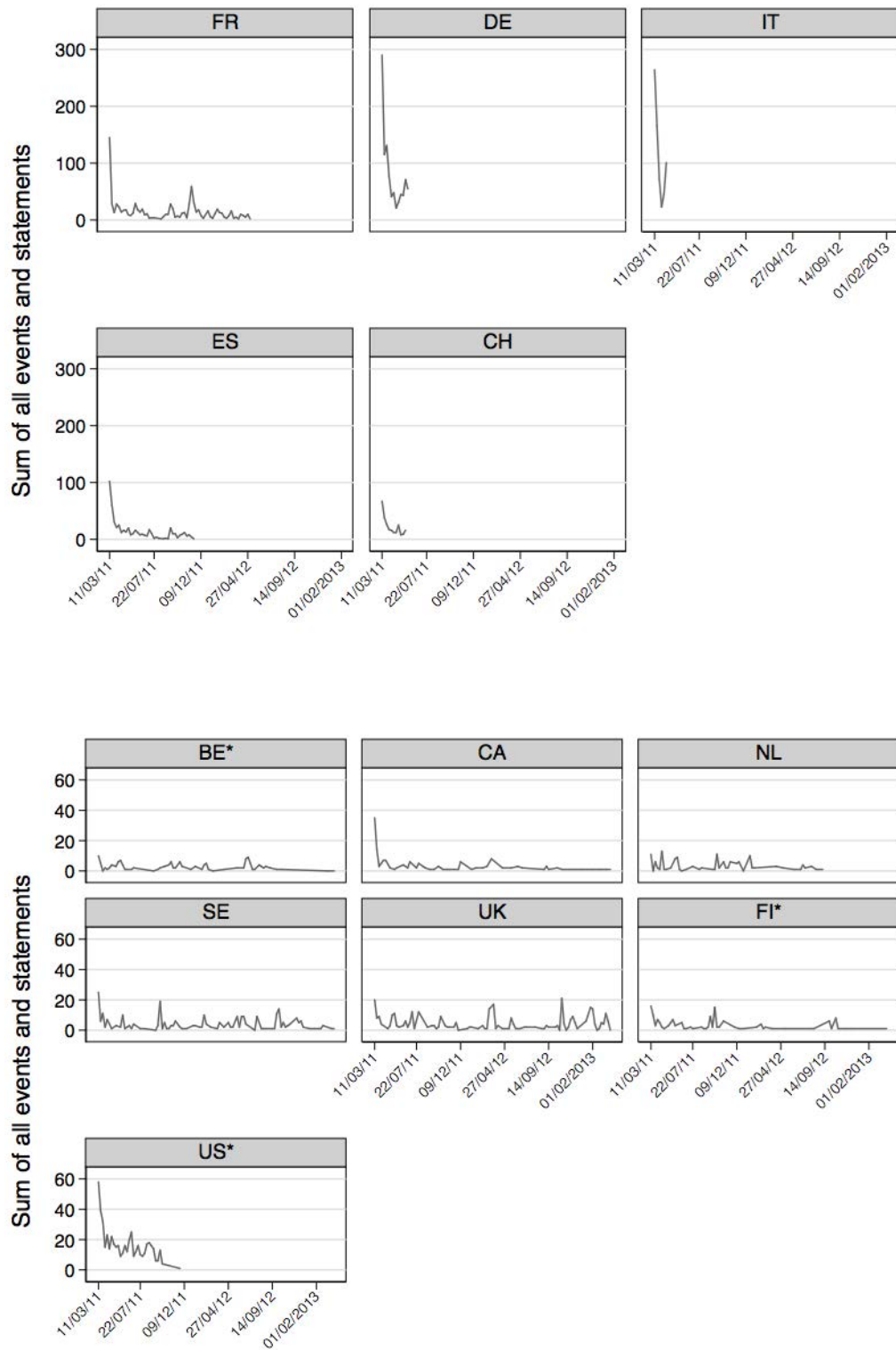
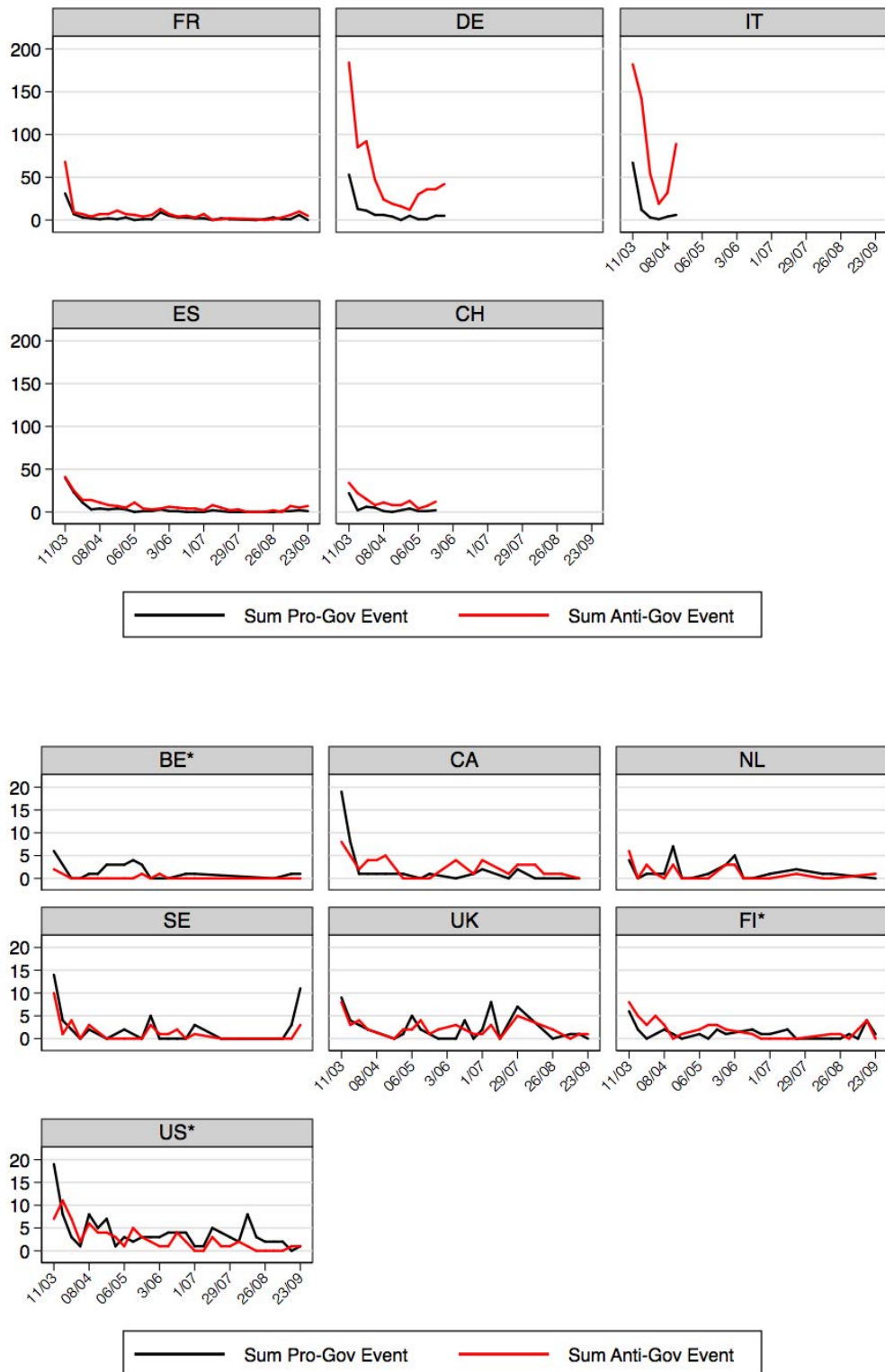


Figure 3 distinguishing high and lower salience cases



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