

CRISIS-INDUCED LEARNING AND ISSUE POLITICIZATION IN THE EU: THE *BRAER*, *SEA EMPRESS*, *ERIKA*, AND *PRESTIGE* OIL SPILL DISASTERS

WOUT BROEKEMA

This article explores the relation between issue politicization and crisis-induced learning by the EU. We performed a political claims analysis on the political response to the four major oil spill disasters that have occurred in European waters since 1993. Political claims that we observed in three arenas (mass media, national parliaments, and the European Parliament) were compared with recommendations in post-crisis evaluation reports and the EU's legislative responses. For all three political arenas our findings indicate that politicization of issues either promotes or impedes crisis-induced EU learning, which points to the existence of determining intervening factors. EU legislation that is adopted in response to oil spill disasters appears to a large extent grounded in crisis evaluation reports. Characteristics of crisis evaluation reports, especially the degree of international focus, seem to offer a more plausible explanation for variance in crisis-induced learning outcomes than politicization.

INTRODUCTION

On 15 January 1996, the Liberian-registered oil tanker *Sea Empress* ran aground on the rocks at the entrance to Milford Haven, releasing 72,000 tonnes of oil into the sea in the following days. Only three years later, on 12 December 1999, a very similar accident occurred in the European Atlantic when the Maltese-registered tanker *Erika* sank due to rough weather conditions off the Brittany coast, causing an oil spill of 20,000 tonnes. Both accidents had a dramatic long-term environmental, social, and economical transboundary impact (EMSA 2004; Wene 2005). In the aftermath of the *Erika* disaster the EU achieved major policy reforms by adopting the legislative packages Erika I and II (EC 2003; Wene 2005). These seem to indicate that the European Union has learned substantially from the *Erika* disaster as regards preventing similar events in the future. In contrast, in response to the *Sea Empress* accident only three years earlier, the EU seems not to have drawn major lessons: no legislative package was adopted (Krämer 2007). This difference in learning outcomes is quite remarkable given the great similarity of location, events, and consequences of both cases (CEDRE 2014; ITOF 2014).

The literature confirms the observation that learning from crises on the part of public organizations varies substantially from case to case (Birkland 2006; Deverell 2010). However, so far the theory has not come up with a satisfying explanation for this variation in lesson drawing. The process of learning from crises is not well understood in the literature, as hardly any theory on the subject seems to have been developed (cf. Smith and Elliot 2007; Deverell 2009). At the same time, there is a lack of empirical studies on the subject. In particular, the factors that determine whether learning takes place are as yet unknown: what drives organizations' learning after a crisis? Politicization is often put forward as an important factor in the learning process (e.g. Stern 1997; Dekker and Hansén 2004; Birkland 2006). However, the exact role that politicization plays remains unclear because scholars simultaneously claim a promoting and an impeding effect for it. As politicization remains

Wout Broekema is in the Department of Public Administration, Leiden University, The Hague, The Netherlands.

outside the main scope of these studies (except for Dekker and Hansén 2004), clarification of the underlying processes and empirical substantiation of the theoretical suppositions are still lacking.

The aim of our study was to explore and clarify the relation between politicization and learning from crises through an analysis of European oil spill disasters. Our research question was: *To what extent does issue politicization affect crisis-induced learning by the EU?* We adopted a political conflict perspective on politicization, as reflected in our use of political claims analysis. In the study we focused on ‘policy learning’, here defined as the enhancement of policies based on increased knowledge, and indicated by evaluation investigations and new EU directives and regulations. Taking an innovative approach, we mainly studied politicization and learning at the issue level, in terms of responses to the *Braer* (1993), the *Sea Empress* (1996), the *Erika* (1999), and the *Prestige* (2002) oil spill accidents. We examined to what extent the contents of political claims in mass media, national parliaments, and the European Parliament (EP) resembled the recommendations made in crisis evaluation reports and new EU legislation. In combination with an in-depth case study analysis we used the technique of pattern-matching (Trochim 1989; Yin 2009) to systematically analyse a large set of empirical data (1,449 claims) while taking into account the specific disaster contexts.

In the next section the main theoretical concepts and the key mechanisms that connect politicization and learning are discussed, followed by an explanation of the current relevance of studying oil spill disasters. After an outline of the methodology, an in-depth case description is presented of the patterns found per disaster case, concluded by a discussion of our findings.

THE EFFECT OF POLITICIZATION ON CRISIS-INDUCED LEARNING

Citizens expect governments to protect them against disaster. If disaster nonetheless strikes, government organizations are expected to respond adequately and subsequently ensure that similar terrible events do not occur again. In theory, organizational learning is conceived to be the process through which an organization can enhance its performance (Fiol and Lyles 1985; Huber 1991). In contrast to the idea prevalent in society and often implicitly assumed in the literature (Smith and Elliot 2007), learning is not a natural reaction of organizations to crises. There is increasing evidence that government organizations experience difficulties with learning from crises (Stern 1997; Smith and Elliot 2007). As noted above, very little theory has been developed so far on the relation between crisis and learning. The number of studies on the subject has been rather limited (notable exceptions are Carley and Harrald 1997, Stern 1997; Dekker and Hansén 2004; Birkland 2006; Smith and Elliot 2007; Deverell, 2010).

In current work it is especially the question of what factors help to explain the presence or absence of learning that remains unanswered. Although sometimes individual characteristics (e.g. crisis experience), organizational characteristics (e.g. organizational culture), or crisis characteristics (e.g. type of crisis) are proposed as influential factors, an explanation of the processes and systematic empirical studies clarifying the supposed effects are generally still lacking (e.g. Smith and Elliot 2007). In the literature, politicization is systematically put forward as a key factor in the learning process. However, it is striking that the exact role politicization plays remains unclear and ambiguous. In some instances scholars argue that politicization has a promoting effect, whereas on other occasions they argue that it has an impeding effect (cf. May 1992; Stern 1997; Dekker and Hansén 2004;

Birkland 2006; Boin *et al.* 2008, 2009; Moynihan 2009). The implicit roots of these conflicting suppositions on the effects of politicization are different theoretical mechanisms that are assumed to connect politicization and learning. Before going into these mechanisms, we will first discuss the main concepts of study.

Learning from crises

Although the concept of organizational learning is often discussed in the literature, there is no generally accepted definition as yet; Levy (1994, p. 279) speaks of a 'conceptual mine-field'. Because it is understood, measured, and applied in many different ways (Fiol and Lyles 1985; Bennett and Howlett 1992; Crosson *et al.* 1999) the construct remains rather elusive. We do not aim to become involved in the ongoing theoretical discussions, but instead use the various approaches as a useful framework for studying the concept and to make clear what we did and did not study.

In the literature, organizational learning is viewed from both a cognitive perspective (acquiring knowledge; cf. Argyris and Schön 1978) and a mere behavioural perspective (transferring new insights into improved actions; cf. Levitt and March 1988). We have combined the two perspectives (cf. Fiol and Lyles 1985) by defining learning as the enhancement of organizational performance (behaviour) based on newly acquired knowledge (cognition). Although the theory on organizational learning and policy learning developed as two separate streams, we have here taken a more integrated approach (cf. Common 2004). The core processes of the learning concept in both streams fit our definition of learning. We approach policy learning as one form of how an organization can learn: besides adapting, for example, organizational culture, norms, skills, or routines, an organization can also improve its policies.

The essence of policy learning as part of the policy cycle and in reaction to external changes is quite straightforward: evaluation exposes the flaws in an organization's policy, in response to which the organization improves its policy (Howlett *et al.* 2009). Or, as Birkland points out, 'learning can be said to have occurred when the proximate causes of the policy failure revealed by the event are subsequently addressed by changes in policy' (Birkland 2006, p. 166). This ties in with what May (1992) calls 'instrumental policy learning', defined as 'new understanding about the viability of policy interventions or implementation designs' (p. 335). He explains that policy failure provides major opportunities for policy learning. Instrumental learning has occurred if new policies are adopted that stem from increased understanding about the policy design. May explains that improved understanding about a policy design can be derived from either direct or indirect experience (through formal evaluations) with a given policy.

Scholars of organizational learning theory distinguish not only between who learns and what is learned, but also between when it is learned, and for what purpose (cf. Bennett and Howlett 1992; May 1992; Deverell 2009). Moynihan (2009) clarifies the last two aspects by distinguishing between 'intercrisis' learning and 'intracrisis' learning. Intercrisis learning concerns the process of learning in the post-crisis period, and is aimed at the prevention of and response to future crises. When the period of chaos is over and normality has been restored, organizations can start to look back and address the things that went wrong.

Crises typically create major opportunities for the adoption of policy changes (Baumgartner and Jones 1993; Kingdon 2011). Policy changes as such, however, do not have to reflect policy learning, as they might not address the actual policy failures revealed by a crisis. Policy changes can be induced by a variety of political reasons that are unrelated to improved understanding. It is especially post-crisis policies that are vulnerable to

political self-interests, as the interests at stake are high. When new policies are not based on increased knowledge, we speak of 'quasi-learning', because learning is pretended but did not actually take place. These or similar processes of mere adaptation instead of learning are recognized by several scholars in the field (cf. Fiol and Lyles 1985, p. 811; May 1992, p. 336; Carley and Harrald 1997, p. 122). Distinguishing 'real' learning from quasi-learning requires tracing back the line to the origins of new policies. 'Real' learning is demonstrated by evidence of new legislation or regulation, together with evidence that this was based on thorough (formal) investigation (Birkland 2006).

Politicization

In the wake of a crisis, political conflict can arise very quickly. However, the intensity of politicization in response to critical incidents varies widely (Brändström and Kuipers 2003), depending on multiple factors such as policy domain, actor mobilization, issue salience, and actors' framing capacities. Normality can suddenly change into crisis politics in which major interests are at stake (Boin *et al.* 2005). Politicization stems from disagreement on interpretations of, in particular, (1) the course of events, (2) the underlying causes and effects, (3) questions of responsibility and accountability, and (4) what lessons should be drawn (adapted from Olson 2000; Boin *et al.* 2008). Political conflict often results in a blame game between the actors involved, in which the positions of public leaders are put into question (Boin *et al.* 2005).

In theory, the concept of politicization is defined in many different ways and is used in a wide range of studies. Often, politicization is defined as increased political attention. This definition, however, ignores the 'disagreement' component often central to definitions of politics. An upsurge of attention does not necessarily correspond to people's dissatisfaction with a situation. In our study we take a 'political conflict' perspective (cf. De Wilde 2011). We consider an issue 'politicized' when it has become subject to increased political conflict. This definition implies that politicization is not restricted to *politics* in a narrow sense, but can also occur outside the formal political institutions. Crisis issues are contested by means of political claims made by multiple actors in different political arenas at different levels (Koopmans 2007; De Wilde 2011), including both formal democratic institutions, such as parliaments, and more informal ones, such as mass media. Therefore, although politicization is usually studied at the level of formal political institutions, studying politicization at the level of the public could provide additional useful insights. As the 'barrier' model (Bachrach and Baratz 1970) explains, issues become political when they are formulated as 'demands' on governments.

Proposed effects of politicization

Describing the mechanisms between variables creates a better understanding of the underlying processes (Pawson and Tilley 1997; De Vaus 2001, pp. 34–36). Theory helps us to distil two general mechanisms that connect politicization and learning but exert contrary effects. Both these mechanisms can be viewed as consisting of the same main processes (concern, informing, understanding, pressuring), but working towards different outcomes. These processes should not be viewed as steps following each other in an orderly fashion, but rather as working towards a specific outcome, with each process partially responsible for that outcome.

The first mechanism exerts a *promoting* effect. Politicization draws attention to certain issues. Because awareness and concern grow, different actors in public and government become involved. This leads to increased public assessment and scrutiny of government

responses (Dekker and Hansén 2004) (*concern*). The concern of actors in society triggers exploration of these topics, creating an increase in information in the form of evaluative investigations, academic studies, hearings, parliamentary questionings, investigative journalism, and judicial reports (Van Duin 1992; Birkland 2004) (*informing*). By comparing the ample information available, decision makers are able to acquire reliable information (Smith and Elliot 2007). In this way decision makers gain insight into the causes of the crisis and policy failures are exposed (Birkland 2006). The new knowledge acquired makes it possible to distil clear lessons (Argyris and Schön 1978) (*understanding*). Political demands, increased scrutiny and concern, a sense of urgency, and the presence of possible solutions then pressure and motivate decision makers into changing policies (*pressuring*). New policies are adopted based on increased knowledge and insights: learning has taken place. As Deverell (2009, p. 186) proposes, 'if there is external critique toward the organization and credibility loss, then implementation of crisis-induced lessons will be carried out at a greater rate'. This mechanism leads to the following hypothesis:

Hypothesis 1: Political conflict promotes policy learning, as conflict over an issue facilitates the adoption of policy change based on increased understanding about that issue.

In contrast, the second mechanism exerts an *impeding* effect. Politicization creates awareness and concern on the part of actors in society. Multiple actors with different interests become involved (*concern*). Actors' concern stimulates exploration into these topics, creating a mass of information from all kinds of sources. The actors involved try to frame the situation in their own interests or beliefs (Stone 2002; Brändström and Kuipers 2003). Information is subjective and conflicting (Carley and Harrald 1997) (*informing*). Actors encounter difficulties processing and making sense of the information, especially given the limitations of human cognitive abilities. The overload of interpretations makes it impossible for decision makers to make sense of causes and distil straightforward lessons (Boin *et al.* 2008). Because of this chaos and stress there is no fruitful context for lesson drawing (*understanding*). As a result of crisis politics and the lack of agreement on causes and solutions, decision makers are forced to occupy themselves with avoiding blame and securing their own position (Boin *et al.* 2005). Actors demand of public leaders that they make quick decisions. Seizing political opportunity, different actors try to press different interests (Kingdon 2011). At the same time, public concern and scrutiny generate public pressure 'to do something' (Birkland 2006) (*pressuring*). Increased scrutiny and concern, political pressure for change, and the lack of clear solutions create an incentive for decision makers to adopt policies that are not based on increased knowledge: quasi-learning has taken place. This mechanism leads to the following hypothesis:

Hypothesis 2: Political conflict impedes policy learning, as conflict over an issue facilitates the adoption of policy change that is not based on increased understanding about that issue.

In our study we explored which of these two hypotheses is the more plausible. After a short background sketch we will explain our methods of data analysis.

EU MARITIME SAFETY

The European economy is largely based upon maritime transport, which comprises around 40 per cent of trade within and 90 per cent outside of its territory (EC 2006, p. 2). Daily, hundreds of oil tankers pass through European waters that are characterized by a combination of tough shipping conditions and a high density of ecologically and economically vulnerable areas (Frank 2005). For quite a long time, the decline in oil spill

accidents in Europe was only moderate, compared to other parts of the world. It could be considered the 'oil spill hotspot worldwide' (Vieites *et al.* 2004, p. 535). In recent decades, disasters have induced the EU to develop a substantive common maritime safety policy, starting with the communication 'A common policy on safe seas' in 1993 (cf. Krämer 2007; Liu and Maes 2009). Although safety seems to have increased substantially in recent years there is a continuous risk of tanker accidents, as serious oil spills keep occurring in European waters (cf. CEDRE 2014; ITOPF 2014). The threat of oil spills was again demonstrated by the *TK Bremen* oil spill accident of 16 December 2011, despite its limited scope, and the potentially devastating consequences of recent events in other parts of the world, such as the Deepwater Horizon catastrophe of April 2010.

RESEARCH DESIGN

We explored the relation between politicization and EU learning mainly at the issue level, that is, through the responses to four European oil spill disasters, while taking into account the different disaster contexts. The analysis was structured in three steps. First, a content analysis was conducted on claims in newspaper articles, debates in national parliaments and the EP, and recommendations in crisis evaluation reports and new EU legislation. Second, the results of the content analysis were matched with pre-established patterns, derived from the theory, resembling different effects (Trochim 1989; Yin 2009) (see table 2). Finally, the patterns found were compared with each other within the context of the specific disasters.

For the empirical analysis four oil spill disaster cases were selected that (1) occurred as a result of tanker accidents, (2) were considered a 'disaster' by EU expert organizations (EC 2006; EMSA 2004), (3) saw at least 15,000 tonnes of oil spilled (EMSA 2004, p. 34); the volume of an oil spill is an indicator of its impact (Vieites *et al.* 2004), and (4) took place since 1993, the year the Maastricht Treaty came into force. These are the accidents with the *MV Braer* in 1993, the *MV Sea Empress* in 1996, the *MV Erika* in 1999, and the *Prestige* in 2002. The cases turn out to be remarkably similar in terms of both the actual turn of events and their consequences, or 'history repeats', as Vieites *et al.* (2004, p. 536) aptly put it.

Operationalization of variables

As indicators for the dependent variable 'policy learning' we used evaluation reports and legislative responses from the EU. Evidence of learning can be obtained by examining new legislation and tracing back the line to the origins of the legislation (Birkland 2006, p. 16). We assumed that the recommendations in evaluation reports are an indicator for cognitive learning, as they demonstrate the new knowledge acquired, and that new legislation is an indicator for behavioural learning, as it demonstrates the actions taken (Fiol and Lyles 1985). Scholars agree that evaluation reports play an important role in the crisis-induced learning process (Moynihan 2009). We adopted the current generally accepted view of policy evaluation as 'an inherently political activity ... with a technical component' (Howlett *et al.* 2009, p. 179). We took evaluation reports of oil spill disasters as an indicator of learning for several reasons. First, the evaluation reports are rather technical in nature and were published in the post-crisis phase, when major political upheaval had ended. Second, the investigations evaluating the oil spill disasters were comprehensive, combining many and varied kinds of information sources and interpretations of the crisis, for example via hearings of actors with divergent interests. Third, the evaluation reports hold a certain status and legitimacy, since the investigations were carried out by independent teams of renowned experts, weighing different interpretations.

TABLE 1 *Main data sources for measurement of politicization*

Global Factiva archive	http://global.factiva.com
House of Commons archive	http://hansard.millbanksystems.com
Congreso de los Diputados archive	http://www.congreso.es
Assemblée Nationale archive	http://archives.assemblee-nationale.fr
European Parliament archive	http://www.europarl.europa.eu

To obtain an indication of policy learning, we first conducted a content analysis of legal documents, that is, EU directives and regulations of legislative packages adopted by the EU in response to the selected disasters (derived from Eur-Lex). Every main topic of a new directive or regulation was considered a separate group. These were binary coded: '0' meaning no legislation, and '1' meaning legislation. Second, for every topic of new legislation we examined to what extent it was also discussed in the recommendations in crisis evaluation reports. This was also binary coded: '0' meaning not discussed or only cursorily, and '1' meaning discussed substantially.

To obtain an indication of the independent variable 'politicization', we used political claims analysis (cf. Koopmans and Statham 1999; Koopmans 2007; De Wilde 2011). We defined a 'claim' as a political demand for government action made by an individual or organization. Examples of typical verbs indicating a claim are 'demanded', 'should', 'must', and 'criticized' (cf. Koopmans 2002). An example of a claim is 'Next should come the establishment of oil tanker exclusion zones to protect coasts and vulnerable areas' (*The Guardian*, 1 August 1993). The benefit of using political 'claims' to indicate crisis politicization is that the unit of analysis is small, which makes the study more concrete and precise.

Political conflict over issues was measured in three different political arenas at three different levels: mass media, national parliaments, and the EP. To measure political conflict in mass media we analysed newspaper articles from *The Guardian* and *The Times* for the *Braer* and *Sea Empress* cases, from *Le Monde* and *Le Figaro* for the *Erika* case, and from *El Mundo* and *El País* for the *Prestige* case. These are generally considered quality (daily) newspapers, and with this selection both the left and right wings of the political spectrum were represented. Articles were selected and retrieved from *Global Factiva* by searching on [disaster name] and the terms [oil] and [disaster] in the body of the text, and by restricting the search to those articles published within one year of the specific accident. For the same period, records of parliamentary debates were selected by searching on [disaster name] in the title of the debate in the national parliament and EP online archives (see table 1). Based on in-depth case knowledge, we included a small number of debates that were directly linked to the specific disasters. Minutes of EP debates on the *Braer* and *Sea Empress* disasters were obtained from the EP on request.

The selected articles and debate minutes were examined for political claims. A total of 1,449 claims were found and analysed. For each political arena claims were listed, analysed, and subsequently categorized by topic, resulting in 57 groups or 'issues'. As a starting point for the categorization of claims, we used the topics of new legislation as separate categories. Second, we clustered the claims that did not fit these first categories but did explicitly mention a specific topic. Third, we divided the remaining claims into the existing categories. For every 'issue' the degree of political conflict was binary coded on the basis of the number of claims made: '0' meaning not politicized (≤ 5 claims), '1' politicized ($6 \geq$ claims). We assumed an issue to be politicized in general if it became

TABLE 2 *Pre-established patterns between politicization, evaluation reports, and EU legislation*

Pattern	Politicization Claims (in mass media, NP, and EP)	Learning Recommendations in evaluation reports	EU directives and regulations	Interpretation of pattern [in terms of effect of politicization on learning]	Supported hypothesis
1	1	1	1	Strong promoting effect (behavioural learning)	H1
2	1	1	0	Moderate promoting effect (cognitive learning)	H1
3	0	1	1	–	–
4	0	0	1	–	–
5	0	0	0	–	–
6	0	1	0	–	–
7	1	0	0	Moderate impeding effect, or no effect	H2
8	1	0	1	Strong impeding effect (quasi-learning)	H2

0: absent, 1: present.

politicized in at least two of the three political arenas. All analysis and coding work in this study was carried out by the same researcher.

Pattern matching

To systematically analyse the large set of empirical data while taking into account the specific disaster contexts we used the technique of pattern matching (Trochim 1989; Yin 2009), described by Yin (2009, p. 136) as ‘one of the most desirable techniques [for case study analysis]’. The logic of pattern matching consists in examining whether the empirical patterns found correspond to pre-established patterns derived from theory or experience (Almutairi *et al.* 2014). On the basis of the theory described above, we established eight different patterns between politicization of issues, discussion in evaluation reports, and adoption in EU legislation, representing different effects (see table 2). Subsequently we matched the results of the content analyses with these patterns.

Patterns 1, 2, 7, and 8 are especially relevant, as they support one of the hypotheses to different degrees. If an issue became politicized and corresponded to both recommendations in evaluation reports and new EU legislation, we inferred that politicization *strongly promoted* EU learning (see pattern 1). This inference was based on the assumption that the politicization of an issue led to the adoption of that issue in expert recommendations, and to the adoption of that same issue in new legislation (see mechanism 1). The result was behavioural learning, since a new policy was adopted that was based on increased knowledge (Fiol and Lyles 1985). If an issue became politicized and resembled recommendations of evaluation reports, but not new EU legislation, we inferred that politicization *moderately promoted* EU learning (see pattern 2). This was based on the assumption that politicization of an issue led to the adoption of that issue in expert recommendations. The result was only cognitive learning: new knowledge was acquired, but not adopted as a new policy.

If an issue became politicized and corresponded neither to recommendations in evaluation reports nor new EU legislation, we inferred that politicization either *moderately impeded* EU learning or had no effect (see pattern 7). This was based on the assumption that the politicization of an issue did not lead to adoption of that issue in either expert

recommendations or new legislation. If an issue became politicized and corresponded to new EU legislation, but not to expert recommendations, we inferred that politicization *strongly impeded* EU learning (see pattern 8). This was based on the assumption that politicization of an issue led to the adoption of new legislation that was not based on increased knowledge (see mechanism 2). The result was quasi-learning (cf. Fiol and Lyles 1985; May 1992; Carley and Harrald 1997): a change of policy that was not based on increased knowledge. None of the other combinations (patterns 3–6) points to an effect of politicization on EU learning. Note again here that we did not aim to ‘measure’ an effect in this study but merely aimed at exploring a relationship.

Subsequently, the patterns found were compared with each other within their specific disaster context. In an in-depth case description of the patterns found we included ‘technical feasibility of claims’ and ‘characteristics of evaluation reports’ as possible intervening factors. If the technical feasibility of claims to be adopted in legislation was restricted, that is, these were primarily aimed at the specific crisis response or at intervention in the private realm, learning was restricted as well. Likewise, varying characteristics of the evaluation reports might also have affected the learning outcome.

FINDINGS

The *Braer* disaster

On 5 January 1993, the 17-year-old Liberian-registered oil tanker *MV Braer* got into trouble on its way from Mongstad in Norway to Quebec City in Canada due to water in its bunkers, in heavy seas ten miles off the Shetland coast. The loss of its entire cargo of 85,000 tonnes during the ensuing days severely affected the local sheep, salmon, and tourist industries, and had a devastating impact on wildlife (CEDRE 2014; ITOPIF 2014). In response to the *Braer* accident, political conflict arose in the British mass media, the House of Commons, and the EP. An evaluation report by the Marine Accident Investigation Branch (MAIB 1993) into the *Braer* disaster was followed by an investigation report from Lord Donaldson (1994), set up by the UK Department of Transport. In response to the *Braer* disaster, the EU issued the communication ‘A common policy on safe seas’ (COM/93/66 final), initiating major new EU policies on oil tanker accident prevention (Plant 1995; Krämer 2007).

In the *Braer* case, our findings support both hypothesis 1, ‘politicization promotes EU learning’ and hypothesis 2, ‘politicization impedes EU learning’ (see tables 3 and 4). Here, we found substantially more support for a promoting effect. The legislation adopted by the EU on *vessel requirements* (Directive 93/75/EEC), *ship inspections* (Directive 94/57/EC), *training of seafarers* (Directive 94/58/EC), *segregated ballast tanks* (Regulation EC 2978/94), and *port state control* (Directive 95/21/EC) was strongly grounded in the evaluation reports. This indicates extensive EU learning from the *Braer* disaster. In response to the *Braer* accident intense political conflict arose, especially on *tanker exclusion zones* (32 claims found), an issue that became politicized in three different political arenas. However, with the exception of *vessel requirements*, none of the issues that became politicized were adopted in new EU legislation. The issue of *vessel requirements* became politicized, was discussed in Lord Donaldson’s recommendations, and was adopted in new legislation, indicating a strong promoting effect on learning (pattern 1).

We found no evidence of quasi-learning (pattern 8), as the topics of all policy changes were also discussed in the evaluation reports. The majority of issues politically contested

in the mass media and parliaments were also adopted in evaluation reports, indicating a moderate promoting effect on learning (pattern 2). Examples are the issues of *salvage tugs*, *flag state requirements*, and *victim compensation* that both became politicized and were extensively discussed in Lord Donaldson's inquiry. We found some evidence for a moderate impeding effect of politicization on learning. The issues *health risks* and *accountability oil industry* became politicized, but were not substantially discussed in evaluation recommendations (pattern 7). The technical feasibility of claims seems to have played a small intervening role: claims regarding the *accountability of the oil industry* were primarily aimed at the specific crisis response rather than at future disasters. The extensiveness of the evaluation reports after the *Braer* disaster is striking: Lord Donaldson's report alone delivered as many as 103 recommendations. The majority of these recommendations were directed at the UK government, but a substantial part was also internationally focused.

The *Sea Empress* disaster

On 15 January 1996, the single-hull Liberian-registered oil tanker *Sea Empress* ran aground before it reached the port of Milford Haven, Wales. Despite the efforts of tugboats it repeatedly hit the rocks, resulting in the spill of 72,000 tonnes of heavy fuel oil in the following days. The accident (taking place in the Pembrokeshire National Park) had a devastating impact on the environment as well as on the regional economy (a fishing ban was implemented) and the tourist industry, which suffered a considerable loss of income (Wene 2005; CEDRE 2014). In response to the *Sea Empress* disaster, political conflict arose in the British mass media, the House of Commons, and the EP. In 1997 an evaluation report was published by the MAIB (1997). No legislative package was adopted by the EU in response to the *Sea Empress* disaster.

In the *Sea Empress* case our findings support both hypothesis 1, 'politicization promotes EU learning', and hypothesis 2, 'politicization impedes EU learning' (see tables 3 and 4). Here, we found similar support for a promoting effect and an impeding effect of politicization. The fact that no major new legislation was adopted in response to the *Sea Empress* accident indicates that learning was restricted and explains why we did not find evidence for either a strong promoting effect (pattern 1) or a strong impeding effect (pattern 8). In response to the *Sea Empress* accident, intense political conflict arose, especially on the issues *salvage operation* (34 claims found), *liability oil industry* (27 claims found), and *pilotage performance* (23 claims found), all politicized in three different political arenas. The politicization of issues shows no clear relation with cognitive learning.

The issues *double hull tankers*, *government response*, *pilotage performance*, and *salvage operation* became politicized in the political arenas and were adopted in evaluation recommendations, indicating a moderate promoting effect (pattern 2). At the same time the issues *adoption Donaldson's recommendations*, *competence shipping crew*, *form public inquiry*, *liability oil industry*, *compensation to industry*, and *transport toxic fuels* were not substantially discussed in the MAIB report, despite intense political conflict, which indicates a moderate impeding effect (pattern 7). The technical feasibility of claims seems to have played a moderate intervening role: claims regarding the *public inquiry* and the *liability oil industry* were aimed primarily at the specific crisis response and the private realm, respectively. It is notable that the recommendations in the MAIB report in response to the *Sea Empress* disaster had only a limited international focus, as they were mainly directed at the national and subnational level.

TABLE 3 Politicization, adoption in evaluation reports, and in EU legislation per issue

Disaster case	Issue	Politicization in mass media (#claims)	Politicization in NP (#claims)	Politicization in EP (#claims)	Recommendations in evaluation reports	EU directives and regulations
<i>Braer</i>	Accountability oil industry	0 (4)	1 (5)	1 (5)	0	0
	Flag state requirements	0 (4)	1 (10)	1 (5)	1	0
	Health risks	1 (12)	1 (6)	0 (0)	0	0
	Port state control	0 (1)	1 (6)	0 (3)	1	1
	Public inquiry	1 (5)	1 (18)	0 (0)	1	0
	Salvage tugs	1 (5)	1 (6)	0 (0)	1	0
	Segregated ballast tanks	0 (0)	0 (0)	0 (0)	1	1
	Ship inspections	1 (5)	0 (4)	0 (0)	1	1
	Tanker exclusion zones	1 (12)	1 (13)	1 (7)	1	0
	Traffic surveillance	0 (0)	1 (9)	0 (4)	1	0
	Training of seafarers	1 (9)	0 (3)	0 (3)	1	1
	Vessel requirements	1 (9)	1 (7)	0 (4)	1	1
	Victim compensation	1 (5)	1 (5)	0 (2)	1	0
	Adoption Donaldson's recommendations	1 (15)	1 (34)	0 (1)	0	0
	Compensation to industry	0 (4)	1 (7)	1 (12)	0	0
	Competence shipping crew	1 (5)	1 (5)	0 (3)	0	0
	Double hull tankers	1 (5)	1 (8)	0 (3)	1	0
	Form public inquiry	1 (5)	1 (24)	0 (2)	0	0
	Government response	1 (15)	1 (8)	0 (0)	1	0
	Liability oil industry	1 (13)	1 (5)	1 (9)	0	0
Pilotage performance	1 (14)	1 (8)	1 (6)	1	0	
Port authority response	1 (14)	0 (2)	0 (3)	1	0	
Port state control	0 (4)	0 (2)	0 (2)	0	0	
Protection environmental sensitive areas	0 (4)	0 (4)	1 (6)	0	0	
Salvage operation	1 (14)	1 (19)	1 (6)	1	0	
Ship safety standards	0 (4)	1 (8)	0 (4)	0	0	
Transport toxic fuels	1 (5)	0 (0)	1 (7)	0	0	
Classification societies	0 (1)	0 (3)	1 (8)	1	1	
Competence of the crew	1 (11)	0 (4)	0 (2)	0	0	
Double hull tankers	0 (1)	0 (1)	1 (6)	1	1	
European coastguard	0 (0)	0 (0)	1 (5)	0	0	
European Maritime Safety Agency	0 (1)	0 (2)	0 (2)	0	1	
Flags of convenience	0 (4)	0 (2)	1 (13)	1	0	
<i>Erika</i>						

TABLE 3 Continued

Disaster case	Issue	Politicization in mass media (#claims)	Politicization in NP (#claims)	Politicization in EP (#claims)	Recommendations in evaluation reports	EU directives and regulations
	Hazardous cargo	1 (5)	0 (2)	0 (3)	0	0
	Knowledge development	1 (5)	1 (5)	1 (7)	0	0
	Liability oil industry	1 (16)	1 (5)	1 (10)	1	0
	Political response	1 (8)	0 (4)	0 (2)	0	0
	Port state control	1 (5)	0 (4)	1 (9)	0	1
	Response operations	1 (15)	1 (13)	0 (1)	0	0
	Vessel traffic monitoring	0 (0)	0 (2)	1 (7)	1	1
	Victim compensation	0 (2)	0 (3)	1 (17)	0	0
	Accident investigation	1 (10)	1 (24)	1 (17)	1	1
<i>Prestige</i>	Classification societies	0 (4)	1 (7)	1 (18)	1	1
	Double hull tankers	0 (4)	0 (4)	1 (23)	0	0
	Environmental area protection	0 (3)	0 (2)	1 (10)	1	0
	European coastguard	0 (0)	0 (0)	1 (5)	1	0
	Implementation legislation	1 (8)	1 (8)	1 (15)	1	0
	Knowledge development	1 (17)	1 (30)	0 (4)	1	0
	Liability oil companies	1 (6)	0 (3)	1 (8)	0	0
	Political response	1 (19)	1 (22)	1 (13)	0	0
	Port state control	1 (8)	1 (5)	1 (14)	1	1
	Ports of refuge	1 (9)	1 (11)	1 (15)	1	0
	Quality of flags	0 (3)	0 (2)	1 (17)	0	1
	Response operations	1 (24)	1 (27)	1 (22)	1	0
	Ship owner insurance	0 (0)	0 (1)	0 (1)	1	1
	Vessel traffic monitoring	0 (1)	0 (3)	0 (1)	1	1
	Victim compensation	0 (2)	1 (42)	1 (26)	1	0

0: absent, 1: present.

TABLE 4 *Patterns identified per issue and disaster case*

Pattern	Effect	Issue			Frequency	Supported hypothesis
		Braer case	Erika case	Prestige case		
1	Strong promoting effect	Vessel requirements	Liability oil industry	Accident investigation Classification societies Port state control	4	H1
2	Moderate promoting effect	Flag state requirements Tanker exclusion zones Public inquiry Salvage tugs Victim compensation	Liability oil industry	Implementation legislation Ports of refuge Response operations Victim compensation Knowledge development	15	H1
3	-	Port state control Segregated ballast tanks Ship inspections Training of seafarers	Double hull tankers Classification societies Vessel traffic monitoring	Ship owner insurance Vessel traffic monitoring	9	-
4	-	-	European Maritime Safety Agency	Quality of flags	2	-
5	-	-	Competence of the crew European coastguard Hazardous cargo Political response Victim compensation	Double hull tankers	9	-
6	-	Traffic surveillance	Flags of convenience	European coastguard Environmental area protection	5	-
7	Moderate impeding effect	Accountability oil industry Health risks	Knowledge development Response operations	Liability oil companies Political response	12	H2
8	Strong impeding effect	-	Port state control	-	1	H2

The *Erika* disaster

On 11 December 1999 the Malta-registered oil tanker *MV Erika* encountered bad weather and faced severe structural problems en route from Dunkirk in France to Livorno in Italy, carrying 31,000 tonnes of oil. The following day the oil tanker broke near the Brittany coast, spilling an estimated 20,000 tonnes of oil in the sea, which contaminated 400 kilometres of French coastline. The accident severely affected the fisheries sector, the tourist industry, and the regional ecological structure (EMSA 2004; CEDRE 2014). In response to the *Erika* accident, political conflict arose in the French mass media, the Assemblée Nationale, and the EP. Evaluation reports on the *Erika* disaster were published by the vessel flag state's Maltese Maritime Authority (MMA 2000) and the Permanent Commission of Enquiry into Accidents at Sea (CPEM 2000). In response to the *Erika* disaster, the EU adopted major new legislation on the prevention of future oil spill disasters in 2002, in the form of the Erika Package I and Erika Package II (EC 2003; Wene 2005).

For the *Erika* case our findings moderately support both hypothesis 1, 'politicization promotes EU learning', and hypothesis 2, 'politicization impedes EU learning' (see tables 3 and 4). Here, we found substantially more support for an impeding effect than for a promoting effect of politicization. Most of the EU legislation adopted in response to the *Erika* disaster, on *classification societies* (Directive 2001/105/EC), *double hull tankers* (Regulation (EC) No 417/2002), and *vessel traffic monitoring* (Directive 2002/59/EC), was strongly grounded in the evaluation reports. This indicates that extensive learning took place. In response to the *Erika* accident intense political conflict arose, especially on *liability oil industry* (31 claims found) and *knowledge development* (17 claims found), issues that became politicized in three different political arenas. In the *Erika* case we found no evidence for a strong promoting effect (pattern 1). *Liability oil industry* is the only issue that points to a moderate promoting effect of politicization (pattern 2), as it became politicized and was discussed in the CPEM recommendations. The issues *knowledge development* and *response operations* did become politicized, but were not adopted in evaluation recommendations, indicating a moderate impeding effect (pattern 7).

As exceptional cases we found that the issues of new EU legislation on the *European Maritime Safety Agency* (Regulation (EC) No 1406/2002) and on *port state control* (Directive 2001/106/EC) were not substantially explicitly included in the evaluation recommendations. Because the latter issue did become politicized, it provides the only support we found for quasi-learning in all four disaster cases (pattern 8). However, as the issue of *port state control* was partly included in recommendations on classification society inspections, one can question whether quasi-learning is really represented here. The technical feasibility of claims seems to have played only a small intervening role: only claims on the *response operation* were primarily aimed at the specific crisis response. The recommendations of the CPEM and MMA evaluation reports were clearly internationally focused.

The *Prestige* disaster

Bahamas-registered single-hull oil tanker *Prestige* encountered a heavy storm on its way from Latvia to Singapore, suffered severe structural failure, and began to leak oil. After six days, with some changes in course, the *Prestige* broke in two on 19 November 2002 and sank 130 miles off the Galician coast, spilling an estimated 63,000 tons of heavy fuel oil. The accident had dramatic consequences for the local fisheries sector, the tourist industry, and the sensitive ecosystem of the area (EMSA 2004; ITOPIF 2014). In the wake of the *Prestige* accident, political conflict arose in the Spanish mass media, the Congreso de los Diputados, and the EP. In 2004 investigation reports on the *Prestige* disaster were published by the

Bahamas Maritime Authority (BMA 2004) and by the Temporary Committee on Improving Safety at Sea (2004) (also known as 'MARE-committee'). In 2005, in response to the *Prestige* disaster, the Third Maritime Safety Package (COM(2005)585 final) was created, containing major new legislation aimed at the prevention of oil spill disasters (Ringbom 2008).

In the *Prestige* case the findings support both hypothesis 1, 'politicization promotes EU learning', and hypothesis 2, 'politicization impedes EU learning' (see tables 3 and 4). Here, we found substantially more support for a promoting effect of politicization. Most of the EU legislation adopted in response to the *Prestige* disaster, on *vessel traffic monitoring* (Directive 2009/17/EC), *classifications societies* (Regulation (EC) No 391/2009 and Directive 2009/15/EC), *ship owner insurance* (Directive 2009/20/EC), *accident investigation* (Directive 2009/18/EC), and *port state control* (Directive 2009/16/EC) was strongly grounded in the evaluation reports. This indicates that extensive learning took place. The only legislation we did not find substantially discussed in the MARE and BMA reports was that on *quality of flags* (Directive 2009/21/EC). In response to the *Prestige* accident, intense political conflict arose, especially on *response operations* (73 claims found), *political response* (54 claims found), and *accident investigation* (51 claims found), issues that became politicized in three different political arenas. The issues *accident investigation*, *classification societies*, and *port state control* became politicized and were also discussed in evaluation recommendations and adopted in new legislation, which indicates a strong promoting effect (pattern 1).

The politicization of issues shows no clear relation with cognitive learning. The issues *implementation legislation*, *ports of refuge*, *response operations*, *victim compensation*, and *knowledge development* became politicized and were discussed in evaluation recommendations, which indicates a moderate promoting effect (pattern 2). At the same time the issues *liability oil companies* and *political response* became politicized but were not substantially discussed in evaluation recommendations, indicating a moderate impeding effect (pattern 7). The technical feasibility of claims seems to have played only a modest role in explaining the absence of EU legislation: the claims on the *political response* and the *liability oil companies* were primarily aimed at the direct crisis response and the private realm, respectively. The MARE report, created by a committee set up by the EP, stands out from the other reports by its largely EU-oriented recommendations.

CONCLUSION AND DISCUSSION

Within the literature scholars have identified politicization as an important factor in the crisis-induced learning process (Stern 1997; Dekker and Hansén 2004; Birkland 2006; Smith and Elliot 2007; Boin *et al.* 2008, 2009). However, exactly what role is played by politicization remains unclear, as this aspect is claimed simultaneously to have a promoting and an impeding effect. In an attempt to clarify this relation, we explored to what extent issue politicization affects EU learning by analysing the four major oil spill disasters that have occurred in Europe since 1993. The study was conducted by comparing patterns between the contents of political claims made in the mass media, national parliaments and the EP, evaluation reports, and new EU legislation within the contexts of the different disasters.

The results of our study indicate that the politicization of issues either promotes or impedes crisis-induced learning by the EU. For every disaster case we found support for both hypotheses, which points to the existence of determining intervening factors explaining the variance in EU learning. Although contrary relations were indicated, we found substantially more support for a promoting role of politicization, contributing to both cognitive and behavioural learning. We found oil spill disasters creating strong political conflicts between actors on the question of what the government should learn from them.

However, we found practically no evidence for politicization facilitating policy changes not based on increased knowledge, that is, quasi-learning. New EU legislation adopted in response to oil spill disasters appeared to be strongly grounded in evaluation reports.

Characteristics of the crisis evaluation reports, especially the degree of international focus, seem to offer a plausible alternative explanation for the variance in crisis-induced EU learning. As an example, the MARE report after the *Prestige* disaster was substantially more aimed at changes at the EU level than the MAIB report after the *Sea Empress* disaster. The 'technical feasibility of claims' seems to have played only a small intervening role; some claims were primarily aimed at the specific crisis response instead of learning for future disasters. Interestingly, we did not find a significant differentiation in the role of politicization in affecting learning between mass media, national parliaments, and the EP. This is notable, as one might rather have expected politicization at the formal political level (i.e. EP) playing a more prominent role in affecting learning than politicization at the level of the public (i.e. mass media), as the former is closer to the decision-making authority (e.g. Bachrach and Baratz 1970). A possible explanation might be related to other aspects of the politicization process, as discussed in the next section.

The main limitations of our study stem from difficulties in measuring the dependent and independent variables. Because in the literature a consensus on the definition of learning is lacking (Fiol and Lyles 1985; Bennett and Howlett 1992; Crosson *et al.* 1999), and the concept is inherently subject to ontological, methodological, and normative problems (cf. Fiol and Lyles 1985; Carley and Harrald 1997; Stern 1997; Dekker and Hansén 2004), there are by definition threats to internal validity. We are well aware of this pitfall, and realize that we might not actually, or indisputably, have indicated learning here. As Birkland rightly notes: 'the operationalization of learning cedes a great deal of judgment to the researcher' (Birkland 2006, p. 22). However, by some simplification, that is, by using evaluation reports as an indicator, we were able to systematically analyse a large amount of empirical data. We recognize that in reality learning is a very complex process instead of a 'quick fix' of often deep-rooted problems (Common 2004, p. 1).

The other main limitation stems from the measurement of politicization, on which there is no consensus on the definition in the literature. Given the unconventional approach of this study and the large amount of data used (1,449 claims), we had to narrow down our research focus. We started with the basic research question that needed to be answered. At the same time we are aware that this excluded actor-related aspects in the politicization process, such as type of actor making the claim, decision-making power, and their position relative to each other, and claim-related aspects, such as the weights and specificity of the claims.

Notwithstanding these shortcomings, our findings may have multiple implications. First, the results provide insight into the relation between politicization and learning by public organizations from crises, which so far has remained empirically under explored. Second, they demonstrate the necessity of differentiation when the concept of politicization is studied. Research outcomes can be determined by the choice of a narrow or conflict perspective, and formal political arena or public. As we have seen in this study, issues can simultaneously become politicized in the mass media but not in parliament, or vice versa. Third, our study introduces an innovative approach to measuring both crisis politics and learning in the field of crisis management. Analysis on an issue level adds considerable value to the abundance of case descriptions on crises in this field. Finally, the results point to the seemingly important role of evaluation reports in the process of learning from crises. It argues for further empirical research on the characteristics of crisis evaluation

reports – such as explicitness/specificity, international focus, and appointment/type of evaluator – and their effects. Future research on the relation between politicization and crisis-induced learning can also expand our knowledge by looking at the role of actor-related and claim-related aspects.

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