Article

Birth of a Failure: Consequences of Framing ICT Projects for the Centralization of Inter-Departmental Relations

Annalisa Pelizza[1] and Rob Hoppe[1]

Abstract

Government information system failures are filling not only newspapers but also parliamentary and administrative reports. This article deals with a case in which information and communication technologies (ICT)–related failure claimed by the media influenced the parliamentary agenda, and intra-governmental relations. Drawing on a narrative analysis of a Dutch parliamentary commission's hearings, it argues that the way the issue was initially framed by the media and then adopted, un-problematized, by Parliament steered the direction of action toward specific administrative solutions, thus shaping the landscape of possible organizational alliances. The article recommends a proactive role of parliaments in framing ICT projects.

Keywords

information system, failure, frame, public administration, media, information infrastructure

[1]University of Twente, Enschede, The Netherlands

Corresponding Author:
Annalisa Pelizza, Department of Science, Technology and Policy Studies, University of Twente, P.O. Box 217, 7500 AE Enschede, The Netherlands.
Email: a.pelizza@utwente.nl

Digital government faces a paradox. On one hand, e-government programs still conceive of the informatization of administrative procedures as a driver for rationalization, innovation, and economic growth. On the other hand, failure rates in public administration's digital infrastructure development represent examples of irrational investments in the eyes of both the media and citizens.

Traditionally, e-government studies and practitioners have tended to see in information and communication technologies (ICT) the embodiment of Weber's promises of bureaucracy as an organizational form rooted in standardized legal-rational authority (Weber, 1980). "In the second half of the 20th century information technologies have been regarded much as Weber's conception of bureaucracy was regarded in the first half—that is, a rationalising force in government" (Margetts, 2003, p. 4). For this reason, e-government has been associated with "modernisation," "efficiency improvement," "procedural streamlining," and "simplification" as forms of rational standardization.

However, public and media debates increasingly depict the informatization of the public sector as a never-ending, complex, expensive, and uncertain process, and ICT[1] expenditures are often seen as an unjustified "waste" of public money. With the recent economic crisis shrinking resources for public services such as healthcare and education, the invisibility of information infrastructure (Aurigi, 2008; DeNardis, 2012) has become a hindrance in justifying increasing expenditure on ICT. Therefore, criticisms of the gap between high investment and the (claimed) lack of benefits have flourished on expert blogs (Ballard, 2013; Bloch, Blumberg, & Laartz, 2012; Veldwijk, 2013), as well as in the more traditional media (Bos, 2014; Stokmans, 2014a; Tromp, 2013).

How has it happened that technologies that promised so much came to be framed in such a dystopian way?

Failures are a long-standing concern in the information system literature (Jiang & Klein, 1999; Lyytinen & Hirschheim, 1987; Sauer, 1997). However, whereas in the private sector ICT failures are usually regarded as unavoidable by-products of innovation, when it comes to taxpayer-funded projects, failures are often accompanied by public criticism and high visibility in the media. In some cases, debates can migrate into the political domain, be the subject of parliamentary debate, and even trigger consequences in the organization of the administration.

The case of the London Ambulance Service (LAS) is a well-known example in this regard (Beynon-Davies, 1995, 1999; Finkelstein & Dowell, 1996). In 1992, the newly developed LAS Computer-Aided Dispatch system (LASCAD) failed, leading newspapers to report that between 20 and 30 patients probably died as a direct consequence of the breakdown (Watts &

MacKinnon, 1992). Following this claim, not only was a parliamentary public inquiry launched, but also the chief executive was forced to resign (MacKinnon & Goodwin, 1992).

More recently, in the United Kingdom the Child Support Agency system, the Passport Agency system, the tax credit system, the Rural Payments Agency system (Syal, 2013), and the National Health Survey (NHS) patient record system (Curtis, 2011; Syal, 2013) have made newspapers headlines and professional blogs (Ballard, 2013) as examples of major failures. These and other cases were investigated not only by the National Audit Office but also by parliamentary commissions, such as the Public Administration Select Committee (PASC; 2011).

The Netherlands is another country in which several parliamentary working groups and commissions have been set up to address claims of failure originally reported by the media. This country shows interesting peculiarites. First, ICT failures have been dealt with by many political initiatives, some of which were launched ad hoc. Unlike in the United Kingdom (where the PASC is a permanent parliamentary committee that conducts inquiries about a broad range of problems, not only failures nor information systems), in the Netherlands temporary commissions and working groups were established with the specific purpose of addressing ICT failures. Second, it may happen that media-triggered claims do not stop at the political discursive level, but come to affect the organization of administrative inter-departmental relations.

This was demonstrated in the workings of a recent (2012-2014) Dutch temporary parliamentary commission on failures in governmental ICT programs. This commission was established to investigate claims of huge "wasting" of public money as initially reported by newspapers. Newspapers identified failures as a government-wide problem and attributed those to technical causes alone. By adopting this formulation without further problematization, the Parliament *de facto* reinforced and legitimated it. This seamless adoption eventually turned out to have consequences not only for the political debate on ICT failures but also for the operational organization of inter-departmental relations.

Using this case as evidence, this article on one hand attempts to extend the concept of framing as a model of the relationship between government and the media to the field of government infrastructural failures. While agenda setting and other approaches that are specifically focused on infrastructural failures stress the role of media in putting a specific issue under the spotlight of the political agenda, other scholarly perspectives also highlight the importance of *how* such issues are constructed. The cascading activation model, for instance, assumes that interpretive frames "leak" from the higher level of government down to parliamentary and expert elites, then to the media and

their frames and—finally—trickle down to public opinion (Entman, 2004). However, when their content resonates with "cultural congruence," specific frames can become influential enough to feed back from the lower to the higher levels (Entman, 2003).

We suggest that the discussion on which one (media or politics) exerts more influence over the other can turn out to be not so much a binary argument (i.e., does politics influence media or vice versa), but rather a function of the alliances facilitated or hampered in a specific time period by a specific frame. Analyzing the success of a specific frame as a function of its content, this article shows how situated representations of actors and causes can trigger path dependencies that shape the landscape of possible alliances and inevitable deadlocks.

On the other hand, this inextricability of content and context does not only affect the political debate on ICT failures. Once the Parliament adopts a specific frame as dominant, this latter can acquire some power to enforce changes in the operational organization of inter-governmental relations. Whereas literature has amply addressed the relationship between media debates and policy processes (Kingdon, 1995; Rochefort & Cobb, 1994), the extent to which the inner workings of the administrative organization are affected by public debates is an under-investigated field of inquiry, to which this article attempts to contribute.

The following section presents the main theoretical frames on media and government on which this work is built. In particular, it compares phronetic planning research and cascading activation as far as the direction of influence and attitude toward frame content are concerned. In Section *Method*, methodological choices are accounted for, as far as both data collection and data analysis are concerned. In that section, we also briefly introduce a specific understanding of failures as unstabilized assemblages, drawn from the Science and Technology Studies (STS) research field that underpins this research. In Section *Results*, a case study is described narratively, resulting from the comparative analysis of some hearings held before the Dutch parliamentary commission on ICT. That case shows how the media's framing of governmental ICT policies as "waste of public money" has triggered political support and, eventually, led to organizational transformations in government procedures, actors, and tasks. In Section *Discussion*, we further develop the results of the narrative analysis, and finally we draw some conclusions.

Literature on Media, Government, and Infrastructural Failures

In an article recently appearing in this journal, Klijn, van Twist, van der Steen, and Jeffares (2014) identified three perspectives on the media's influence on

government: public relations, mediatization, and agenda setting. For the purposes of this research, only the second and third of these are considered.

The conceptual framework on mediatization concentrates on the intrinsic characteristics of the media system, and identifies some biases—termed "media logics"—that can strongly influence political or administrative rationales. According to Bennett (2009), four types of informational biases can be identified as a result of recent economic developments in the media business: (a) strong personalization of events, (b) emphasis on conflict and crisis, (c) focus on isolated stories out of context, and (d) preoccupation with social order. "Media logics" can invade other domains, such as the political and administrative ones, forcing them to adapt to their inherent requirements (Altheide & Snow, 1979; Strömbäck, 2011). This "invasion" mainly takes the form of politicians and public executives adapting to the media logic by "speaking in sound bites and dramatizing their performance" (Klijn et al., 2014, p. 9).

The agenda-setting perspective is explicitly focused on how the media can influence the political agenda. "The agenda perspective highlights the complexity of the interaction between media and governance processes and the various factors that might influence the impact of media attention on [political] agenda setting" (Klijn et al., 2014, p. 8). Authors in this tradition consider the role that the media play in placing a specific problem under the spotlight. Some of them focus in particular on how a policy issue comes to be constructed as a result of struggles among actors that compete to set the political agenda (Baumgartner & Jones, 2009; Kingdon, 1995; Rochefort & Cobb, 1994).

Drawing on both perspectives, Flyvbjerg (2012) describes how planning research on megaproject[2] failures was able to generate media exposure and top positions in the public agenda, thus in turn effectively gaining political impact in transforming planning practices. The "phronetic planning research" Flyvbjerg and his colleagues pursue consists of "injecting" research results into the media coverage of megaprojects. According to the author, this form of publication triggers some "tension points"[3] that make the story relevant for the media, and are thus likely to enter the political agenda. With their focus on power and "suspicious practices," tension points are in fact potentially generative of story-telling that is interesting for the media. Therefore, alliances become possible between planning researchers providing studies on cost overruns, benefit shortfalls, risk, optimism, and deception, and media hungry for narratives of conflict and crisis.

When, for instance, phronetic researchers released results about the first Danish megaproject,[4] the threats received by a high-ranking government

revealed that a tension point had been reached. Not only did phronetic strategy gain media attention, but the issue moved to a high position in the public agenda, and ultimately, it led members of the Danish Parliament to address the media debate in Parliament (Flyvbjerg, 2012).

Phronetic planning researchers look for tension points to question existing planning practices, and thereby create space for new, more democratic, effective, and transparent procedures (Flyvbjerg, Landman, & Schram, 2012). However, the notion of "tension point" itself reveals little of its content. Following the mediatization perspective mentioned above, emphasis is put on controversy, conflict, and crisis as vectors to achieve media attention, regardless of the situated meanings being conveyed.

At the other end of the spectrum, the cascading activation model accounts for the influence of government on the media by focusing on the frames that circulate at the various levels of society (Entman, 2003, 2004). This model was developed to explain parliamentary and lobbying elites' influence on U.S. foreign policy; however, it can also provide valuable insights for our field of analysis.

The cascading activation model assumes framing as the process of "selecting and highlighting some facets of events or issues, and making connections among them so as to promote a particular interpretation, evaluation, and/or solution" (Entman, 2004, p. 5). The model proposes a five-tier metaphorical cascade in which frames and influence spread from one actor on the top of the network to the others (Figure 1). Actors are (a) government administration, (b) parliamentary and expert elites, (c) media and (d) their frames, and (e) civil society.

According to Entman, the spread of "ideas" is highly stratified. As with actual waterfalls, while moving downward is relatively straightforward, for ideas to move upward, an additional "pumping mechanism" is required. Looking at Figure 1, it can be deduced that while influence proceeding from the executive branch level exerts the greatest strength, it is much more difficult for frames at lower levels to move back up to leaders. For example, "journalists possess less ability to shape news frames than members of the administration or elite networks" (Entman, 2003, p. 422).

However, despite this hierarchical conceptualization, Entman identifies a "pumping mechanism" that can enforce frames generated at the lower levels. What he terms "cultural congruence" measures the ease with which a frame can cascade or rise up through the different levels. Drawing on the hegemony theory (Augelli & Murphy, 1988), he argues that

> the more congruent the frame with schemas that dominate the political culture, the more success it will enjoy . . . . The most inherently powerful frames are those fully congruent with schemas *habitually* used by most members of society. Such frames have the greatest intrinsic capacity to arouse similar responses. (Entman, 2003, p. 422, emphasis in original)
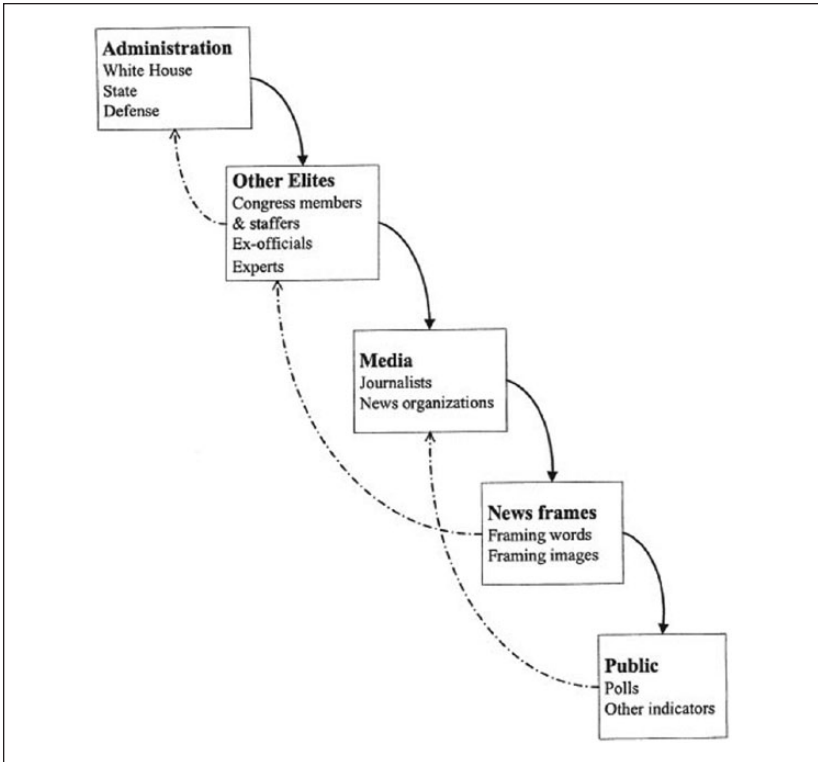
Figure 1. Cascading network activation.
Source. Entman (2003, 2004).

In summary, while—drawing on agenda-setting theories—approaches native to the field of planning and infrastructural failures highlight the power of phronetic researchers to influence the media and politics by harnessing conflict and opposition, frame-based approaches native to foreign policy scholarship assume a more hierarchical model of influence, nevertheless mitigated by "cultural congruence." In the remainder of this article, we address a case similar to that depicted by phronetic planning researchers, in which mass media debates on failures in infrastructure developments turned out to be successful in influencing the parliamentary agenda. However, we show not just that the conduct of the media had consequences for the political agenda, but also that *the way in which the issue at stake was framed by the media steered the direction of action toward specific organizational solutions*. In other words, the case analyzed suggests that the discussion about which one (media or politics)

exerts more influence over the other can reveal unexpected situatedness, if only one takes into consideration *how an issue is constructed*. In a given situation, specific representations of actors and causes can trigger path dependencies that shape the landscape of possible alliances and inevitable deadlocks. Before that, we briefly describe the methodology used in this study.

Method

To obtain data, we analyzed the hearings of the Dutch temporary parliamentary commission on governmental ICT projects. Ministerial decrees, newspaper articles, and expert blog posts were also analyzed, to cross-check the actors' accounts. The selection of the newspaper articles and blog posts was not conducted on a statistically valid sample. Rather, newspaper articles and expert blog post were analyzed that had been explicitly acknowledged as relevant by informants themselves during the parliamentary hearings. This choice followed a constructivist approach that does not assume a priori some sources as more relevant than others, but does consider the citations made by informants as relevant in themselves (Latour, 2005).[5] The parliamentary commission on ICT was established in 2012 as one of the eight research commissions required by the "Future and Research Agenda 2012" approved by the Lower House of the Dutch Parliament in late 2011. The ICT commission was expected to report on the causes of the alleged high failure rates in informatization projects in the public sector. In particular, it was tasked with finding out why significant investments had returned considerably fewer benefits than promised. To this end, the commission was tasked with assessing ongoing projects and recommending methods to standardize project management.[6] In April 2014, the first hearings took place, and the final report was published in October 2014.

The commission's hearings provided rich opportunities for analysis in three respects. First, being a parliamentary initiative, the commission translated into the political agenda some debates that up to that moment had taken place in traditional media or Internet blogs. The commission was a sense-making endeavor, which—by directly and explicitly addressing Dutch citizens[7]— contributed to the stabilization of criticism as a structuring dynamic of the national politics of informatization.

Second, the hearings allowed the comparison of accounts given by a wide range of actors (ministries, local authorities, civil servants and public managers, consultants, executives from supplying companies, and small entrepreneurs), some of whom would have been difficult to reach for a research interview (e.g., ministries). Third, because during the hearings informants were explicitly asked to provide their explanations of why projects failed, their accounts described in unexpected detail the inner workings of government.

As to the methods for data analysis, in the wide range of approaches to narrative policy analysis (Van Eeten, 2007), we chose narratology, which privileges the close reading of the specifics of texts (Bal, 1998). First, we identified the narratives present in the accounts by individual informants. Here, the unit of analysis was single hearing sessions (about 1.5 hr), during which members of the ICT commission posed questions to individual informants. As for the purposes of this article we concentrated on high-level decision makers (e.g., ministries, public executives), there was no need to reconstruct collective narratives that were representative of diverse types of actors (Van Eeten, 2007).

Second, for each narrative identified, we recognized pairs of opposing actors. In particular, we looked at how tasks and roles were distributed among actors, according to the competences and types of knowledge they were said to have. Third, we looked at whether other actors mediating the frictions between the opponents were recognizable. This additional step was crucial, as it assumed that infrastructural failures were unstable assemblages that needed to enroll further actors to achieve stabilization.

This is a major methodological suggestion drawn from that branch of Science and Technology Studies termed "Actor-Network Theory" (ANT). ANT explains the relationship between elements (i.e., actors, both human and non-human) and the whole assemblage (i.e., networks) in terms of "translation." Translation refers not only to the transformation of meaning from one language to another but also to the position an actor comes to occupy in a network as a result of the alignment of its and others' interests (Latour, 1987, p. 117).

ANT therefore explains failures in terms of actor-networks that are not yet stabilized and that need to enroll new potential actors (both humans and technologies) through a chain of translations that iteratively defines and positions them in the network. As the number of actors enrolled increases, the network is both lengthened and strengthened, to the point at which it becomes stable. If failing infrastructures need to enroll additional actors to achieve stabilization, by tracing those actors that mediated frictions, we thus hoped to discover which new actors were enrolled in Dutch governmental ICT projects to prevent failures. Table 1 summarizes these three analytical steps.

Results

"Failing Governmental ICT Projects" in the Media: Government-Wide and Technical

Government ICT infrastructural failures entered the Dutch public agenda as a fully fledged issue only in 2007. According to the hearings, until 2007, there was no comprehensive monitoring of ICT projects operating at the

Table 1. Steps for Data Analysis.

Steps	Unit of analyses	Example
1. Frame identification	Single hearing sessions involving ministries, senior government officers, contractor executives, civil servants	ICT failures as government-wide issue
2. Identification of actor/task patterns	Single frame	Cabinet is responsible for project implementation, Parliament must control
3. Identification of mediators	Actor/task patterns	RICTC as responsible for ICT coordination between departments, it also mediates between Cabinet and Parliament

Note. ICT = information and communication technologies; RICTC = responsible for ICT coordination.

governmental level. ICT activities were dispersed around the directorates in charge of personnel, organization, and information at the various government departments. Most importantly, informatization used to be the responsibility of each individual ministry.

Things changed in early June 2007, when an article titled "Automation Swallows Billions of Euros" appeared in the *Trouw* newspaper (Dekker, 2007). Drawing on international comparative research, the article claimed that more than 6 billion euros per year were being "wasted" in "automation systems" by "the government." The article reported calculations by professors from the universities of Eindhoven and Amsterdam that showed that of all ICT projects, 30% were never completed, 50% encountered serious problems, and only 20% could be termed successful.

These claims drove the Lower House of the Parliament into investigating "why so many ICT projects were running out of hand," as the chairman of the 2012 to 2014 commission put it. On June 13, 2007, the first debate took place in the Lower House, chaired by an ad hoc working group. Over the years, several audit initiatives followed up.

Like in the accounts by phronetic planning researchers, in the Dutch case, the alliance between researchers and mass media reporting on failures in infrastructural developments succeeded in influencing the parliamentary agenda, such that ad hoc working groups and commissions were established, rather than the other way round, as Entman's model would suggest. Even

more, the effects of the media debate were not limited to the political agenda. As the 2014 commission's hearings revealed,[8] the *Trouw* article activated a series of upward cascades that had also consequences for inter-departmental relations. However, these consequences were not simply triggered by the diffusion of the issue to other media—other newspapers and expert blogs in primis—and political elites, as Flyvbjerg's approach would suggest. The *way the issue was originally constructed* had a major role in making some alliances more likely, while hampering others. The way in which the "failing ICT projects" issue was framed by the *Trouw* article rested on two premises:

1. Failures in information infrastructure are a government-wide problem and, therefore, should be addressed in a centralized way.
2. Failures in information infrastructures primarily have technical causes and, therefore, require technical knowledge.

First, in defining the issue, the *Trouw* article referred to "all ICT projects" "in the government" (*bij de overheid*).[9] That is, ICT infrastructural failures were framed as a single government-wide phenomenon. The article did not refer to discrete informatization activities scattered around the various departments, ministries, or at other governmental levels (e.g., municipalities), but to what could be termed a "partitive totality" (Greimas, 1976): an ensemble of distinct entities that can nonetheless only be conceived in an aggregate manner—namely, "governmental ICT projects."

Second, the *Trouw* article framed "governmental ICT projects" as primarily technical activities aimed at automating existing administrative processes (*automatiseringssystemen*). By definition, automation refers to the streamlining of existing procedures through the use of machines, with the aim of reducing human intervention. This dichotomous approach was reinforced by the article, which identified failures as technical in nature (e.g., software bugs; Dekker, 2007). The article might have mentioned, but it did not, different causes, such as the non-use of perfectly running software, as the scholarship on technology and users has shown (Oudshoorn & Pinch, 2003; Wyatt, 2003).

Given this specific framing, it is important to note that not only had the newspaper used a very narrow frame, but also Parliament immediately closed it off. No counter-frame was offered by the parliamentary bodies to construct an alternative narrative. On one hand, "ICT projects in government" was the standard definition by which parliamentary initiatives had been labeled since 2007. In particular, the 2012 to 2014 parliamentary commission framed information infrastructures as a partitive totality to be addressed Cabinet-wide, rather than at the level of individual departments. As we will see in the

next sub-section, this framing enabled the Lower House to demand an over-view of all governmental informatization activities, thus engaging in direct confrontation with the Cabinet. This in fact pre-selected and sharply reduced the range of options available to prevent future failures.

On the other hand, the parliamentary commission embraced *Trouw*'s under-standing of ICT projects as primarily technical endeavors requiring exclusively technical knowledge (Algemene Rekenkamer, 2013). During the commission hearings, only one civil servant resisted an instrumental understanding of infor-mation infrastructure development as something separate from the primary processes of policy making: "there are no such things as governmental ICT projects, but only projects led by the government" (a public officer).

In summary, by seamlessly adopting the *Trouw* frame without further problematization (Callon, 1986), parliamentary working groups and commis-sions *de facto* reinforced and legitimated it. Far from being an unquestionable objective fact, the "failing governmental ICT projects" issue was the result of researchers and a newspaper framing information infrastructure development as a primarily technical activity taking place government-wide, *and* of politi-cal actors (i.e., parliamentary working groups and commissions) adopting this definition without problematizing it. In Entman's terms, we have here a case of "total dominance" by one frame initiated by the alliance between researchers and a leading newspaper, and reinforced by parliament. As we will show in the following sub-sections, this seamless adoption had conse-quences for the administrative response to failure claims.

Introducing a New Role: The Responsible for ICT Coordination (RICTC)

We might say that the *Trouw* article performed three of the four basic func-tions that the cascading activation model attributes to frames: (a) It defined a condition as problematic, (b) it identified its causes, and (c) it conveyed a moral judgment of those involved (Entman, 2004, p. 5). The fourth func-tion—that is, endorsing remedies to the problem—was left to the parliamen-tary bodies.

The primary measure proposed by Parliament to stabilize governmental ICT project costs and time overruns was a new control function. A "respon-sible for ICT coordination" (RICTC) role was meant to exert control, and to provide the Parliament with a constant overview of ICT projects being devel-oped by all central government departments.

As Figure 2 shows schematically, the way this new role was envisaged by Parliament was consistent with the way the issue was initially constructed by the *Trouw* article:
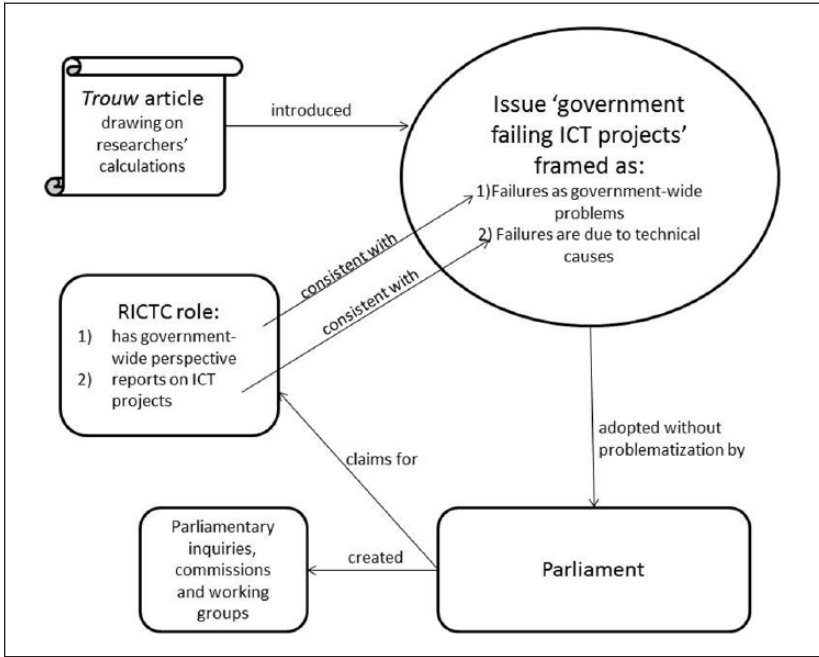
Figure 2. Consistency between the RICTC role and initial issue framing.
Note. RICTC = responsible for ICT coordination; ICT = information and communication technologies.

1. The RICTC role was expected to report from a government-wide perspective.
2. The RICTC role was expected to report on all projects having some information technology component.

First, the RICTC role was intended to have a government-wide insight. This was not the only possible level of analysis, as individual ministries would also have been in a position to report individually to Parliament. However, the level selected entailed establishing a single coordinating role with the duty of reporting to Parliament about all ICT activities initiated by the Cabinet. This solution was consistent with the construction of the issue of "failing governmental ICT projects" as a partitive totality.

Second, the RICTC role was intended to report on all projects that had any information technology component. As the previously mentioned civil servant noted, what fitted into this category was not unambiguous. Far from being onto-logically grounded, the distinction between technical and non-technical projects

was consistent with *Trouw* originally framing the issue as technical, and with Parliament accepting that characterization unquestioningly.

The new coordinating role was therefore established as endowed with purposefully centralizing functions. The RICTC was meant to achieve a complete overview of all ICT projects of the whole Cabinet, and to be the main source of information for Parliament. Unsurprisingly, deciding which actor should actually assume the RICTC role was not straightforward.

The solution initially envisaged by the Parliament was to delegate the RICTC role to one ministry. However, this solution collided with both constitutional and unwritten bureaupolitical logics. On one hand, in the Dutch constitutional system, ministers have overall responsibility for their departments, which are constitutionally independent of each other (Andeweg & Irwin, 2005). Granting coordinating responsibility over ICT to one ministry would have meant subordinating other ministries' autonomy to a *primus-inter-pares* (i.e., first among equals). For this reason, members of the Cabinet resisted the idea of delegating the new role to one member:

> The Lower House actually wanted the Minister for Internal Affairs to take overall responsibility for all ICT projects. At the request of the Chamber, I dutifully explained this to the Cabinet. The cabinet members—by the way, together with me—did not find that a good idea. I have already mentioned the reason for that: you should not have just one person, if at all possible, responsible for all government ICT projects . . . . If you make just one minister responsible, then you have to change the Constitution. (Former Minister of Internal Affairs)

On the other hand, this resistance also revealed the collegial attitude proper to the Dutch Cabinet, where bureaupolitical logic prevents one minister from imposing her or his will on other members of the Cabinet. As one member of the temporary commission summed it up, "it might be not so much the juridical arguments that are prohibitive, but the more political and administrative arguments that may be the real obstacle" (a commission member).

Informatization and the Centralization of Operational Management

Summarizing previous arguments, the media first—and in their wake politicians—framed the issue of "failures in governmental ICT projects" in such a way that the main role introduced to stabilize the actor-network (i.e., the RICTC) deliberately entailed centralized control. Indeed, the RICTC role was expected to achieve a panopticon-like overview of all government-wide

technical activities, and to act as a mediator between Parliament and the Cabinet. Because of this nodality, it turned out to be difficult to delegate this role to an actual actor; constitutional and bureaupolitical considerations prevented it from being attributed to a single ministry.

Other logics not directly related to informatization came to drive the conundrum out of the deadlock. Between 2007 and 2010, a centralization of operational management (*bedrijsfvoering*) was taking place at the Dutch government. This resulted in one ministry assuming a Cabinet-wide coordinating role for operational tasks. As the RICTC role was framed as technical and Cabinet-wide, the solution of the conundrum was found in this ongoing centralization trend, and solutions analogous to those created for other operational tasks were found.

Here follows a description of how this happened, in reverse chronological order. In a 2010 letter to the Lower House of Parliament, the Minister for Internal Affairs requested that her Ministry be given the coordinating role in all modes of operational management for the whole Cabinet. The Minister's request was motivated by budget-cutting imperatives:

> [Establishing a coordinating ministry for operational management] was not just about ICT, but also about the operational management of central Government. The main driver to appoint a coordinating minister was the established objective of reducing the size of the civil service by 10,000 employees . . . . Members of the Cabinet had to do this jointly. Then, you have to agree on how to achieve such a cut, what you cut, how many officers remain at which departments, and so on. Certainly at that point there was a need for coordination. (Former Minister of Internal Affairs)

In the words of the former Dutch Minister of Internal Affairs, the "policy making versus operational management" dichotomy[10] was invoked to overcome deadlocks in inter-departmental relations when it came to substantial restructuring of the civil service. While—as we have seen above—policy making was constitutionally the preserve of individual ministries, operational management could follow a different path. As a consequence, technical operations (including personnel management) could be centralized under the responsibility of one ministry, provided that they were not delegated to political bodies (i.e., the minister), but to technical ones (i.e., a new Directorate General; see below).

Indeed, throughout the period from 2007 to 2010 centralization of operational management across inter-departmental relations was a novelty for the Netherlands, as a brief historical reconstruction can demonstrate.[11] In the Dutch ministerial system, until 2006 operational management tasks were carried on

by autonomous units in each ministry.[12] However, in 2007 operational management started to follow a movement toward centralization that culminated in the 2010 letter to the Lower House of the Parliament referred to above. As early as 2007, operational management had transformed into something more than a set of tasks replicated within each ministry. A few months after coming into office, the Minister of Internal Affairs established a new Directorate General for Central Organization and Operational Management (DG COOM) in her Ministry. The tasks of the new DG included "the development, implementation, maintenance and evaluation of a *Government-wide common vision of operational management*, and contributing to the preparation of proposals for *further cooperation and integration* in that area" (Minister van Binnenlandse Zaken en Koninkrijksrelaties, 2007, authors' emphasis).

The strengthening of a coordinating role for operational management at the central Cabinet level was further enforced by the ministerial decree of July 4, 2008, titled "Central Government Reform."

> The Cabinet sets new government-wide goals for operational management. The Cabinet considers it necessary for operational management that a framework policy at the central level shall be enacted. This should cover the field of Human Resource Management, *Information Management and Information- and Communication-Technology* [emphasis added], Procurement, Housing and Facilities Management. Therefore, I have established the Directorate General Central Organisation and Operational Management (DG COMM) at the Ministry of Internal Affairs. The Council of Ministers has agreed to the terms of reference of this DG COOM. In line with this, the administrative units across the operational management of the civil service will also be reorganized as to their tasks, responsibilities and mandates. (Minister van Binnenlandse Zaken en Koninkrijksrelaties, 2008)

The change in inter-governmental relations entailed a reorganization of tasks and responsibilities across administrative units. The Directorate Personnel, Organization and Information, for instance, was composed of a Director Staff, an Employment Department, a Labour Quality Department, an Organization Department, and an Information Department. The 2007's ministerial decree re-allocated these departments to the newly constituted DG COOM.

As a result of the ongoing enforcement of a Cabinet-wide coordination for operational management, the role of RICTC followed a destiny similar to that of the coordinator of personnel management. Following a pattern similar to that which led to the constitution of the DG COOM, the RICTC role was attributed to a brand new technical actor—the chief information officer (CIO)—whose office was located in the Ministry of Internal Affairs.
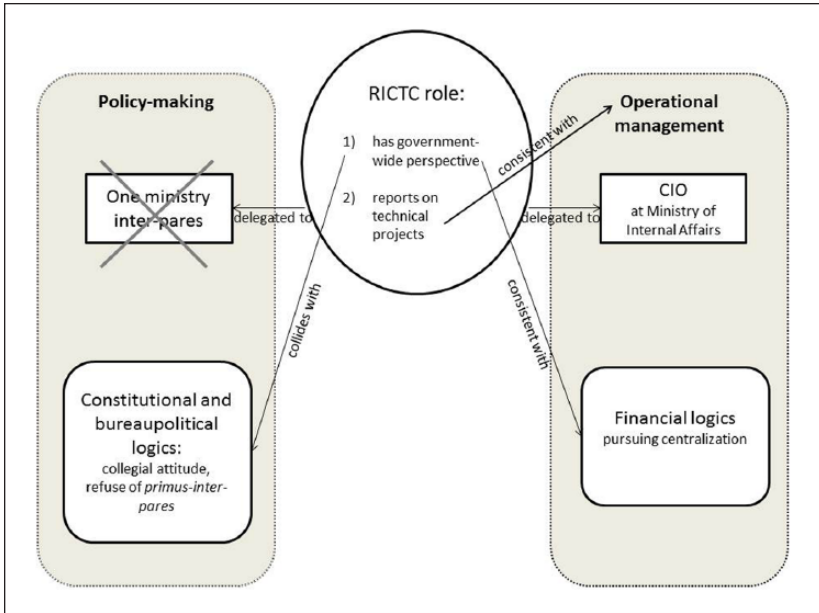
Figure 3. RICTC role attribution: Possible alliances and deadlocks.
Note. RICTC = responsible for ICT coordination; ICT = information and communication technologies; CIO = chief information officer.

We suggest that this solution to the initial deadlock was possible because of the way the RICTC role was defined, which in turn resonated with the way in which the "failing ICT project" issue was initially framed. As Figure 3 shows, on one hand, it was because the RICTC was expected to perform government-wide centralized tasks that it could join an existing movement toward the centralization of operational management. The need for a coordinating figure was a common feature of both financial and informatization logics, and acted as a "handle" for the latter to connect to the broader movement.

On the other hand, if the RICTC function had been conceived of as a political role, its introduction would have been more sensitive to constitutional logics. Instead, by framing it as an operationalfunction, the RICTC role could be attributed to an operative actor (i.e., the CIO), rather than to a political one (i.e., a member of the Cabinet). Figure 3 summarizes this argument.

Therefore, at this stage it is worthwhile to investigate in a little more depth the partitioning of knowledge that allowed this construction. This is where an STS approach can most successfully supplement frame-based theoretical models.

Content-Specific and Systemic Knowledge

Due to the creation of the DG COOM and of the coordinating CIO, from 2007 to 2010, the Ministry of Internal Affairs centralized tasks that were previously duplicated in each ministry. We have seen that this was possible by invoking the "policy making versus operational management" dichotomy inherent in New Public Management (NPM): it was only operational management tasks that were delegated to the DG COOM and the CIO, thus bypassing constitutional and bureaupolitical logics that—by definition—apply to policy making.

These changes in the inter-departmental order were also facilitated by the Ministry of Internal Affairs claiming to act as mediator between Parliament and the Cabinet:

> I used the arguments and pressure of Parliament in the Cabinet to have things done there [i.e., in the Cabinet]. When I said in the Cabinet that I had had a general consultation with the Parliament and that they insisted that I gave them a list of [ICT] projects, this put me in a position with colleague ministries such that they had to support me. (Former Minister of Internal Affairs)

As the STS literature points out, knowledge plays a crucial role in positioning actors at the intersection of different logics (Law, 1991). On which type of knowledge could the Ministry of Internal Affairs rely, to claim a nodal position as a mediator between the Parliament and the Cabinet?

During the hearings, the Ministry of Internal Affairs was described as having operational management knowledge: "the attention and knowledge for operational management that are proper to Internal Affairs are not proper to other [departments], which are more focussed on policy" (Former Minister of Internal Affairs). By inference, other ministries (e.g., Public Works and Water, Defense, and Housing) have specific policy knowledge necessary to carry out their functions.

In the commission hearings, a parallelism can be traced between these two types of knowledge and the "policy making versus operational management" dichotomy. Actors with policy-making tasks are characterized by specific expertise in their particular domains of intervention. Conversely, the Ministry of Internal Affairs has no specific expertise, but a "systemic" form of knowledge that is necessary to address operational management tasks. This coupling of task attribution and type of knowledge is described by the former Minister of Internal Affairs as the "system accountability" construction:

> By "system accountability" it is intended that you [i.e., Internal Affairs] are not directly responsible for the content, but you are responsible for the system.

Table 2. "System Accountability" Construction.

Institutional actors	Other ministries and local authorities	Internal affairs
Tasks	Policy making	Operational management
Type of knowledge	Policy-domain specific expertise	Systemic
Type of accountability	Over "content"	Over "system"

> Some tasks, for instance, are decentralized to municipalities. They are more directly responsible for them, but the Minister [of Internal Affairs] keeps a kind of system accountability for what happens. I mentioned the advantage of that, and I maintain that if you as minister have system accountability for ICT projects of the government, it does not mean that you are personally responsible for any IT project. I use the example of the [ICT] security system in road tunnels. It would be extremely foolish to give a project in that area to the Ministry of Internal Affairs, which has no expertise in the field of traffic and transport; and neither does it have a large staff of officers expert in the field of traffic and transport. (Former Minister of Internal Affairs)

This coupling of task attribution and type of knowledge also included a pattern of distribution of accountability. It delegates accountability over "content" to local authorities and other ministries, and accountability over "system" to Internal Affairs. We sum up the "system accountability" construction in Table 2.

However, in a deeper analysis, policy-specific expertise and systemic knowledge do not constitute a real dichotomy, as they are defined according to heterogeneous logical criteria (Rutgers, 2001). On one hand, policy-specific forms of expertise are defined according to the fields of application and required disciplines. This is the classical functional form of organization, in which a clear set of competencies is organized according to the "unity of command" principle (Raadschelders, 2000). On the other hand, it is not as intuitive to define "systemic knowledge." In the system accountability construction, systemic knowledge is not defined with respect to a specific set of competencies, but only in relational terms. First, it is the form of knowledge necessary to address operational management tasks. Second, it is the peculiar form of knowledge held by the Ministry of Internal Affairs. Third, it is a form of meta-knowledge useful for supervising the deployment of content-specific knowledge.

Systemic knowledge thus resembles what ANT and STS scholars term "technical knowledge": an apolitical and instrumental rationality that deliberately

avoids addressing any political decisions (Latour, 1996). This is why systemic knowledge in the commission hearings came to overlap with ICT-related expertise: "you need to just hold together content and system, that is, ICT. You should not separate that" (former Minister of Internal Affairs). In other words, ICT knowledge is a form of black-boxed knowledge: useful for exerting supervision, but never subjected to evaluation, or even description.

Discussion: Shaping the Landscape of Possible Alliances and Inevitable Deadlocks

At the outset of this analysis, we saw that the *Trouw* article framed failures in governmental information infrastructures by adopting two unquestioned assumptions. First, failures had to be addressed government-wide, rather than at the level of individual departments or ministries. Second, failures resulted only from technical shortcomings.

The resulting "failing governmental ICT projects" issue was seamlessly adopted by Parliament, which—instead of proposing a counter-frame—performed the last function associated with any new frame: it endorsed a remedy to the problem (Entman, 2004, p. 5). An RICTC role with government-wide scope and overview on all ICT activities was thus identified as the main stabilizing element, and a CIO was appointed at the administrative level of operational management. This, in turn, affected the inter-departmental organization of the Cabinet, with Cabinet-wide operational management of information systems becoming the responsibility of the Ministry of Internal Affairs, through its coordinating CIO.

Similarly to the cases described by phronetic planning researchers, this case shows that—when it comes to government infrastructural failures—the media directly influenced not only the political agenda, but indirectly even the very organization of the administration. If we compare this case with Entman's scheme in Figure 1, it apparently predicts the opposite result: new frames initiated by the media can be strong enough to influence the parliamentary elite. Even more, once Parliament adopted the media-initiated frame as dominant, this frame acquired the power to drive changes in the organization of inter-departmental relations (i.e., the centralization of operational management in the hands of the Ministry of Internal Affairs).

The diffusion of the ICT failure issue to political elites and indirectly to administration could rely on some congruencies. The *specific way the issue was originally framed* had a major role in making certain alliances more likely, while hampering others.

On one hand, the fact that the "failing ICT project" issue had been defined as government-wide facilitated the mutual reinforcement with centralizing

logics already prevalent at the level of inter-departmental relations. The need to introduce an RICTC role with government-wide scope "resonated" with the centralization of operational management driven by financial imperatives. On the other hand, the fact that the issue was framed as having technical causes impeded any political solution, while it facilitated an operational solution. The technical character of the issue led actors to also conceive of the RICTC as a technical role. This in turn allowed by-passing constitutional and bureaupolitical constraints. If it had been conceived of as a political role, the introduction of the RICTC would, in fact, have been more sensitive to constitutional and bureaupolitical logics (see Figure 3).[13]

In other words, the way the issue was initially framed by the media and then adopted by Parliament *shaped and unintentionally pre-selected the landscape of possible alliances and inevitable deadlocks*; it steered the direction of action toward specific organizational solutions.

If we follow Entman's notion of "cultural congruence," we could hypothesize that the frame proposed by *Trouw* was so congruent with ongoing schemas that it was able to reverse-engineer Entman's cascade. Therefore, which were the schemas that dominated the political culture, to the point that the cascade model could be inverted?

It is undeniable that claims of infrastructural failures involving public resources found wide resonance in the financial climate of late 2000s/early 2010s. As a matter of fact, the premise under which the *Trouw* article framed the "failing governmental ICT projects" issue postulated the "precedence of economically based values over legally based values" (Moe, 1994, p. 114) introduced 20 years ago by the NPM.[14] As a consequence, this case reveals a pattern of influence on government by narratives of failure that is rather different from that described by the phronetic research approach. While phronetic research argued that the media tend to influence planning practices toward more traceable political accountability, our case study shows that when narratives of failure continue their journey into the governmental-administrative agenda, they can magnify financial concerns, rather than principles of democratic accountability.

However, this explanation risks echoing functionalist reasoning. Moreover, it does not add much to a heuristic of change. A complementary explanation for the sensitivity of the government to media claims of ICT failures might be found in the organizational reputation literature. According to Maor, Gilad, and Bloom (2013), government agencies are

> more likely to respond to opinions about core functional areas with regards to which [they have] a generally weak reputation, or about matters wherein [their] reputation is still evolving, and to keep silent over functions regarding which [they] generally enjoy a strong reputation. (p. 582)

These authors argue that the intensity of a response to criticism is inversely correlated to the strength of their reputation in a specific area.

Adopting this framework as an explanation would suggest that the Dutch Parliament strikingly reacted to media-triggered ICT failure claims because informatization is an area in which its reputation is weak. Indeed, in the commission hearings, the weak reputation of government agencies with regard to ICT expertise was a recurring theme, as is also widely acknowledged in the literature on eGovernment (Dunleavy, Margetts, Bastow, & Tinkler, 2006). The introduction of an RICTC role endowed with technical knowledge was intended precisely to counteract this lack of knowledge.

Therefore, under this lens, the same parliamentary working groups and commission on ICT failures might be conceived of as an attempt by the Dutch Parliament to improve its reputation as far as information systems and ICT expertise were concerned.[15] At the same time, we cannot avoid noticing that this goal was only partially achieved. During the parliamentary commission's hearings, one constant request was that witnesses refrained from using technical jargon. As we have discussed above, "ICT knowledge" was "black-boxed" as a form of systemic knowledge. While ICT knowledge can act as an umbrella term for a wide range of skills (e.g., data center management, programming, application development), none of these specializations was mentioned in the commission's working papers, nor were other technical and/or social details mentioned that could have helped explain the causes of system failures.

Conclusion

This article has described the media-prompted rise of the notion of "failing governmental ICT projects" in the Netherlands since 2007, and has considered how it linked (or did not link) with other governmental-administrative logics. Despite some tentative solutions (e.g., appointing a general CIO), as of today, the actor-network built to prevent considerable cost and time overruns of ICT projects has not yet stabilized into a permanent governance structure, as recent press statements by the parliamentary commission's chairman have shown (Stokmans, 2014b; Veldwijk, 2015).

In its final report published in October 2014, the Dutch parliamentary commission advocates the creation of an ICT responsible agency to supervise the development of information infrastructures across the various ministries. If, in abstract terms, the solution remains the same (i.e., a government-wide supervisor endowed with systemic knowledge), what changes is the actual, concrete actor tasked with fulfilling this role. The commission suggests creating an "Office for ICT Assessment" (*Bureau ICT-toetsing*—BIT), a temporary ICT authority composed of "independently minded and autonomous

experts" (Dutch Temporary Commission on Government ICT Projects, 2014, p. 2). As a further confirmation of our analysis, in its reaction to the report, the Cabinet has proposed the appointment of the new BIT under the control of the Cabinet-wide CIO (Veldwijk, 2015).

Differently, following Roe (2013), we suggest that the figure in charge of "managing the mess" should possess *both* systemic knowledge about the macro design *and* expertise of specific projects. As Roe has pointed out, trying to handle wicked problems from a macro perspective that can only rely on formal and deductive knowledge might easily worsen problems. Likewise, "managing the mess" from a micro perspective endowed only with experiential knowledge of micro operations might lack in reliability. According to Roe, actual mess management should be delegated to mid-level professionals, who can integrate the macro perspective with contingent scenario formulations, and the micro perspective with pattern recognition drawn from the experience of individual projects. Similarly, we suggest that the BIT—or any other agency having ICT coordinating functions—should pursue the integration of both deductive and experiential knowledge, if it aims for success in halting or preventing disasters in ICT projects (Hoppe, 2015; Pelizza & Hoppe, 2014).

To conclude, the case study comes with a recommendation to those actors in charge of translating any media debate into the political and governmental agenda. In this case, they are parliamentary working groups and commissions. As we have seen, addressing infrastructural failures can lead to a variety of organizational outcomes, depending not only on how an issue is initially constructed by the media but also on whether this construction is adopted with or without problematization by political and administrative actors.

We might wonder whether we would have obtained the same organizational solution (i.e., coordinating CIO under the authority of the Ministry of Internal Affairs), if scarcity of benefits had been framed by Parliament in a different way than that adopted by the *Trouw*, so that they did not align with the financial logic and the ongoing movement of centralization of interdepartmental relations, but rather with constitutional, bureaupolitical considerations. Parliamentary groups and commissions would have the opportunity to steer the number of possible organizational solutions, but only if they problematized how the issues framed by the media are translated into the political and governmental agenda.

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Notes

1. Although the authors would prefer to use the term *information system* for the purpose of this article, they adopt the term *ICT*, which is preponderantly used in the case study analyzed.
2. That is, transport infrastructure such as bridges, dams, submarine tunnels costing billion euros.
3. Tension points are a "type of power relation [which] is particularly susceptible to problematization and thus to change, because it is fraught with dubious practices, contestable knowledge, and potential conflict" (Flyvbjerg, 2012, p. 171).
4. The "so-called 'Great Belt fixed link' (1987-1998) was meant to connect East and West Denmark, and link Scandinavia with continental Europe across the entrance to the Baltic Sea" (Flyvbjerg, 2012, p. 170).
5. This second-grade objectivity is one of the key epistemological starting points of the Actor-Network Theory (ANT) approach underpinning this research (Latour, 2005). We thank one anonymous reviewer for suggesting making more explicit this key methodological and epistemological assumption.
6. The seven projects were the modernization of the personal data register (mGBA), the electronic patient dossier (EPD), a surveillance system for tunnel infrastructure, a digital communication system for emergency services (C2000), the electronic debit card for public transport (OV), the vehicle register, and finally unemployment and social assistance electronic services (Werk.nl).
7. Not only were the commission hearings streamed live and then made available on YouTube, but also the discursive strategy of the commission members was explicitly oriented to "having these issues understood by Dutch citizens at home" (commission chairman).
8. Key government and administrative witnesses during the hearings agreed in acknowledging a causative role of the article published by *Trouw* for the subsequent organizational developments. Following the constructivist approach mentioned above, this shared acknowledgment must be treated as a result in itself, and methodological choices must follow accordingly. Therefore, the following analysis concentrates on the peculiar framing brought about by this article.
9. In this respect, it is important to note that in the Dutch Constitution, "government" (*overheid*) is any executive branch at any level: central government, provinces,

municipalities, water boards. However, "national government" (*Rijksoverheid*) refers only to the central government in The Hague (Andeweg & Irwin, 2005).

10. It is not one of the goals of this article to reconstruct the contested history of the foundational politics versus administration dichotomy. That such a history is usually traced back to Woodrow Wilson's 1887 article "The Study of Administration" says a lot about the number of sedimentations a comprehensive, serious study should include. For a map of the almost endless debate on this issue, see Du Gay (2000, pp. 114-135) and Overeem (2009). For the purpose of this study, it is sufficient to mention that in the Dutch administrative system, both personnel management and information systems come under operational management. There are historical reasons for that. As Raadschelders (2000) has recalled, in the early 20th century's welfare state, staff units responsible for internal functions (i.e., personnel, financial, organizational, and—more recently—information management) were created within each ministry as a consequence of functional reorganization. It was the NPM reforms of the late 1980s and early 1990s that re-ignited the debate about the decoupling of operational management from policy making (Hood, 1995; Moe, 1994; Pollitt, 1995). During this period, the long-standing dichotomy between politics and administration was re-enacted as a system in which politicians should avoid any involvement with the routine operations of government management, while executives and officials should efficiently implement the required policies by means of private-sector-like techniques (Du Gay, 2000).

11. As Raadschelders recalled, in the early 20th century operational staff units were created within each ministry. As late as 1949, the first U.S. Hoover commission still recommended that personnel, accounting, financial, and budgeting functions be decentralized to single agencies (Moe, 1994).

12. For instance, the Directorate General (DG) Function, Control, Audit, and Certification; the unit Financial, Economic Affairs, and Control; the direction Financial Operational Management; the Strategy, Innovation and Account management unit; the direction Personnel, Organization, and Information of the DG Management Public Sector (Minister van Binnenlandse Zaken en Koninkrijksrelaties, 2006).

13. We have in this case what Roe (1994) would call a "metanarrative": an impasse between conflicting narratives (i.e., the constitutional/bureaupolitical logic versus Parliament's need for a Cabinet-wide supervisor) in which actors develop new narratives (i.e., the supervisor as a technical role attributable to an actor that has operational management tasks). The new narrative in turn recast the issue in such a way that a solution could be devised.

14. This case also highlights another analogy between media influence and NPM reforms from the 1990s. As Raadschelders and Bemelmans-Videc (2007) have pointed out, NPM reforms have mainly concerned the operational level; they tend to avoid directly affecting constitutional foundations, and rather to influence them by pulling operational (i.e., economic) levers. In a similar way, in the case described in this article, the introduction of the responsible for ICT coordination (RICTC) role by-passed constitutional constraints and interacted with developments at the operational management level.

15. Actually, the attempt was conducted at three levels: institutional (by Parliament), party-political (by the then leading party in the Dutch government coalition, which established the commission), and individual (by the commission chairman).

References

Algemene Rekenkamer. (2013). *Aanpak van ICT door het Rijk 2012. Lessons learned* [Approach to ICT by the State 2012. Lessons learned]. 's-Gravenhage: Author. Retrieved from http://www.rekenkamer.nl/Publicaties/Onderzoeksrapporten/Introducties/2013/03/Aanpak_van_ICT_door_het_Rijk_2012

Altheide, D. L., & Snow, R. P. (1979). *Media logic*. Beverly Hills, CA: Sage.

Andeweg, R. B., & Irwin, G. A. (2005). *Governance and politics of the Netherlands*. Basingstoke, UK: Palgrave Macmillan.

Augelli, E., & Murphy, C. (1988). *America's quest for supremacy in the Third World: A Gramscian analysis*. London, England: Pinter.

Aurigi, A. (2008). What you don't see is (also) what you get: Invisible flows and the shaping of media-rich cities. *Journal of Architectural and Planning Research*, *25*, 106-117.

Bal, M. (1998). *Narratology: Introduction to the theory of narrative*. Toronto, Ontario, Canada: University of Toronto Press.

Ballard, M. (2013, May 31). Pull out and keep our guide to UK gov IT failures. *Computer Weekly*. Retrieved from http://www.computerweekly.com/blogs/public-sector/2013/05/pull-out-and-keepyour-guide-to.html

Baumgartner, F. R., & Jones, B. (2009). *Agendas and instability in American politics*. Chicago, IL: University of Chicago Press.

Bennett, W. L. (2009). *News: The politics of illusion* (8th ed.). New York, NY: Pearson Longman.

Beynon-Davies, P. (1995). Information systems "failure": The case of the London Ambulance Service's Computer Aided Dispatch Project. *European Journal of Information Systems*, *4*, 171-184.

Beynon-Davies, P. (1999). Human error and information systems failure: The case of the London Ambulance Service Computer-Aided Dispatch System Project. *Interacting With Computers*, *11*, 699-720.

Bloch, M., Blumberg, S., & Laartz, J. (2012). *Delivering large-scale IT projects on time, on budget, and on value*. McKinsey & Company. Retrieved from http://www.mckinsey.com/insights/business_technology/delivering_large-scale_it_projects_on_time_on_budget_and_on_value

Bos, K. (2014, May 1). De overheid verliest 4 à 5 miljard per jaar aan falende ICT-projecten [The government loses between 4 and 5 billion a year in failed ICT projects]. *NRC Handelsblad*. Retrieved from http://www.nrc.nl/next/van/2014/mei/01/de-overheid-verliest-4-a-5-miljard-per-jaar-aan-f-1372467

Callon, M. (1986). Some elements of a sociology of translation: domestication of the scallops and the fishermen of St. Brieuc Bay. In J. Law (Ed.), *Power, action, and belief: A new sociology of knowledge?* (pp. 196-223). London, England: Routledge & Kegan Paul.

Curtis, P. (2011, May 18). Government urged to abandon NHS IT programme. *The Guardian*. Retrieved from http://www.theguardian.com/society/2011/may/18/government-urged-to-abandon-nhs-it-programme

Dekker, V. (2007, June 4). Automatisering slokt miljarden euro's op [Automation swallows billion of euros]. *Trouw*. Retrieved from http://www.trouw.nl/tr/nl/4324/nieuws/article/detail/1357967/2007/06/03/Automatisering-slokt-miljarden-euro-rsquo-s-op.dhtml

DeNardis, L. (2012). Hidden levers of Internet control: An infrastructure-based theory of Internet governance. *Information Communication & Society*, *15*, 720-738. doi:10.1080/1369118X.2012.659199

Du Gay, P. (2000). *In praise of bureaucracy: Weber, organization, ethics*. London, England: Sage.

Dunleavy, P., Margetts, H., Bastow, S., & Tinkler, J. (2006). *Digital era governance: IT corporations, the state, and e-government*. Oxford, UK: Oxford University Press.

Dutch Temporary Committee on Government ICT Projects. (2014). *Conclusions and recommendations of the Dutch Temporary Committee on Government ICT Projects*. Den Haag: Dutch Parliament. Retrieved from http://www.houseofrepresentatives.nl/sites/default/files/news_items/conclusions_and_recommendations_0.pdf

Entman, R. M. (2003). Cascading activation: Contesting the White House's frame after 9/11. *Political Communication*, *20*, 415-432. doi:10.1080/10584600390244176

Entman, R. M. (2004). *Projections of power: Framing news, public opinion, and US foreign policy*. Chicago, IL: University of Chicago Press.

Finkelstein, A., & Dowell, J. (1996). A comedy of errors: The London Ambulance Service case study. In *Proceedings Eighth International Workshop on Software Specification & Design IWSSD-8* (pp. 2-4). Washington, DC: IEEE CS Press.

Flyvbjerg, B. (2012). Why mass media matter to planning research: The case of megaprojects. *Journal of Planning Education and Research*, *32*, 169-181. doi:10.1177/0739456x12441950

Flyvbjerg, B., Landman, T., & Schram, S. (2012). Important next steps in phronetic social science. In B. Flyvbjerg, T. Landman, & S. Schram (Eds.), *Real social science: Applied phronesis* (pp. 285-298). Cambridge, UK: Cambridge University Press.

Greimas, A. J. (1976). *Sémiotique et sciences sociales* [Semiotics and Social Sciences]. Paris, France: Éditions du Seuil.

Hood, C. (1995). The "new public management" in the 1980s: Variations on a theme. *Accounting, Organizations and Society*, *20*, 93-109.

Hoppe, R. (2015, April). Bespreking van: Emery Roe, making the most of messes: Reliability and policy in today's management challenges, Durham/London: Duke University Press 2013. *Beleidsonderzoek Online*. doi:10.5553/BO/221335502015000017001

Jiang, J. J., & Klein, G. (1999). Risks to different aspects of system success. *Information & Management*, *36*, 263-272.

Kingdon, J. W. (1995). *Agendas, alternatives, and public policies* (2nd ed.). New York, NY: Longman.

Klijn, E. H., van Twist, M., van der Steen, M., & Jeffares, S. (2014). Public managers, media influence, and governance: Three research traditions empirically explored. *Administration & Society*. Advance online publication. doi:10.1177/0095399714527752

Latour, B. (1987). *Science in action: How to follow scientists and engineers through society*. Cambridge, MA: Harvard University Press.

Latour, B. (1996). *Aramis, or, the love of technology*. Cambridge, MA: Harvard University Press.

Latour, B. (2005). *Reassembling the social: An introduction to Actor-Network-Theory*. Oxford, UK: Oxford University Press.

Law, J. (1991). Power, discretion and strategy. In J. Law (Ed.), *A sociology of monsters: Essays on power, technology and domination* (pp. 165-191). London, England: Routledge.

Lyytinen, K., & Hirschheim, R. (1987). Information systems failures—A survey and classification of the empirical literature. *Oxford Surveys in Information Technology*, *4*, 257-309.

MacKinnon, I., & Goodwin, S. (1992, October 29). Ambulance chief quits after patients die in computer failure. *The Independent*. Retrieved from http://www.independent.co.uk/news/ambulance-chief-quits-after-patients-die-in-computer-failure-1560111.html

Maor, M., Gilad, S., & Bloom, P. B. N. (2013). Organizational reputation, regulatory talk, and strategic silence. *Journal of Public Administration Research and Theory*, *23*, 581-608.

Margetts, H. (2003, February 13). *Electronic government: Method or madness?* Paper presented at the Inaugural Lecture given at University College London, England.

Minister van Binnenlandse Zaken en Koninkrijksrelaties [Ministry of Internal Affairs and Kingdom Relations]. (2006, November 21). Organisatiebesluit [Organizational decree] n. 2006-0000271528 of 09/11/2006. *Staatscourant* [Government Gazette]. Retrieved from http://wetten.overheid.nl/BWBR0020525/geldigheidsdatum_24-06-2015/informatie

Minister van Binnenlandse Zaken en Koninkrijksrelaties [Ministry of Internal Affairs and Kingdom Relations]. (2007, January 3). Organisatiebesluit project-directoraat-generaal Organisatie en Bedrijfsvoering Rijk [Organizational decree Project Directorate General Organisation and Operational Management] n. 2007-0000501591 of 05/12/2007. *Staatscourant* [Government Gazette]. Retrieved from http://wetten.overheid.nl/BWBR0023190/geldigheidsdatum_07-04-2014/informatie

Minister van Binnenlandse Zaken en Koninkrijksrelaties [Ministry of Internal Affairs and Kingdom Relations]. (2008, July 6). Wijziging Besluit instelling van de Interdepartementale Commissie Bestuur, Overheid en Publieke Dienstverlening en de Interdepartementale Commissie Bedrijfsvoering Rijkdienst [Modification Decree establishing the Interdepartmental Commission Governance, Government and Public Services and the Interdepartmental Committee Operational Management] n. 2008-0000295251 of 04/07/2008. *Staatscourant* [Government Gazette]. Retrieved from https://zoek.officielebekendmakingen.nl/stcrt-2008-135-p7-SC86614.html

Moe, R. C. (1994). The "reinventing government" exercise: Misinterpreting the problem, misjudging the consequences. *Public Administration Review*, *54*, 111-122.

Oudshoorn, N., & Pinch, T. (2003). *How users matter: The co-construction of users and technology*. Cambridge, MA: MIT Press.

Overeem, P. (2009). *The politics-administration dichotomy: A reconstruction* (Doctoral thesis). University of Leiden, The Netherlands.

Pelizza, A., & Hoppe, R. (2014, November). ICT-problemen oplossen? Maak controversen zichtbaar! [Want to solve IT problems? Make controversies visible!] *Binnenlands Bestuur*. Retrieved from http://www.binnenlandsbestuur.nl/Hoppe-Pelizza

Pollitt, C. (1995). Justification by works or by faith? Evaluating the new public management. *Evaluation: The International Journal of Theory, Research and Practice*, *1*, 133-154.

Public Administration Select Committee. (2011). *Government and IT—"A recipe for rip-offs": Time for a new approach* (Twelfth report). London, England: The Stationery Office by Order of the House of Commons. Retrieved from http://www.publications.parliament.uk/pa/cm201012/cmselect/cmpubadm/715/71501.htm

Raadschelders, J. C. N. (2000). *Handbook of administrative history*. New Brunswick, NJ: Transaction Publishers.

Raadschelders, J. C. N., & Bemelmans-Videc, M.-L. (2007). Political system reform: Can administrative reform succeed without? In J. C. N. Raadschelders, T. A. J. Toonen, & F. M. van der Meer (Eds.), *The Civil Service in the 21st century: Comparative perspectives* (pp. 279-296). Basingstoke, UK: Palgrave Macmillan.

Rochefort, D. A., & Cobb, R. W. (1994). *The politics of problem definition: Shaping the policy agenda*. Lawrence: University Press of Kansas.

Roe, E. M. (1994). *Narrative policy analysis: Theory and practice*. Durham, NC: Duke University Press.

Roe, E. M. (2013). *Making the most of mess: Reliability and policy in today's management challenges*. Durham, NC: Duke University Press.

Rutgers, M. R. (2001). Splitting the universe: On the relevance of dichotomies for the study of public administration. *Administration & Society*, *33*, 3-20.

Sauer, C. (1997). Deciding the future for IS failures: Not the choice you might think. In R. Galliers & W. Currie (Eds.), *Rethinking management information systems* (pp. 279-309). Oxford, UK: Oxford University Press.

Stokmans, D. (2014a, May 22). Fijn, zo'n digitale overheid zonder ICT [Fine, such a digital government without ICT]. *NRC Handelsblad*. Retrieved from http://www.nrc.nl/next/van/2014/mei/22/fijn-zon-digitale-overheid-zonder-ict-1380064

Stokmans, D. (2014b, December 8). Rijk blijft falen met ICT ontkennen [Government continues to deny ICT failures]. *NRC Handelsblad*. Retrieved from http://www.nrc.nl/nieuws/2014/12/08/ton-elias-in-nrc-rijk-blijft-falen-met-ict-ontkennen/

Strömbäck, J. (2011). Mediatization and perceptions of the media's political influence. *Journalism Studies*, *12*, 423-439.

Strömbäck, J., & Kiousis, S. (2011). *Political public relations: Principles and applications*. Abington, MA: Routledge.

Syal, R. (2013, September 18). Abandoned NHS IT system has cost £10bn so far. *The Guardian*. Retrieved from http://www.theguardian.com/society/2013/sep/18/nhs-records-system-10bn

Tromp, J. (2013, June 29). Met ict licht overheid zichzelf op [Government lit himself with ICT]. *De Volkskrant*. Retrived from http://www.volkskrant.nl/dossier-archief/met-ict-licht-overheid-zichzelf-op~a3467200/

Van Eeten, M. J. G. (2007). Narrative policy analysis. In F. Fischer, G. J. Miller, & M. S. Sidney (Eds.), *Handbook of public policy analysis: Theory, politics, and methods* (pp. 251-269). Boca Raton, FL: CRC Press.

Veldwijk, R. (2013, July 31). ICT-projecten: ruimte voor falen [ICT projects: room for failure]. *iBestuur Online*. Retrieved from http://ibestuur.nl/weblog/ict-projecten-ruimte-voor-falen

Veldwijk, R. (2015, February 5). Rapport Elias: elegant in de prullenmand [Report Elias: elegant in the trash bin]. *iBestuur Online*. Retrieved from http://ibestuur.nl/weblog/rapport-elias-elegant-in-de-prullenmand

Watts, S., & MacKinnon, I. (1992, October 30). Software failure may be behind ambulance crisis. *The Independent*. Retrieved from http://www.independent.co.uk/news/uk/software-failure-may-be-behind-ambulance-crisis-1560323.html

Weber, M. (1980). Wirtschaft und Gesellschaft: Grundrisz zur Verstehenden Soziologie (5th ed.) [Economy and society: An outline of interpretive sociology]. Tübingen, Germany: J.C.B. Mohr.

Wyatt, S. (2003). Non-users also matter: The construction of users and non-users of the Internet. In N. Oudshoorn & T. J. Pinch (Eds.), *How users matter: The co-construction of users and technology* (pp. 67-79). Cambridge, MA: MIT Press.

Author Biographies

Annalisa Pelizza is Marie Curie Fellow and assistant professor at the Department of Science, Technology and Policy Studies, University of Twente. She holds a PhD in information society from the University of Milan Bicocca. She has worked as project manager and ethnographer of large-scale governmental ICT projects. Her fields of interest are governance by technologies; script analysis; media as ICT infrastructures (and vice versa); Actor-Network Theory and semiotics as research methodologies. Her latest article *Developing the Vectorial Glance* is published by *Science, Technology and Human Values*.

Rob Hoppe is a professor of policy and knowledge at the Department of Science, Technology, and Policy Studies, University of Twente. He holds a PhD in social sciences from the Free University Amsterdam. His fields of interest are comparative long-term policy dynamics and innovation, especially the role of technology; methodological and institutional implications of deliberative policy analysis; applications of Q Methodology; and the governance of expertise. His latest book is *The Governance of Problems. Puzzling, Powering, and Participation* (Policy Press, Bristol).