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Framing POLITICS



Sophie Lecheler

FRAMING POLITICS

Framing Politics

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FRAMING POLITICS

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Table of Contents

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION	1
CHAPTER 1 NEWS FRAMING AND PUBLIC OPINION: A MEDIATIONAL ANALYSIS OF FRAMING EFFECTS ON POLITICAL ATTITUDES	21
CHAPTER 2 ISSUE IMPORTANCE AS A MODERATOR OF FRAMING EFFECTS	47
CHAPTER 3 GETTING REAL: THE DURATION OF FRAMING EFFECTS	73
CHAPTER 4 WHAT A DIFFERENCE A DAY MADE? THE EFFECTS OF REPETITIVE AND COMPETITIVE NEWS FRAMING OVER TIME	101
CONCLUSION	131
APPENDIX	149
ENGLISH SUMMARY	163
NEDERLANDSE SAMENVATTING	167
ACKNOWLEDGEMENTS	171

List of Figures

FIGURE 0.1	Overview of “Framing Politics”	12
FIGURE 1.1	(Moderated) Mediation of a Framing Effect.....	26
FIGURE 1.2	Mediational Analysis – Belief Importance.....	32
FIGURE 1.3	Mediational Analysis – Multiple Mediation.....	33
FIGURE 1.4	Mediational Analysis – Moderated Mediation.....	35
FIGURE 2.1	Low-Importance Issue – Mediational Analysis.....	61
FIGURE 2.2	Low-Importance Issue – Moderated Mediation Analysis.....	62
FIGURE 3.1	Framing Effects Over Time – Three Different Levels of Political Knowledge.....	89
FIGURE 4.1	The Moderating Effects of Political Knowledge on Framing Effects – Model t_3 (after one day).	119

List of Tables

TABLE 1.1	Mean Differences for Belief Importance Considerations	31
TABLE 1.2	Regression Models Predicting Opinion.....	34
TABLE 2.1	Low-Importance Issue ‘trade’ – Overall Belief Importance.....	59
TABLE 2.2	Belief Importance for Low-Importance Issue ‘trade’ by Perceived Personal Importance.....	60
TABLE 3.1	Framing Effects Over Time.....	87
TABLE 3.2	Regression Models Predicting Opinion - t_4 (after 2 weeks).....	90
TABLE 4.1	Repetitive and Competitive Framing Over Time.....	114
TABLE 4.2	Repetitive Framing Over Time by Level of Political Knowledge.....	115
TABLE 4.3	Explaining the Effects of Political Knowledge on Repetitive and Competitive Framing Exposure Over Time.....	117
TABLE 4.4	Competitive Framing over Time by Level of Political Knowledge.....	118

Introduction

Setting the Scene: Mapping Political Communication Effects

The way the news “frame” politics has been the subject of a great number of theoretical and empirical investigations by political communication scholars over the past two decades. The question how news framing affects citizens’ understanding of political issues and processes has received particular attention. As a result, studies of framing effects have helped to explain in what ways subtle differences in the presentation of a political issue can lead to changes in interpretation, attitudes, and behavior (Chong & Druckman, 2007a). To date, studies have investigated news framing effects for all sorts of issues and events, ranging from social protest (McLeod & Detenber, 1999), to government spending (Jacoby, 2000) and EU integration (Schuck & de Vreese, 2006). However, perhaps because news framing effects theory proved to be so valuable for studying different political issues and contexts, many scholars have approached the theory “very inductively and examined framing as a phenomenon without careful explication of the theoretical premises and their operational implications” (Tewksbury & Scheufele, 2009, p. 17). While these case studies have unquestionably provided a solid empirical basis for the existence of news framing effects in political communication, they have also left several fundamental questions unanswered.

This dissertation addresses some of these questions. First, we investigate the intermediary psychological processes that enable or limit a news framing effect on political attitudes. The study of these processes is essential for our understanding of how news framing effects actually work in an individual’s mind, but the literature is still full of debate about the range of mediators a news framing effect can go through. Second, we examine whether a news framing effect depends on the particular issue at stake, and how the importance of an issue alters susceptibility to framing effects. This study enables a more fine-grained understanding of the limits of news framing effects, and also further introduces the socio-psychological notion of “attitude strength” into framing literature. Third, we study how long news framing effects last over time and, fourth, if their persistence depends on whether news framing is repetitive or competitive in nature. To date, only very few scholars have investigated duration and persistence of news framing effects. Yet, testing these leads framing effects theory on the way to understanding how influential news framing effects really are in politics and political communication. In this opening chapter, we discuss some of the basic theoretical concepts that have motivated this dissertation, and then shortly introduce the design of the project.

Like any study in political communication, the research conducted in this dissertation essentially relies on the idea that the media play an important role in how citizens comprehend politics and participate in it (Mazzoleni & Schulz, 1999). However, for the last century or so, the scholarly conception of just how much influence the media really exert on citizens has been oscillating between conceptions of minimal, maximal, and differentiated political

communication effects (for an overview see Bryant & Zillmann, 2009; McQuail, 2005). First steps were taken by studies of propaganda and public opinion at the beginning of the twentieth century (e.g., Lasswell, 1927; Lippmann, 1922). Impressed by the popularity of the upcoming mass media, these studies established the idea that the media could substantially and directly affect citizens' political opinions and actions. Soon after, however, empirical evidence for the limits of this media influence began to pile up, and the idea of the all-powerful media was heavily challenged. Most notably the work of Lazarsfeld and colleagues on *The People's Choice*—that is, the rather modest and partisan reinforcing effect of the mass media in election campaigns—led to a general disenchantment with the study of media effects, and rang in a paradigm of minimal media effects (see also Lazarsfeld et al., 1944; Berelson, 1949; Klapper, 1960). During the 1970s and 1980s, the rise of television brought change: Picking up on Trenaman and McQuail's study of the British general elections (1961), McCombs and Shaw's (1972) agenda-setting theory provided evidence for a strong relationship between media and audience priorities. Around the same time, Noelle-Neumann (1973) argued that consonance—the repetitive nature of much of the media content—is likely to result in large media effects, simply because citizens are unable to avoid certain standpoints (see also Noelle-Neumann & Mathes, 1987; Peter, 2004).

Since then, research has adopted a more differentiated understanding of media effects. Scholars still assume a sizeable effect, but depart from the idea of an active citizen who weighs political news messages against extant beliefs or values and then integrates them (e.g., Gitlin, 1980; Gamson & Modigliani, 1989). A differentiated examination of media effects also required the use of a more fine-grained theoretical approach to investigate media effects, which gave rise to “framing”, a concept that originated in psychology and sociology.

In psychology, the idea of framing is based on Kahneman and Tversky's *prospect theory* (1979; 1984), which assumes that decisions taken by individuals can be altered by presenting information in logically equivalent but semantically different ways. Kahneman and Tversky found that when a decision was framed in terms of losses, individuals tended to be risk seeking, while when it was framed in terms of gains, individuals were risk averse. In sociology, Goffman (1974) constructed the idea of framing on a macro-level. He suggested that individuals organize their daily experiences by means of “frameworks or schemata of interpretation” (p. 21). Most important among these are the so-called primary frameworks, which render “what would otherwise be a meaningless aspect of the scene into something that is meaningful” (p. 21). During the 1980s, framing was quickly adapted in communication research, and both the sociological and the psychological origins of the concept were integrated with extant knowledge in media effects research (see Entman, 1993; D'Angelo, 2002).

But what demarcates the study of framing from working with other effect theories, such as agenda-setting, priming, and persuasion? The relationship between agenda-setting and its' extension priming on the one hand and framing on the other hand has stirred some attention in the literature and is characterized by an ongoing disagreement in the scholarly debate (see

Scheufele, 2000; Tewksbury & Scheufele, 2009; Weaver, 2007). One group of authors considers also framing an extension of agenda-setting (e.g., McCombs & Ghanem, 2001), whereas a second group argues that there is a fundamental distinction between the two theories (e.g., Scheufele, 2000; Scheufele & Tewksbury, 2007). This latter view seems more plausible, based on the psychological processes that underlie the respective effects: Whereas agenda-setting increases the accessibility of an issue and therefore shapes the importance we assign to an issue, framing functions by (re-)organizing and connecting beliefs, which renders these beliefs more likely to be integrated into subsequent judgments. Accordingly, frames can have applicability effects, as opposed to an accessibility effect of agenda-setting and priming (Nelson, Oxley, Clawson, 1997).

The difference between persuasion and framing also hinges on primary psychological processing. As opposed to the conception of framing as an applicability effect—which is based on the assumption that a framed belief consideration must already be accessible and available within the individual’s mind—persuasion is often understood as the addition of previously unavailable beliefs to an individual’s mental stockpile (see e.g., Petty & Briñol, 2008 for an overview). Moreover, framing is usually concerned with the “origin, evolution, presentation, and effects of frames” produced by journalists for an audience that is *unaware* of these mechanisms, whereas persuasion studies “involve the presentation of intentionally persuasive content to audiences presumably aware of that intent” (Tewksbury & Scheufele, 2009, p. 20). However, we must note that the distinctness of framing effects theory from other effect theories is a developing argument, and heavily depends on the further development of the theoretical basis of framing. Therefore, all four chapters in this dissertation are also concerned with the “correct placement” of framing within the cadre of political communication theory.

News Framing Effects Theory

In the following, we present the theoretical assumptions our research is based on. We begin by providing a definition of news frames, and summarize some of the literature on news framing effects. We then give a short delineation of the open questions we aim to answer in this dissertation, and place them within their respective research areas.

What is a News Frame?

Although the term “frame” has been used in political communication literature for several decades now, the question of what exactly constitutes a frame is not easy to answer (Kinder, 2007; Matthes, 2009). Frames can be found in various parts of the communication process: within the originating (political) system, the journalists or media institutions, and the recipients (e.g., de Vreese, 2002; Entman, 1993; Kinder & Sanders, 1996; Scheufele, 1999). Kinder and Sanders (1996, p. 164) argue that frames “lead a double life,” because they are present in political discourse, as well as in the mind as “cognitive structures that help individual citizens

make sense of the issues that animate political life". In view of that, Scheufele (1999, pp. 106-107) distinguishes between "media frames" in content and "individual frames" that are present in a person's mind as a result of either deep-rooted beliefs or short-term reference changes. The notion of the presence of frames in multiple locations has led to the understanding of framing as a process that stretches across all parts of the communication process (e.g., D'Angelo, 2002; Scheufele, 1999). De Vreese (2002, p. 24) distinguishes this process into frame-building—that is, the "process and factors that influence the structural qualities of news frames"—and frame-setting, namely the "interaction between media frames and individuals' prior knowledge and predispositions."

On a macro-level, a frame "organizes everyday reality" within the media and is thereby "part and parcel of everyday reality" (Tuchman, 1978, p. 193). Frames are "persistent patterns of cognition, interpretation, and presentation, of selection, emphasis and exclusion by which symbol-handlers routinely organize discourse" (Gitlin, 1980, p. 7). In the news, a frame is often described as "a central organizing idea or story line that provides meaning to an unfolding strip of events, weaving a connection among them. The frame suggests what the controversy is about, the essence of the issue" (Gamson & Modigliani, 1987, p. 143; see also Reese, 2001). Entman (1993, p. 52; italics in original) highlights the selection aspect of frames in arguing that to "frame is to select some aspects of a perceived reality and make them more salient in a communicating context, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described". Based on these definitions, we argue that frames in the news can be defined as patterns of interpretation that are used to classify information and that aid audiences in processing information efficiently. News frames stress certain aspects of reality and push others into the background: they have a selective function. In this way, certain attributes, judgments, and decisions are suggested. Yet, this conceptual frame definition does not give much indication of the distinct elements that constitute a news frame or *how* to actually identify a frame in the news (see e.g., Matthes & Kohring, 2008). The goal of this dissertation is the study of framing effects and not the analysis of frames in the news. We therefore let two common classifications guide our operationalization of news frames.

The first one divides news framing into equivalency and emphasis frames (Druckman, 2001b). Equivalency frames refer to content that is similar or even identical in its logical message, but is presented or phrased differently (e.g., Kahneman & Tversky, 1984). Emphasis frames are closer to "real" journalistic news coverage and present "qualitatively different yet potentially relevant considerations" of an issue (Chong & Druckman, 2007a, p. 114). The concept of equivalency framing stems from Kahneman and Tversky (e.g., 1984), who, by altering the wording of two similar scenarios that outline the consequences of a fatal illness, were able to explore differences in subsequent decision-making. Equivalency frames are not often used in political communication research, because this rather narrow conceptualization of framing limits its applicability in a political context. For that reason, many studies—including

the ones reported on in this dissertation—have made use of emphasis frames as more realistic translations of political news coverage (de Vreese, 2002; Sniderman & Theriault, 2004, but see Iyengar, 2009).

Second, studies have identified two types of emphasis frames that have been used in effects studies: issue-specific frames and generic frames. Issue-specific frames are built explicitly for a topic and have a limited scope. Generic news frames are a set of frames that are said to be applicable to a wide range of topics and were thus pre-identified and used in a number of studies (e.g., Cappella & Jamieson, 1997; d'Haenens & de Lange, 2001; Iyengar, 1991; Semetko & Valkenburg, 2000). Issue-specific frames are defined by a very open approach to the relevant news coverage and enable the generation of apposite frames for different issues and contexts. However, as these frames may only be applicable to a specific topic, their creation is time-consuming and under risk of capturing more of the “authors’ frames” than actual patterns in media coverage. In using generic frames, researchers might be in danger of omitting potentially important factors in news coverage. Nonetheless, generic frames signal patterns in news coverage that were previously identified by empirical study. This renders generic frames highly appropriate for effect-based studies that cannot draw on news frames from content analysis, and that also recoil from simply “thinking up” a news frame. Thus, the use of generic news frames decreases the risk of testing implausible frame scenarios, and all studies in this dissertation do therefore test the effects of generic news frames.

What is a News Framing Effect?

A news framing effect is the influence a news frame has on an individual’s frames in mind. To date, the study of framing effects mainly focuses on studying cognitive framing effects, as the question of how the news can affect our thinking of an issue is at the very center of political communication research (Scheufele, 1999). Some framing studies investigate cognitive framing effects by studying information processing and how citizens interpret and “understand” a political issue or event (e.g., Price et al., 1997; Valkenburg et al., 1999; Shen, 2004; Nabi, 2003). However, an increasing number of studies conceives this process as only a “mediating step on the way to some other effect” (Tewksbury & Scheufele, 2009, p. 26) and focus on attitudinal variables, most notably political opinions (e.g., Haider-Markel & Joslyn, 2001; Jacoby, 2000; Slothuus, 2008). For instance, Nelson, Oxley, and Clawson (1997, p. 237) present a model of news framing effects on opinion, where the framing process affects attitudes and opinions by lending “additional weight to an already accessible concept by influencing its perceived relevance or importance.” Jacoby (2000, p. 763; italics in original) investigates framing effects on opinion about government spending, finding that “[d]iffering frames produce widespread *changes* in the ways that people respond to a single issue.” All four chapters in this dissertation investigate similar attitudinal framing effects, aimed at tapping individual-level opinion towards a specific issue.

Framing scholars have also examined other cognitive variables, such as cognitive complexity (e.g., Shah et al., 2004), political cynicism (Cappella & Jamieson, 1997), knowledge (de Vreese & Boomgaarden, 2006), and trust (Valentino et al., 2001). Moreover, there is a variety of studies that have investigated behavioral or emotional framing effects. For instance, behavioral framing effects have received a considerable amount of attention in the study of social movements, where scholars have studied how frames can enable mobilization and protest (e.g., Entman & Rojecki, 1993; Snow et al. 1986; Snow & Benford, 1992). However, Scheufele (1999, p. 113) notes that these data are “of only limited use when examining the potential impact of individual frames on political participation or action,” due to their “aggregate-level” nature. On an individual level, behavioral framing effect studies focus on campaigns and the effects of news frames on voter mobilization or turnout (e.g. de Vreese & Semetko, 2002; Valentino et al., 2001). For example, Valentino and colleagues (2001) found that framing with a focus on strategy demobilizes less sophisticated citizens. However, in most cases, behavioral effects are measured by tapping “behavioral intention” rather than actual behavior, and the level of attitude-behavior consistency for framing effects is in need of further empirical investigation (Scheufele, 1999). There is also an emerging field of studies that deal with the emotional effects of framing (e.g., Nabi, 2003; Gross & Brewer, 2007; Druckman & McDermott, 2008; Schuck & de Vreese, 2009). For instance, Gross and Brewer (2007) examined the impact of specific news frames on anger and disgust, and found a conditional effect of framing on emotion, limited by the nature of personal beliefs connected to the framed issue.

Mediators of News Framing

Framing scholars increasingly focus on the intermediary psychological processes that underlie a news framing effect (e.g., Nelson, Oxley, & Clawson, 1997; Chong & Druckman, 2007a; Matthes, 2007; Slothuus, 2008). Early studies conceived of the framing process as an accessibility effect (Iyengar, 1991), while subsequent research found the effect process to be more complex. A majority of studies today conceive of framing as an applicability effect, where framing functions by “altering the *weight* of particular considerations” (Nelson, Oxley, & Clawson, 1997, p. 236; italics in original). Thus, framing renders these considerations more important and therefore also more likely to be included in subsequent judgments (see Tewksbury & Scheufele, 2009 for a recent overview).

News framing as an applicability effect thus assumes that a frame “operate[s] by activating information *already at the recipients’ disposal*, stored in long-term memory” (Nelson, Oxley, & Clawson, 1997, p. 225; italics in original). However, some scholars have recently investigated another process that may be attributed to news framing: belief content change (e.g., Shah et al., 2004; Slothuus, 2008). Belief content change refers to the addition of previously inaccessible or unavailable beliefs to an individual’s set. A belief content change model is particularly interesting when investigating the framing of politics, as political news frames may cover information that is remote and complex to the individual, and may therefore regularly

convey new information also. Consequently, Slothuus (2008, p. 7) has proposed a “dual-process” model of issue framing effects that combines applicability effects and belief content change. Results of his experimental study show that frames do indeed affect opinion via both proposed mechanisms. However, we do not know which of the two mediators prevails across issues and frames. *Chapter 1* of this dissertation evaluates the dual-process model of issue framing for a different political issue, and adds to the literature by determining the explanatory power of the two mediation processes.

Moderators of News Framing

The empirical evidence of strong news framing effects may lead one to suspect that frames affect citizens’ understanding of politics across the board. However, citizens are not “at the mercy of elites’ whims” (Druckman, 2004, p. 233). Rather, in the light of a differentiated media effects paradigm, framing effects are likely to depend on specific individual and contextual variables. The literature suggests a few of these variables on an individual level, such as knowledge (e.g., Nelson, Oxley, & Clawson, 1997; Schuck & de Vreese, 2006) and values (e.g., Shen & Edwards, 2005). Beyond that, there is increasing scholarly interest in contextual moderating variables like, for instance, source credibility (e.g., Druckman, 2001a), and interpersonal communication (e.g., Druckman & Nelson, 2003). To date, scholars have only just begun to explore the moderators of framing, which invites further empirical investigation.

A few framing studies have paid special attention to the moderating role of one of the most important variables of political communication: *political knowledge* (e.g., Nelson, 1997; Haider-Markel & Joslyn, 2001; Jacoby, 2000; Schuck & de Vreese, 2006; Slothuus, 2008). However, the empirical evidence on the role of knowledge in the framing process remains mixed and is thus inconclusive. One group of scholars argues that individuals with higher levels of knowledge are affected to a greater extent, because they possess a larger stock of available considerations that are ready to be “framed” (e.g., Druckman & Nelson, 2003; Nelson, Oxley, & Clawson, 1997). However, this evidence does not concur with the assumption that high levels of knowledge usually coincide with strong predispositions towards an issue, which might substantially reduce vulnerability to any media-induced effect. A second group of authors have thus argued that less knowledgeable individuals should display higher susceptibility to news framing effects, because they cannot resist a framed message (e.g., Haider-Markel & Joslyn, 2001; Schuck & de Vreese, 2006). Given the central role political knowledge plays in political communication research as well as the unclear mechanisms that define its influence on the news framing process, we investigated the moderating role of political knowledge in *Chapters 1, 3, and 4* of this dissertation.

Because most news framing effect studies focus on the extent to which news framing affects attitudes, scholars can make use of the concept of “attitude strength” in social psychology. Here, a rich body of literature can provide further insights into the variables that make for strong and stable attitudes and can therefore condition attitudinal framing effects (see

e.g., Krosnick & Petty, 1995; Krosnick et al., 1993; Miller & Peterson, 2004). One key aspect of strong and stable attitudes is the importance of the issue at stake, which indicates that this variable could also affect susceptibility to news framing effects. For example, Iyengar (1991) distinguishes between episodic and thematic framing and finds that framing effects vary according to the particular issue. However, he does not offer conclusive evidence on the conditions under which issue characteristics matter. Haider-Markel and Joslyn (2001) focus on a high salience issue, assuming that attitudes toward this issue and an issue frame are stronger as individuals attach high levels of importance to it. This indicates that issue importance should be fundamental for the framing process, and it is therefore investigated in *Chapter 2* of this dissertation.

How Persistent are Framing Effects?

Framing experiments can establish causality, but do they also allow conjectures about the real-life impact of news frames in political discourse? When interpreting their results, many scholars draw conclusions about the long-term influences that news frames can have on political attitudes and behavior. However, the reality of this long-term impact is almost never put to the test. An increasing number of authors do therefore point out a “disjuncture between the hypothesized nature of some effect and the limitations of the methods chosen to study it” (Tewksbury & Scheufele, 2009, p. 29; see also Gaines et al., 2007; Kinder, 2007).

The role that news framing effects play in our day-to-day life depends to a great extent on how long they actually last (Gaines et al., 2007). Assume, for instance, that one news frame has more lasting effects than another. Would this not imply that this news frame has a more substantial effect on political attitudes? The study of the *duration* of news framing effects is still in its infancy, with only a small handful of rather straightforward studies available (e.g., de Vreese, 2004; Druckman & Nelson, 2003; Tewksbury et al., 2000). These studies all include one delayed measurement of the dependent variable, which is then compared to the immediate framing effect in the study. The results of these studies, however, differ: Some researchers claim long-term effects (Tewksbury et al., 2000), while others advocate the short-term impact of news framing (e.g., de Vreese, 2004). In light of this inconclusive evidence and the limitations of extant study designs, *Chapter 3* presents a systematic analysis of news framing effects across multiple delayed time points.

The significance of framing effects over time also depends on whether the individual is exposed to only one or a *multiplicity* of news frames. The latter scenario is certainly more realistic, given the habitual nature of our day-to-day media use. When it comes to watching, reading, or listening to the news, citizens are likely to be exposed to a whole plethora of repetitive or competitive news frame messages, and the effects of these two types of message combinations are likely to vary (Zaller, 1992; 1996). The effects of repetitive news frames are often only speculated upon (Price & Tewksbury, 1997), while some studies have investigated the impact of competitive frame messages (e.g., Chong & Druckman, 2007b; Hansen, 2007;

Sniderman & Theriault, 2004). However, nearly all studies expose their participants to multiple frames at the same time, and do therefore not take into account the temporal dimension of political communication flows. *Chapter 4* combines the study of the longevity of news framing effects with exposure to either repetitive or competitive news frames, and thereby offers an encompassing account of the persistence of news framing effects over time.

Research Design

We investigate news framing effects by means of an experimental research design, and conducted *survey experiments*. A large majority of results on framing effects stem from survey experiments (Kinder, 2007). This is not surprising, given that a well-designed experiment is a primary means of determining cause and effect, and of disentangling the complex processes that account for this effect. Due to the important role that experimentation plays in framing research, this dissertation also evaluates the use of it in the literature and offers two options for improving the external validity of survey experiments: delayed measurements (*Chapters 3 & 4*), and multiple exposure treatment settings (*Chapter 4*).

Survey experiments are attractive to framing effects researchers because of their ability to create a *standardized* environment in which participants receive the same stimulus under comparable circumstances, and are subjected to identical procedures and measures. Doing so minimizes the “likelihood that extraneous factors, of which the experimenter might not even be aware, could influence the results in decisive ways” (McDermott, 2002, p. 33). By allocating participants *randomly* to different groups, a framing effect can be ascribed to the treatment manipulation and not to the composition of the groups (such as differences in age, education, or political beliefs) (see also e.g., Kinder & Palfrey, 1993; Lavine et al., 2002).

The experiments conducted in this study used between-subject designs, whereby the framing effect is established by tapping the differences between two or more groups that have been exposed to different frames (see McDermott, 2002). In doing so, they stand in a long tradition of between-subjects designs in the field which are used to investigate the “effects of alternative news frames on opinion,” rather than test the “effects of framing versus no framing” (Nelson, Clawson, & Oxley, 1997, p. 579). Moreover, the inclusion of pre-test opinion measurements in over-time designs in this dissertation would also have increased the overall number of measurements further, and therefore also the risks that participants would respond differently to these measurements, or drop out of the experiment. However, to preclude any criticism of our design, we included control groups, which served as the baseline (see also Druckman, 2001a; Druckman & Nelson, 2003; Gaines et al., 2007).

The literature shows that the *stimuli* in framing experiments—the news frames—are operationalized in quite different ways (see Iyengar, 2009). Some researchers create frame stimuli by means of alternative question wordings. For example, Nelson, Oxley, and Clawson (1997) exposed participants to a manipulated opinion measure, which stressed either the

entitlement of poor citizens to receive welfare, or the economic threats posed by welfare spending (see also e.g., Nelson & Kinder, 1996). However, such frame manipulations “do not speak very convincingly to the presentation of frames in everyday life” (Kinder, 2007, p. 158). While alternative question wordings suffice in establishing framing mechanism as introduced by Kahneman and Tversky (1984), they do not adhere to the way political issues are framed in real news coverage and are therefore of limited use when analyzing media effects. Many studies therefore employ emphasis frames that focus on relatively independent aspects of an issue (e.g., a “privacy” versus a “criminal” frame when thinking about internet law enforcement). Yet, such a framing conceptualization also introduces the risk of error into the experimental design, because “different words may convey more than differences in perspective and different individuals may ‘read’ the same words quite differently” (Iyengar, 2009, p. 188; see also Shah et al., 2009). Consequently, the use of independent issue frames could jeopardize the results of studies that are aimed at disentangling the subtle psychological processes of news framing. Because we sought both to minimize this risk of noise in our design, and to expose participants to realistic news frames, this dissertation consistently employs alternative versions of *one* well-established generic news frame, namely the economic consequences frame (de Vreese, 2009; Semetko & Valkenburg, 2000).

The ability to establish causal relationships, paired with high levels of control in measurement and procedure, endows survey experiments with a great deal of *internal validity*, that is, a great certainty that the study design measures what it promises to measure. Yet, the *external validity* of survey experiments is a continuous source of discussion in the literature (e.g., Gaines et al., 2007), which is why the improvement of external validity by means of tests of longevity and multiple exposure is taken up in this dissertation (*Chapters 3 & 4*). The artificial and forced environment created by experimentation has made some researchers wonder whether a more realistic media use should play a role in future framing effects research (e.g., Kinder, 2007; Barabas & Jerit, 2008). Kinder (2007), for instance, emphasizes that framing experiments may have exaggerated the power of the media, simply because such experiments ensure that “frames reach their intended audiences,” instead of being deflected off a typically uninvolved media user. As a remedy, Kinder suggests the use of real-life events to generate natural experiments. However, he also acknowledges that doing so requires a “decisive shift in the deployment of frames in some real-world setting” – a condition that is very rarely fulfilled (p. 157; see also Boomgaarden & de Vreese, 2007; Gerber et al., 2009).

In the absence of such events, how can researchers both retain the qualities offered by a good experimental design, *and* keep track of external validity? In this dissertation, we argue that what is needed is a greater focus on a temporal dimension in framing effects theory (Chapter 3). A time-persistent framing effect allows researchers to draw conclusions concerning the “strength” of a framing effect, and the societal and political implications of their results. If experimental framing effects are short-lived, one must question the applicability of experimental designs. De Vreese (2004, p. 206) argues that longitudinal experimental designs are a

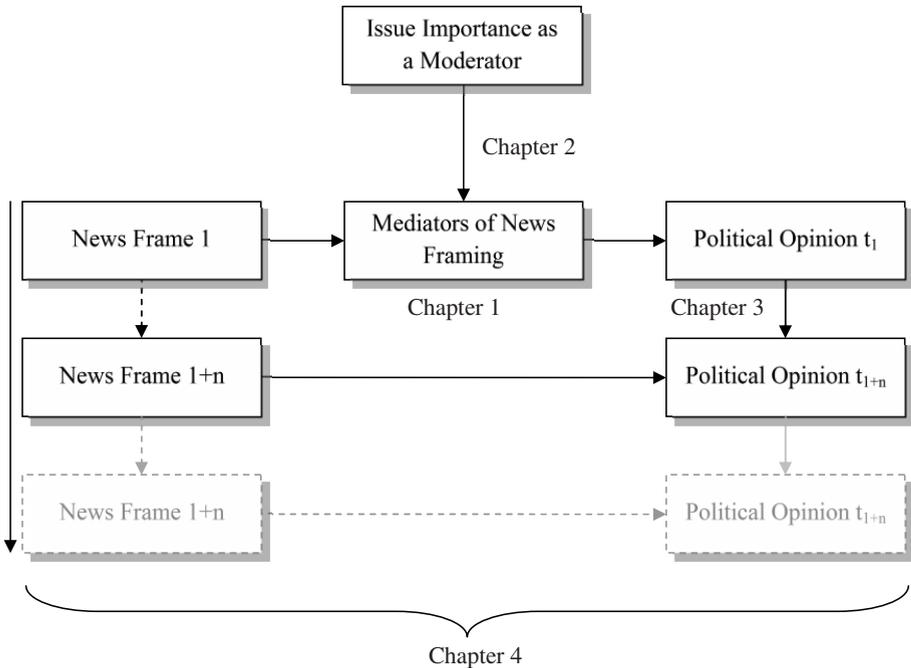
“worthwhile path to pursue in the quest to disentangle the robustness and persistency of effects”. Gaines and colleagues (2007) even point out that “determining the rates of decay of various treatment effects and deriving the political implications could be one of the most informative tasks that users of survey experiments undertake in the future” (p. 6). To fill this imminent research gap, *Chapters 3 and 4* incorporate tests for longevity.

External validity can also be increased by including multiple treatments over time into the experimental setting. Most framing studies expose participants to just *one* relatively obtrusive news frame. However, by providing participants with only one frame, even if this frame is highly applicable, experiments cannot simulate political communication, where media exposure to a particular issue is characterized by a flow of repetitive and competitive messages (Gaines et al., 2007). This interplay between consonant and dissonant media information in political communication has been described by Zaller (1992) and other authors, but not tested sufficiently in experimental research (see also Noelle-Neumann, 1973). Druckman (2004, p. 685) suggests a greater focus on the experimental frame exposure scenario, the “context under study”. Consequently, Chong and Druckman (2007b) presented their participants with competing framing scenarios, but within an experiment. In doing so, the authors created a more realistic setting, and also experimentally showed that the effects of multiple exposure scenarios differ from single exposure measurement (see also Sniderman & Theriault, 2004). Recently, Chong and Druckman (2008) introduced an over-time perspective into their competitive framing design. However, so far, no study has included multiple exposures of both a repetitive and a competitive nature over various lengths of time, which is what *Chapter 4* attempts to achieve.

Outline of the Dissertation

In the following, we present a short outline of the four chapters in this dissertation. Figure 0.1 provides an overview of these chapters, and indicates where each chapter stands in a model of news framing effects.

Figure 0.1: Overview of “Framing Politics”



To better understand framing, scholars must consider the underlying psychological processes that lie between exposure to a news frame and change in opinion (see effect process illustrated in Figure 0.1). Based on an experimental design, *Chapter 1* presents a mediational analysis of a news framing effect on opinion, testing for two mediators: change in the importance of available beliefs, and change in the belief content by making new beliefs available. The moderating influence of political knowledge is tested.

As Figure 0.1 shows, *Chapter 2* is devoted to the question which variables enhance, limit, or obliterate this news framing effects process. Specifically, we address the fundamental question whether framing effects vary according to the particular issue at stake. Based on two experimental studies, we investigate the extent to which framing effects differ, depending on how important an issue is.

Although most framing studies emphasize the relevance of their results for daily politics, they fail to assess this claim empirically. Thus, based on a survey experiment, *Chapter 3*

systematically traces the duration of framing effects across three delayed time points, namely after one day, after one week, and after two weeks (see vertical arrows in Figure 0.1). We also investigate how political knowledge moderates the duration of a news framing effect.

Chapter 4 builds on these results, and is one of the first to empirically mimic the dynamic nature of framing effects over time (see over-time model of multiple framing as displayed in Figure 0.1). Based on Zaller's (1992) model of dynamic communication flows, we integrate (1) multiple news frame exposures (repetitive and competitive) and (2) tests for duration of framing effects into an experimental study design. Again, political knowledge is tested as a potential moderator.

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Chapter 1

NEWS FRAMING AND PUBLIC OPINION: A MEDIATIONAL ANALYSIS OF FRAMING EFFECTS ON POLITICAL ATTITUDES

Manuscript under review

Abstract

A growing number of studies show how media frames can affect the formation of public opinion. To disentangle these effects, scholars must consider their underlying psychological processes or mediators. However, to date, there is no satisfactory account of the mediators of framing effects, and the explanatory power of different established mediators has not been addressed. Based on an experimental study ($n = 1,537$), this article presents a mediation analysis of a news framing effect on opinion, testing for two significant mediation processes: belief importance and belief content change. Results show that framing is mediated by both belief importance and belief content change, with belief content being the more prominent mediator. The extent to which each process takes effect depends on an individual's level of political knowledge. Knowledgeable individuals are affected to a greater extent via both belief content and belief importance change. The implications for future framing effects research are discussed.

Introduction

Framing theory can explain to what extent the media affect citizens' understanding of politics. Accordingly, a large amount of studies report significant effects of media frames on the formation of public opinion (e.g., Berinsky & Kinder, 2006; Druckman, 2001a; Druckman & Nelson, 2003; Entman, 1991; Schuck & de Vreese, 2006). Yet, it is not only the presence or magnitude of the effect that is of interest. Scholars must also consider the underlying psychological processes of such effects. In recent years, a growing number of studies have sought to understand *how* and under which conditions political news can affect public opinion, and have thus begun to build a richer theoretical base for framing research (e.g., Baden & de Vreese, 2008; Chong & Druckman, 2007; Matthes, 2007; Nelson, Oxley, & Clawson, 1997; Slothuus, 2008).

A frame can affect an individual by stressing certain aspects of reality and pushing others into the background – it has a selective function. In this way, certain issue attributes, judgments and decisions are suggested (e.g., Berinsky & Kinder, 2006; D.A. Scheufele, 2000). Early studies conceived of the framing process as an accessibility effect (Iyengar, 1991), while subsequent research found the effect process to be more complex. A number of scholars propose belief importance change to be the most characteristic mediator of framing: Frames make suggestions to the individual by rendering already available and accessible considerations more important than others, thereby leading these considerations to be applied when forming an opinion (e.g., Nelson et al., 1997; Price, Tewksbury, & Powers, 1997; Tewksbury & Scheufele, 2009). Recent studies show, however, that a frame does not only render certain considerations more important, but that it can also make new considerations available; it can also change an individual's belief content (e.g., de Vreese, Boomgaarden, & Semetko, in press; Lecheler, de Vreese, & Slothuus, 2009; Shah, Kwak, Schmierbach, & Zubric, 2004). Recently, Slothuus (2008) has presented a “dual-process” mediation model of news framing, accounting for both belief importance and belief content change. However, the explanatory power of the two processes remains unclear (see Chong & Druckman, 2007). Accordingly, we do not know which of the two mediators prevails, and how mediation processes differ depending on the news frame or issue at stake.

Therefore, this study conducts a mediational analysis including both belief importance and belief content change. In our theoretical framework, we combine extant knowledge on mediated framing effects with recent empirical evidence on the role of belief importance and belief content change. By use of an experimental survey design, we test the mediation model and determine the explanatory power and relationship of the two mediators. We also test the contingency of framing effects on one of the most significant moderators of framing, political knowledge.

Mediators of Framing Effects

The study of mediators refers to the specification of the intermediary causal mechanisms by which an independent variable influences the dependent variable (Baron & Kenny, 1986; Muller, Judd, & Yzerbyt, 2005; Preacher & Hayes, 2004). A frame, for instance, causes change in the weight we assign to certain beliefs which, in turn, can affect how citizens understand politics. Following Baron and Kenny (1986, p. 1176), a prerequisite for a mediated effect is a general direct effect of the independent variable on the dependent variable. Secondly, the independent variable must have a significant effect on the proposed mediator. Lastly, the proposed mediator variable must have a significant effect on the dependent variable. By controlling for the proposed mediator, the effect of the independent variable on the dependent variable must decrease. Should the decrease of the direct effect not be complete, indication is given for the “operation of multiple mediation factors” (see also Preacher & Hayes, 2008).

A mediational analysis therefore requires the presence of a direct relation between the frame and the measured outcome variable. Studies have generally tested this link by presenting participants with either equivalency or emphasis frames (Druckman, 2001b). Equivalency framing refers to the presentation of logically identical, yet differently phrased decision scenarios (e.g., Kahneman & Tversky, 1984). In emphasis framing, researchers choose material that emphasizes several aspects of an issue. This is likely to render the used frames closer to “real-life” journalistic news coverage and emphasis frames are widely used in framing effects research (e.g., Entman, 1993; D. A. Scheufele, 2000; Schuck & de Vreese, 2006). In addition, studies normally work with either of two types of news frames: issue-specific and generic frames (Semetko & Valkenburg, 2000). Issue-specific frames pertain to a particular topic while generic news frames are applicable to a wide range of topics. This wide application of generic frames makes it easier to compare framing effects across conditions and generic frames are thus utilized in the present study.¹

Thus far, research has identified three basic processes likely to mediate framing effects: (1) accessibility change, (2) belief importance change and (3) belief content change (see Chong & Druckman, 2007; Nelson et al., 1997; Slothuus, 2008). Accessibility change as an intermediary mechanism is hypothesized to function by making considerations in the individual’s mind more salient and therefore more likely to be used when forming an opinion (e.g., Iyengar, 1991; B. Scheufele, 2004). Thus, essentially, accessibility change does not refer to the alteration of content within the individual’s mind, but merely to the accentuation of certain existing beliefs (e.g., Iyengar & Kinder, 1987). D.A. Scheufele (2000, p. 309) discards the notion of accessibility in framing theory, stating that “framing influences how audiences think about issues, not by making aspects of the issue more salient, but by invoking interpretative schemas that influence the interpretation of incoming information”. Along these lines, the presumed lack of an accessibility effect of frames is sometimes held to be one of the main distinguishing factors between framing effects and agenda-setting and priming (e.g., Miller, 2007; D. A. Scheufele,

2000). Accessibility change, moreover, proves to be difficult to tap by empirical investigation (see Baden & de Vreese, 2008), and studies aimed at establishing accessibility as a mediator of framing effects have delivered at best equivocal results (e.g., de Vreese, 2009). Consequently, accessibility change is not pursued in the current study.²

Belief Importance Change

Belief importance change is thought to be the most characteristic mediator of framing effects (e.g., Druckman, 2001a; Nelson & Oxley, 1999; Nelson et al., 1997; Tewksbury & Scheufele, 2009). It refers to framing as “altering the *weight* of particular considerations” in the individual’s mind (Nelson et al., 1997, p. 236, italics in original). Thus, frames do not render certain frame-related beliefs more salient, but increase the weight that is assigned to those beliefs. As an intermediary, important considerations, in turn, are more likely to be incorporated into subsequent judgments (e.g., Price & Tewksbury, 1997). Thus far, extant research has widely examined and supported models of belief importance change as a mediator of framing effects (e.g., Druckman, 2001a; Druckman & Nelson, 2003; Nelson et al., 1997). Based on such findings, we find belief importance change a theoretically as well as empirically plausible mediator of framing effects. It thus forms a decisive part of the mediated effect of news framing on opinion. We consequently examine belief importance change as the first mediator of framing effects. Our expectation is stated as:

H1a: News framing effects are mediated through belief importance change.

Belief Content Change

Recently, scholars have turned to a third possible mediator for framing effects: *belief content change* (e.g., Lecheler et al., 2009; Shah et al., 2004; Slothuus, 2008). A belief content change model refers to the addition of new beliefs to an individual’s set and alludes to one of the most established mechanisms in media effects research - the persuasive effect (e.g., Eagly & Chaiken, 1993; Petty & Cacioppo, 1986; Zaller, 1992). Yet, belief content change has been widely disregarded in framing effects. Nelson et al. (1997, p. 225, italics in original) note that “frames operate by activating information *already at the recipients’ disposal*, stored in long-term memory” – leaving a “true” framing effect to be determined by its subtle influence through rendering certain available (and accessible) considerations more important than others. While such theoretical limitations did contribute to the strengthening of framing as a media effects approach independent from persuasive effects, they reduce the chances of providing an exhaustive picture of the psychological mechanisms caused by exposure to a media frame. This might specifically be the case when examining the effects of framing of political issues. Studies that investigate political news framing often cover issues that seem unimportant and remote to citizens and the number of available and accessible beliefs might therefore be very limited.

Political news framing should thus not only function via belief importance change, but also provide new beliefs to the individual.

Slothuus (2008, p. 7) accounts for this conceptual slippage by arguing that framing “must be considered an independent variable and that this independent variable can have different effects, depending on its receivers” (see also D. A. Scheufele, 1999). Along this line, a frame can have belief importance change as well as other effects (see also Lecheler et al., 2009). This enables the distinction between what is traditionally called a *framing effect* on the one hand, and the *effect of a frame* on the other. Along these lines, a news frame can have a variety of effects, which are also worthwhile examining (see Tewksbury & Scheufele, 2009 for an overview).

Accordingly, Slothuus (2008) proposes a “dual-process” model of framing effects by combining both intermediary paths of belief importance and belief content change. Results of his experimental study show that frames affect opinion via the two proposed mechanisms, with belief content change being a significant mediator for individuals of more moderate levels of political knowledge. Along this line, belief content change may also result in more elaborate information processing and “greater” framing effects. Shah et al. (2004, p.114) find that exposure to unfamiliar information in the form of frames lead individuals to adjust their beliefs on a specific topic, and to consequently “generate more detailed cognitions” (see also Baden & de Vreese, 2008). Recently, Lecheler et al. (2009) found that a low-importance issue yielded in strong framing effects, and that these were predominately mediated by belief content changes.

Following these results, we predict that framing effects are also mediated by altering the content of beliefs about an issue. Because the level of magnitude of the dual process is as yet unknown, we see H1a and 1b as complementary hypotheses:

H1b: News framing effects are mediated through belief content change.

In summary, while evidence on accessibility as a mediator of framing effects remains equivocal (e.g., Miller, 2007), recent research has come to acknowledge two main mediational processes of framing effects: belief importance and belief content change. However, the model has only been tested in one previous study (Slotuus, 2008), and the explanatory power of the two mediators remains in need of further investigation. First, we do not know *which* of the two processes prevails, or whether the two act at the same time and can thus be conceived as complementary in enabling a framing effect. Second, research has yet to test the interplay between the two mediators in different contexts. Slothuus (2008) tested his dual-process model for a controversial national issue. The process might, however, be different when employing another issue that is not on top of the political agenda. This study further investigates the above questions. Because we have no clear expectations of the power relationship between belief importance and belief content change, we formulate the following open research question:

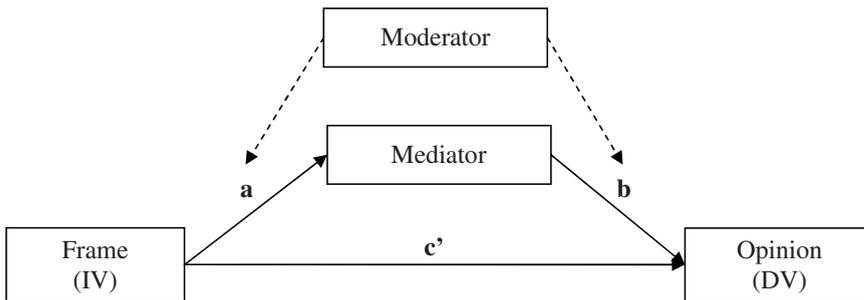
RQ: Which mediation process prevails in the dual-process model of news framing?

Moderated Mediation of Framing Effects

A model of mediated framing effects must also take into account that the effects of news frames are not equal across the board. Rather, the extent to which each mediator applies is likely to depend on a number of moderator variables, such as knowledge, values, and personal beliefs. In assessing these individual differences, mediation studies can draw on existing knowledge from studies of moderated framing effects (e.g., Druckman & Nelson, 2003; Shen & Edwards, 2005).

The moderation of a mediation process is usually referred to as *moderated mediation*. Moderated mediation occurs when “mediation relations are contingent on the level of a moderator” (Preacher et al., 2007, p. 193; see also Bucy & Tao, 2007; Frone, 1999; Muller et al., 2005; Preacher, Rucker & Hayes, 2007). This conditionality can emerge on the path between the independent variable and the mediator, as well as between the mediator and the dependent variable (see Figure 1.1). In this paper, we focus on two mediators: belief importance and belief content. Consequently, the question emerges under which circumstances each of these mediational processes is moderated.

Figure 1.1: (Moderated) Mediation of a Framing Effect



Note. c' is the direct effect of the independent variable (the frame) on the dependent variable (opinion), or the effect of the independent variable on the dependent variable when the mediator is controlled for. a is the mediated effect of the independent variable on the proposed mediator. b is the mediated effect of the proposed mediator on the dependent variable. The total effect of the independent variable on the dependent variable is the sum of the direct effect and the mediated effect (e.g., MacKinnon, Fairchild & Fritz, 2007; Preacher & Hayes, 2004). Both a and b may also depend on level of the moderator.

Research has come up with a number of individual-level moderator variables such as political knowledge (e.g., Nelson et al., 1997; Schuck & de Vreese, 2006), and values (e.g., Shen & Edwards, 2005). Moreover, several studies have investigated contextual moderators like, for instance, source characteristics (Druckman, 2001a), interpersonal communication (Druckman & Nelson, 2003), and competitive framing (e.g., Sniderman & Theriault, 2004) (see Chong & Druckman, 2007 for an overview see Lecheler et al., 2009).

Among these, political knowledge has emerged as a dominant moderator of susceptibility to framing effects (e.g., Cappella & Jamieson, 1997; Nelson et al., 1997; Price et al., 1997; Schuck & de Vreese, 2006). Yet, to date, evidence on political knowledge as a moderator variable is divided. One group of scholars finds less knowledgeable individuals to be more susceptible to framing effects, ascribing such effects to the inability of low knowledge individuals to counter-argue a framed message (e.g., Kinder & Sanders, 1990; Schuck & de Vreese, 2006). However, a second group suggests the opposite, arguing that only knowledgeable individuals possess over the adequate mental stockpile to understand and process a frame (Krosnick & Brannon, 1993; Nelson et al., 1997).

We expect political knowledge to play a decisive role in the mediational process of framing effects. Mediation via belief importance change requires the availability of frame-related beliefs (e.g., Nelson et al., 1997). Politically knowledgeable individuals are likely to be equipped with a larger set of relevant considerations and a higher level of comprehension for issue-related considerations. Thus, individuals with higher levels of political knowledge are likely to be more susceptible to framing effects via belief importance than individuals with lower levels of knowledge (Nelson et al., 1997, p. 227). Our second mediator, belief content change, operates by making new considerations available. Individuals with lower levels of political knowledge are expected to possess a smaller stock of considerations available to them. Along these lines, they are more likely to be unfamiliar with a political issue and thus more susceptible to belief content change (e.g., Zaller, 1992).

Slothuus (2008, p. 21) finds that individuals with high levels of political knowledge were framed “through importance change alone, while the moderately politically aware were framed through importance change as well as content change.”³ This indicates that political knowledge moderates the way individuals can process framed information. While these findings are plausible, they remain to be tested for additional frame scenarios and across issues. Consequently, we predict that political knowledge moderates the mediation processes of importance and content change in this study. Due to their more elaborate mental stockpile, we expect belief importance change to be the more dominant path for individuals with higher levels of political knowledge. On the other hand, belief content change is likely to apply to a greater extent for individuals with lower levels of political knowledge, as those individuals will often need to form opinion via the acquisition of new beliefs:

H2a: Belief importance as a mediator is more important among individuals with higher levels of political knowledge.

H2b: Belief content as a mediator is more important among individuals with lower levels of political knowledge.

Method

To investigate the underlying psychological processes of framing effects on opinion, we conducted a survey experiment among a representative sample of Dutch citizens. As research venue, we chose the issue of the 2007 enlargement of the European Union (EU). Specifically, we tested framing effects on opinion towards the economic development of the EU's two newest members, Bulgaria and Romania. So far, a number of studies of framing effects on attitudes towards EU integration have employed experimental designs (e.g., Maier & Rittberger, 2008; Schuck & de Vreese, 2006), while others have relied on survey data (e.g., de Vreese & Boomgaarden, 2006). Given the paucity of relevant research in mediated framing effects, we wanted to be able to isolate the steps in the causal process, for which an experimental approach was superior.

Design

In a single-factor, post-test only, between-subjects experimental design, we randomly assigned participants to one out of three conditions. In line with the manipulation used in most studies in the field, the first two conditions each contained an alternative version of a generic frame; the "economic consequences" frame (de Vreese, 2009). Specifically, one frame pointed out the *opportunities* Bulgaria and Romania presented to the EU market, and was thus positive in evaluative direction. The second frame emphasized the *risks* the two new EU countries pose for the EU market, and was thus negative in valence (see also Schuck & de Vreese, 2006). The use of alternative versions of one generic frame ensures commensurability of the effects across conditions. However, external validity in our study is high, as the economic consequences news frame can be found in real political news coverage on EU integration and enlargement (e.g., de Vreese, 2009; Neuman, Just, & Crigler, 1992; Schuck & de Vreese, 2006; Semetko & Valkenburg, 2000).

Sample

CentERdata at the University of Tilburg (The Netherlands) recruited a total of 1,537 individuals (45% female, aged between 16 and 92 [$M = 51.12$, $SD = 15.68$]) from their representative web-panel consisting of approximately 2,000 households across the Netherlands. Recruiting into the panel was done using online, phone and face-to-face contacts. Members of the panel are contacted on a regular basis via an online survey tool and are offered incentives for completing online questionnaires on their home computer. The response rate was 54 percent (AAPOR RR1).

Procedure

The experimental procedure was as follows. First, all participants completed a pre-test questionnaire, including socio-demographic variables and political knowledge. Next, participants

in the two treatment groups were exposed to one constructed news article containing either the opportunity or risk frame manipulation. Then, participants received a post-test questionnaire, recording data on belief importance and belief content, as well as opinion. Participants in the control group moved directly from pre- to post-test questionnaire, without treatment. The design also included a manipulation check (see below). A between condition randomization check on age, gender and occupation performed at the outset of the analysis revealed successful randomization with no between-group differences. The treatment and control groups did not differ with regard to political knowledge, our pre-intervention moderator variable, either ($F(2,1537) = .14, p = .98$).

Stimulus Material

The stimulus material consisted of one news article per treatment condition, containing the economic consequences frame in an opportunity or a risk version. We manipulated an article about EU investment in the Bulgarian and Romanian market after the countries' EU accession in 2007. The focus of our study on subtle psychological processes of framing required high amounts of experimental control, which meant using constructed rather than actually published news material. While the economic consequences frame can be found frequently in current political news and EU news in particular (e.g., de Vreese, 2009; de Vreese, Peter & Semetko, 2001), the use of real news coverage would have minimized the commensurability across conditions. By adjusting the article in journalistic style and lay-out, effort was made to mimic the structure and language of day-to-day Dutch news coverage. Following previous experimental studies, most information within the news article was kept identical between the two frame versions (e.g., de Vreese, 2004; Price et al., 1997), and only some parts in the news story were manipulated to point out the opportunities or risks when thinking about the economic consequences of the issue (see underlined text, Appendix B).

Manipulation Check

After being exposed to the stimulus material, participants were asked to indicate on a 7-point scale (1 = strongly disagree to 7 = strongly agree) to what extent the article dealt with advantages or disadvantages of EU enlargement. The manipulation check showed successful manipulation. Participants in the opportunity condition ($M = 5.94, SD = 1.63$) perceived their article to be more positive than participants in the risk condition ($M = 2.35, SD = 1.93$) ($t(1252) = 2.75, p < .001$). Differences between groups in the post-test can therefore be attributed to the experimental manipulation.

Measures

The dependent variable, *opinion* was measured on a 7-point scale with higher scores indicating increased support for the perceived economic benefits of Bulgaria and Romania's EU membership, ($M = 3.73, SD = 1.33$). To assess *belief importance*, participants were asked to rate

four different considerations directly related to the economic consequences frame. Specifically, participants rated these considerations according to how important they found them when forming their opinion about an economic collaboration with Bulgaria and Romania (1 = not at all important to 7 = very important) (e.g., Druckman & Nelson, 2003; Nelson et al., 1997).⁴ Following previous studies (e.g., Druckman & Nelson, 2003; Slothuus, 2008), *belief content* was measured by asking individuals to agree or disagree with a number of statements about Bulgarian and Romanian markets and economic situation within the EU. The items were measured on a 7-point scale (1 = strongly disagree to 7 = strongly agree) and summarized in an index ($M = 3.98$, $SD = 1.13$). Cronbach's alpha for belief content was .74. Higher index scores indicate a more positive expected effect from an economic collaboration with Bulgaria and Romania (for item wordings, see Appendix C).

Political knowledge was tested as a moderator of the mediational process. We measured political knowledge by using factual knowledge, which has been shown to be superior to the measurement of perceived knowledge on an issue (Delli Carpini & Keeter, 1993). Political knowledge was tapped with five factual multiple choice questions, which combined items asking for EU-related and national political issues (Hobolt, 2007; Karp, Banducci, & Bowleder, 2003, p. 278; see Appendix C).⁵ The variable ($M = .61$; $SD = .21$) is an additive index from 0 to 1. Cronbach's alpha for this scale was .73.

Results

As a prerequisite to the mediational analysis, we first examined the “direct” framing effects in our study. We found that participants in the opportunity economic consequences condition supported the idea that Bulgaria and Romania contribute to the economic growth of the EU more ($M = 4.27$, $SD = 1.26$) than those in the risk condition ($M = 3.29$, $SD = 1.22$). Participants in the control condition were, on average, between these two values ($M = 3.49$, $SD = 1.28$) ($F(2,1509) = 99.24$, $p < .001$). Thus, the frame had a significant effect on our dependent variable of opinion. In the following, we first present our results from the mediational process via belief importance. Next, belief content was added to the model and the explanatory power of both mediators was determined. Finally, we focused on political knowledge as a moderator of each cognitive process.

Belief Importance

Based on the above, we examined the psychological processes that are likely to underlie framing effects. We predicted that belief importance functions as a mediator for the effect of an opportunity frame on policy support. To start with, we analyzed the importance levels participants assigned to our belief importance considerations across conditions. Table 1.1 shows participants' importance ratings were affected.

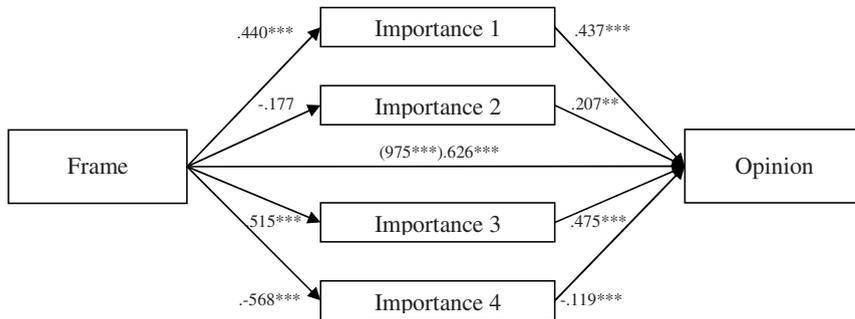
Table 1.1: Mean differences for Belief Importance Considerations

	Opportunity (n = 623)	Risks (n = 610)	Control (n = 279)
Mean (Standard Deviation) for:			
Agreement contributes towards cooperation companies & new EU members (<i>O/Importance 1</i>)	4.82 ^a (1.33)	4.38 ^b (1.37)	4.27 ^b (1.45)
Agreement is only a small step compared to much bigger necessary changes (<i>R/Importance 2</i>)	4.68 (1.27)	4.80 ^a (1.37)	4.50 ^b (1.47)
Bulgaria and Romania can be new investment markets (<i>O/Importance 3</i>)	4.91 ^a (1.34)	4.40 ^b (1.37)	4.28 ^b (1.41)
Bulgarian and Romanian markets are still characterized by difficulties (<i>R/Importance 4</i>)	4.78 ^a (1.30)	5.34 ^b (1.37)	4.92 ^a (1.42)

Note. Different superscripts indicate a significant difference at $p < .05$; all tests are two-tailed; Higher values indicate more attached importance to this argument; O = opportunity, R=risks.

Figure 1.2 confirms the mediation, showing the frame's influence on belief importance, which in turn affected opinion.⁶ Given the complexity of the opinion formation process, framing research has focused on mediating variables that significantly decrease the direct effect, rather than expecting a full mediation. Sobel (1982) provides a significance test for mediation effects, which is employed in the current study.⁷ The indirect effect of the news frame on opinion via all belief importance considerations was significantly different from zero (*Importance 1*: 5.47, ($p < .001$); *Importance 2*: -2.25, ($p < .05$); *Importance 3*: 6.38, ($p < .001$); *Importance 4*: 3.90, ($p < .001$)). Hypothesis 1a, which specified that news framing is mediated by belief importance, is supported.⁸

Figure 1.2: Mediational Analysis – Belief Importance

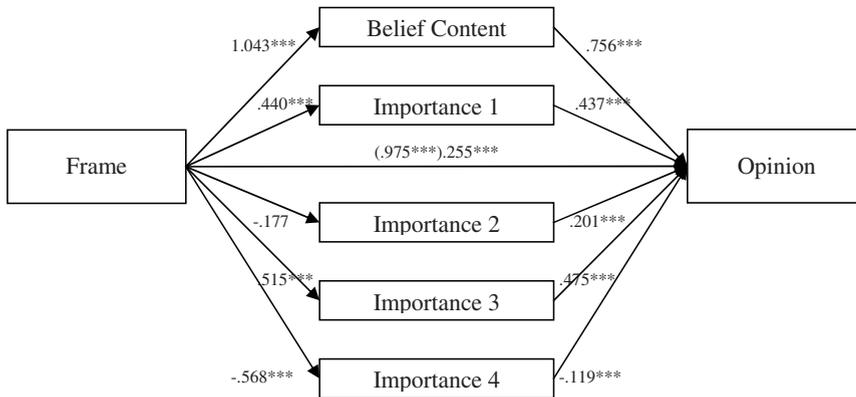


Note. Coefficients are unstandardized coefficients; all two-tailed significance tests; *** $p < .001$, ** $p < .01$; * $p < .05$. Frame is coded so that 0 = Risk and Control and 1 = Opportunity. The importance items are coded as 1=present and 0=non present. Importance items are Importance 1 = "Agreement contributes towards cooperation companies and new EU members"; Importance 2 = "Agreement is only a small step compared to much bigger necessary changes", Importance3 = "Bulgaria and Romania can be new investment markets"; Importance 4 = "Bulgarian and Romanian markets are still characterized by difficulties". Opinion is coded so that a higher value indicates increased support for the agreement; unmediated main effect in parentheses; Sobel Test statistics for Importance Change: Importance1: 5.47 ($p < .001$), Importance2: -2.25, ($p < .05$), Importance3: 6.38 ($p < .001$), Importance4: 3.90 ($p < .001$).

Belief Content

In a second step, we tested to what extent the effect of the frame was mediated by importance and belief content together. Initially, results showed significant differences in belief content, i.e., the degree to which participants saw the economic consequences of Bulgaria and Romania within the EU market in terms of opportunities or risks ($F(2,1507) = 157.49$ $p < .001$). Participants in the opportunity condition were more positive about the economic consequences ($M = 4.51$, $SD = 1.08$) than participants in the risk condition ($M = 3.47$, $SD = .98$). Participants in the control condition were between the two treatment groups ($M = 3.90$, $SD = 1.01$). To test H1b, we conducted a second path analysis including the four importance considerations, plus the belief content index. Figure 1.3 shows a large impact of the frame on belief content, which in turn affected opinion. Following the results of a Sobel test, the indirect effect of the news frame on opinion via *belief content* was significantly different from zero (*Sobel Test statistics* = 15.07, $p < .001$). Thus, supporting Hypothesis 1b, the model shows that the framing process was also mediated to a great extent by belief content.⁹

Figure 1.3: Mediation Analysis - Multiple Mediation



Note. Coefficients are unstandardized coefficients; all two-tailed significance tests; *** $p < .001$, ** $p < .01$; * $p < .05$. Frame is coded so that 0 = Risk and Control and 1 = Opportunity. The importance items are coded as 1 = present and 0 = non present. Importance items are Importance 1 = “Agreement contributes towards cooperation companies and new EU members”; Importance 2 = “Agreement is only a small step compared to much bigger necessary changes”; Importance3 = “Bulgaria and Romania can be new investment markets”; Importance 4 = “Bulgarian and Romanian markets are still characterized by difficulties”. The belief content scale is coded so that higher values indicate a more positive effect. Opinion is coded so that a higher value indicates increased support for the agreement; unmediated main effect in parentheses; Sobel Test statistics for Belief Change: 15.07 ($p < .001$).

Explanatory Power

We posed an open research question, asking whether belief content or belief importance change would prevail in our mediational model. In Table 1.2, we see that the adjusted R square significantly increases from $R^2 = .13$ in a model with only the direct effects of a opportunity news frame as a predictor for opinion ($F(1,1231) = 188.51, p < .001$) to $R^2 = .41$ after the belief importance variables are included ($F(5,1226) = 184.24, p < .001$) (R^2 change: $F(4, 1226) = 150.37, p < .001$).

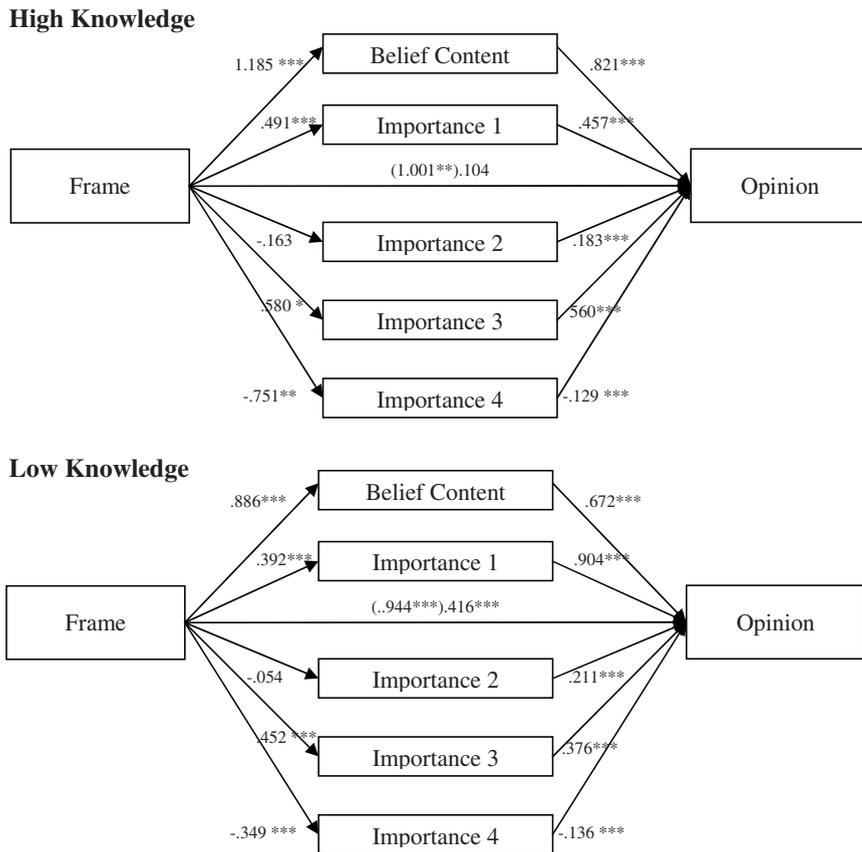
Table 1.2: Regression Models Predicting Opinion

	Model 1	Model 2	Model 3
	Direct Effect	Belief Importance	Multiple Mediation
Frame (1 = opp.)	980*** (.071)	.626*** (.061)	.255***(.059)
Belief Importance 1	--	.228***(.029)	.098***(.027)
Belief Importance 2	--	.051 (.026)	.078**(.023)
Belief Importance 3	--	.316***(.029)	.151***(.028)
Belief Importance 4	--	-.171***(.023)	-.062*(.022)
Belief Content	--	--	.554***(.033)
Adjusted R ²	.13	.41	.52
Incremental R ² (%)	--	28.5***	10.8***
N	1229	1225	1224

Note: Ordinary least squares regression. Data are unstandardized regression coefficients and standard errors (in parentheses), * $p < .05$; ** $p < .01$; *** $p < .001$. Importance items are Belief Importance 1 = “Agreement contributes towards cooperation companies and new EU members”; Belief Importance 2 = “Agreement is only a small step compared to much bigger necessary changes”, Belief Importance3 = “Bulgaria and Romania can be new investment markets”; Belief Importance 4 = “Bulgarian and Romanian markets are still characterized by difficulties”. The belief content scale is coded so that higher values indicate a more positive effect. Opinion is coded so that a higher value indicates increased support for the agreement.

In Model 3, we see another significant increase of R^2 to .52, when belief content is added ($F(6, 1225) = 227.63, p < .001$) (R^2 change: $F(1, 1225) = 279,10, p < .001$). Our results suggest that both belief importance *and* belief content explain the effect of a news frame on opinion. However, they do so to a varying degree, with belief content being the more prominent mediator variable in our analysis.

Figure 1.4 Mediation Analysis – Moderated Mediation



Note. Coefficients are unstandardized coefficients; all two-tailed significance tests; *** $p < .001$, ** $p < .01$; * $p < .05$. Frame is coded so that 0 = Risk and Control and 1 = Opportunity. The importance items are coded as 1=present and 0=non present. Importance items are Importance 1 = “Agreement contributes towards cooperation companies and new EU members”; Importance 2 = “Agreement is only a small step compared to much bigger necessary changes”; Importance3 = “Bulgaria and Romania can be new investment markets”; Importance 4 = “Bulgarian and Romanian markets are still characterized by difficulties”. The belief content scale is coded so that higher values indicate a more positive effect. Opinion is coded so that a higher value indicates increased support for the agreement; unmediated main effect in parentheses; High Knowledge Sobel Test statistics for Belief Content: 7.52 ($p < .001$); for Importance Change: Importance 1: 2.96 ($p < .001$), Importance 2: -1.67, ($p < .01$), Importance 3: 3.17 ($p < .01$); Importance4: 2.76 ($p < .01$). Low Knowledge Sobel Test statistics for Belief Change: 9.37 ($p < .001$); for Importance Change: Importance 1: 3.05 ($p < .01$), Importance 2: -.01, ($p > .05$), Importance 3: 4.21 ($p < .001$); Importance 4: 2.36 ($p < .05$).

Moderated Mediation

Thus far, we found the framing effect to be mediated by both importance and belief content. However, we also predicted the two processes to act differently, depending on level of political knowledge of the individual.¹⁰ In an additional path analysis, these two groups were compared. A comparison indicated that for both the high and low political knowledge group, framing effects were mediated via *both* importance and belief content. Figure 1.4 indicates an overall stronger effect for higher knowledge individuals via both belief content and belief importance change. As a result, H2a can be partially supported. Individuals of high political knowledge are indeed affected to a greater extent via belief importance change. However, we do not find support for H2b; individuals with lower levels of political knowledge are not framed to a greater extent with belief content change than high knowledge individuals. In sum, we find moderation, but the hypothesized mechanism resting on the range of available beliefs does not explain the pattern of moderation.

Discussion

News frames have a significant impact on the formation of public opinion. However, to fully understand *how* framing affects opinion, scholars need to gather empirical evidence on the psychological processes that underlie the effect (e.g., Chong & Druckman, 2007; Igartua & Cheng, 2009; Nelson et al., 1997; Slothuus, 2008). This article reports on an experimental study investigating the presence and explanatory power of two mediational processes of framing: belief importance change and belief content change. Based on a significant direct effect of our news frames on opinion, we analyzed mediation in three consecutive steps: First, we successfully showed the mediational process of framing via belief importance change. Next, belief content was added to the model and the explanatory power of both types of mediators was determined. Our analysis lets us carefully suggest that belief content prevailed as a mediation process in our study. An analysis of the moderating influence differing levels of political knowledge have on these mediation processes tentatively showed that both mediational processes are influenced by level of political knowledge. Our findings carefully suggest that citizens of high knowledge were more susceptible to framing via *both* belief importance and belief content change.

We believe that the strength of belief content as a mediator of framing effects versus belief importance change is one of the most interesting aspects of our findings. Initially, we showed that belief importance change mattered to a great deal – and are therefore in line with a number of other studies of framing effects (e.g., Druckman & Nelson, 2003; Nelson et al., 1997). However, belief content change was surprisingly influential in our mediation analysis – a mediator that has only very recently found attention amongst scholars of framing effects (e.g., Lecheler et al., 2009; Slothuus, 2008). Belief content change refers to the addition of *new* beliefs to an individual's mental stockpile, and alludes to one of the most established mechanisms in media effects research, the persuasive effects (e.g., Petty & Cacioppo, 1986). Thus, utilizing

belief content change in a framing effects model requires a re-definition of what exactly constitutes “framing”: D.A. Scheufele (1999) suggests that frames ought to be considered as an independent variable in the research process. We did so and concur with Slothuus (2008, p. 22), who concludes that a framing effect must be “any effect of a frame in communication on a receiver’s opinion”. Thus, while a *framing effect* may traditionally still be conceived as changing belief importance within an individual’s mind, we support a more inclusive conceptualization, which enables a frame to cause an array of *different effects*. This may lead to the future conclusion that both persuasion and framing work by similar intermediary processes (see Tewksbury & Scheufele, 2009).

This taken into account, our analysis shows to what extent mediated effects depend on other, moderating, variables. Our results illustrate that high politically knowledgeable citizens are framed to a greater extent via *both* belief importance and belief content change. This is partially in line with existing research on moderators of framing effects, namely with those studies that find that a solid stock of knowledge on an issue facilitates the processing of a frame, and results thus in large effects (e.g., Druckman & Nelson, 2003; Nelson et al., 1997; Shen & Edwards, 2005; Slothuus, 2008). However, we consequently expected our low knowledge individuals to be framed to a greater extent via belief content change, i.e. via the acquisition of new information through a frame. The results indicate that the conditionality of mediated framing effects may vary across issues, probably depending on how important an issue is to the individual or on the media agenda (Lecheler et al., 2009). Slothuus (2008) utilizes welfare policy, an issue well-discussed on the national public agenda. Our study, however, framed EU enlargement in light of the accession of Bulgaria and Romania in 2007 - an important, yet rather invisible (EU) issue (e.g., Maier & Rittberger, 2008). As our results show, even knowledgeable citizens seemed not to have possessed a satisfactory amount of available considerations connected to the issue, and were thus framed via belief content change also. This suggests that the extent to which each psychological mechanisms acts depends on the information and opinion environment an individual finds her or himself in. When a political issue is more important to elites, individuals are more likely to be exposed to issue-relevant messages, including issue frames (see e.g., Lecheler et al., 2009 for an extended discussion; Zaller, 1992).

Thus far, we know that frames can render certain frame-related beliefs more important than others. Moreover, each frame may also add new information to our memory set. This, naturally, does not represent an exhaustive model of the psychological mechanisms that underlie framing effects – and extant studies do contain reference towards a remaining “direct effect” in their intermediary models. However, interestingly, this “effect” often remains underdiscussed. Thus, we do not know what such remnants really represent. Are they merely residues, empirical artifacts of those mechanisms we did not account for? Or may there be an unmediated, *direct effect* of frames on opinion?

A first step to answer these questions must be the future identification of other mediators. Chong and Druckman (2007, p. 116) collected a number of under-discussed mediators, such as

emotions, narratives and perceptions of public opinion. Among those, emotions emerge as a most interesting, and long neglected, category. Gross and D'Ambrosio (2004, p. 21) have provided a number of clues on the effect of framing on emotional response (see also Druckman & McDermott, 2008; Nabi, 2003). The authors state that "emotional reactions are conditioned by both predispositions and the information available in a given frame". Recently, Schuck and de Vreese (2008) took up this idea and posited risk perceptions to mediate a framing effect of political news on voter mobilization – conditioned by differing levels of political efficacy.

A second step, and a liaison with our argumentation on the nature of framing effects, must be an extended side glance at other media effects theories such as agenda-setting or persuasion. Miller (2007) juxtaposes cognitive and affective mediators of the agenda-setting effect. Contrary to previous research, she finds accessibility not to be a mediator of agenda-setting (but see D. A. Scheufele, 2000). Negative emotions, however, emerge as one of the main determinants of an agenda-setting effect, by means of heightening perceptions of the importance of an issue (e.g., Martin, 2008; Schuck & de Vreese, 2008). In persuasion research, Rosselli, Skelly and Mackie (1995) found mediational processes to be determined by the rational or emotional quality of the message, with rational appeals resulting in cognitive and emotional appeals in affective processing. Concluding, we encourage future mediational analyses in framing effects research. Such analyses, however, must be conducted without the theoretical anguish that has so far limited the establishment of a comprehensive basis for framing theory: Previous studies have focused too much on distinguishing framing from other media effect theories, and have paid too little attention to the multitude of effects a frame may have.

There are a few caveats to this study. First, we base our findings on an experimental design. While experimental research provides a fantastic tool to establish causal links, we do not know how real-life persistent framing effects documented in this way are. Second, we acknowledge that our measurement of belief importance change and belief content change was not exhaustive. Our operationalization has been used in previous research (e.g., Nelson et al., 1997; Nelson & Oxley, 1999; Slothuus, 2008). However, the pre-definition of importance considerations and belief content considerations in the experimental questionnaire may have disregarded important considerations that were not included in the list (Baden & De Vreese, 2008; Lecheler et al., 2009; Nelson & Oxley, 1999). However, this does not diminish the validity of those findings presented, it merely limits their reach; and if anything means that importance and content mediation are likely to explain even more variance than we could demonstrate.

Scholarly interest in the underlying psychological processes of framing effects is growing steadily. Taking into account one well-established and one novice mediator of framing effects, this study contributes to existing literature by shifting our focus further away from simply determining whether a frame "has an effect" or not (e.g., Shah et al., 2004). Frames function, at the least, via rendering certain considerations more important than others *and* the acquisition of new consideration. However, the extent to which the two mechanisms apply might not only

depend on the individual, but also on the informational context a citizen finds him or herself in. On the road towards a more fine-grained understanding of the framing process, we must avoid a parochial understanding of what a framing effect represents behind, and consider the possible wide array of effects a framed message may have.

Notes

¹ News frames are also often characterized by a specific valence. This may affect the sort of effect such frames have. According to de Vreese and Boomgaarden (2003, p. 376), valenced emphasis frames have the capacity to affect opinion on and support for an issue, while neutral emphasis frames may only affect issue interpretation (see also Bizer & Petty, 2005).

² Recently, Chong and Druckman (2007, p. 111) have suggested that frames can also work via “making certain available beliefs accessible”. The authors, however, do not provide empirical evidence of such functioning. Baden and de Vreese (2008, p. 21) propose framing to be a two-step process, in which initially a form of ‘smart accessibility’ applies: Frames shift an individual’s informational base by making specific beliefs more salient. However, this salience shift is not random, but follows the “schematic relevance” of each belief (see also Price & Tewksbury, 1997).

³ Slothuus (2008, p. 15) utilizes six factual political knowledge questions to test for “political awareness”.

⁴ Belief Importance 1: $M = 4.54$, $SD = 1.39$; Belief Importance 2: $M = 4.69$, $SD = 1.35$; Belief Importance 3: $M = 4.59$, $SD = 1.38$; Belief Importance 4: $M = 5.03$, $SD = 1.37$.

⁵ Following Karp et al. (2003), we considered a combination of EU-related and national political knowledge items a more steady measurement of level of political knowledge in our study, simply because opinion formation on EU-matters is not independent of levels of national political knowledge (and vice versa). However, if we split the scale along these dimensions, our results do not change substantially.

⁶ For certainty, we also included a number of control variables, such as socio-demographic variables, pre-existing attitudes towards the issue, and media use in our models. While the regression coefficients shifted slightly, their overall significance pattern remained stable.

⁷ For the Sobel test ($a*b/\text{SQRT}(b^2*sa^2 + a^2*sb^2)$); a = raw (unstandardized) regression coefficient for the relation between independent variable and mediator; sa = standard error of a ; b = raw coefficient for the association between the mediator and the dependent variable (controlling for the independent variable), and sb = standard error of b . (see e.g., Sobel, 1982; MacKinnon et al., 1995).

⁸ Preacher and Hayes (2008) propose multiple mediator models to be tested via the use of bootstrapping techniques. The authors suggest that both the causal-steps approach by Baron and Kenny (1986) as well as the Sobel test (1982) are based on the assumption of normality of the sampling distribution. However, this assumption is often not given, especially when dealing with smaller sample sizes (Preacher & Hayes, 2004, p. 720). Following such recommendation, we also tested our model using (BC) bootstrapping. Our estimates are based on 5,000 bootstrap samples. The results of this additional test confirm the findings of our path-analysis: Results show that the *total effect* of a frame on opinion is significant ($b = .97$, $SE = .07$, $p < .001$). Bootstrapping for the *total indirect effect* through four belief importance mediators ($b = .35$, $SE = .04$) with a 95% BCa bootstrap CI of .2666 to .4487. As the confidence interval does not

include zero, we can consider the effect significantly different from zero. The *specific indirect effect* was $b = .10$ ($SE = .02$) (95% BCa CI of .0606 to .1491) (through *Importance 1*), $b = -.005$ ($SE = .005$) (95% BCa CI of -.0240 to .0007) (through *Importance 2*), $b = .16$ ($SE = .02$) (95% BCa CI of .1135 to .2268) (through *Importance 3*) and $b = .09$ ($SE = .02$) (95% BCa CI of .0600 to .1433) (through *Importance 4*). Thus, as proposed in our path-analytical approach, we find that three out of four belief importance variables are mediators of framing effects, as their confidence intervals did not include zero. Controlling for the mediators, the *direct effect* decreases, but remains significant ($b = .62$, $SE = .06$, $p < .001$).

⁹ We also tested our multiple mediation model via the use of bootstrapping techniques. Estimates were again based on 5,000 bootstrapping samples. For the dual-process model, we find that the total indirect effect through four belief importance mediators and the belief content mediator ($b = .72$, $SE = .05$) with a 95% BCa bootstrap CI of .6087 to .8310) does not include zero, thus the effect significantly differs from zero. The specific indirect effect was $b = .04$ ($SE = .01$) (95% BCa CI of .0162 to .0800) (through Importance 1), $b = -.009$ ($SE = .006$) (95% BCa CI of -.0275 to .0004) (through Importance 2), $b = .07$ ($SE = .01$) (95% BCa CI of .0433 to .1208) (through Importance 3), $b = .0357$ ($SE = .01$) (95% BCa CI of .0080 to .0692) (through Importance 4) and $b = .57$ ($SE = .05$) (95% BCa CI of .4747 to .6847) (through Belief Content). Thus, we find that three out of four belief importance variables and belief content are mediators of framing effects, as their confidence intervals did not include zero. This reinforces our findings from the path-analysis. Controlling for all mediators, the *direct effect* decreases, but remains significant ($b = .25$, $SE = .05$, $p < .001$).

¹⁰ We used a median split to create groups of high and low political knowledge (e.g., Druckman and Nelson, 2003, p.740).

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Chapter 2

ISSUE IMPORTANCE AS A MODERATOR OF FRAMING EFFECTS¹

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Abstract

A growing amount of research is devoted to the question which individual and contextual variables enhance, limit or obliterate news framing effects. However, the fundamental question whether framing effects vary depending on the issue at stake has not been addressed. Based on two experimental studies (n = 1,821), this article investigates the extent to which framing effects differ in magnitude as well as process, depending on how important an issue is. The studies show that a high-importance issue yielded no effects and a low-importance issue resulted in large effects. This moderating function of issue importance operates both at the contextual and at the individual level. The implications for future framing effects research are discussed.

Introduction

Framing theory helps to understand how citizens make sense of politics. Frames have been shown to affect public opinion on a variety of topics (e.g., Berinsky & Kinder, 2006; Iyengar, 1991; Nelson, Oxley, & Clawson, 1997; Schuck & de Vreese, 2006). Recently, scholars have started to examine which individual and contextual variables can enhance, limit, or even obliterate framing effects (e.g., Druckman, 2001). However, only very few studies have considered how framing effects may vary depending on the particular issue at stake.

In a series of framing studies, Iyengar (1991) compares different issues and their framing effects. However, he does not offer conclusive evidence on the conditions under which issue characteristics matter. Haider-Markel and Joslyn (2001) examine a high-salience frame on the assumption that attitudes towards this frame are strong as individuals attach high levels of importance to it. Indeed their example, amongst others, makes it plausible that framing effects may depend on the ‘importance’ of their issues. After all, the more important an issue is, the stronger the preexisting ideas about the issue might be. This indicates that citizens are affected differently by information when they care about an issue. Thus, this importance, while little studied in framing literature, is one of the key dimensions of public opinion and attitude formation in the attitude strength literature and a vital ingredient of strong and resistant attitudes (e.g., Boninger, Krosnick, Berent, & Fabrigar, 1995; Krosnick, 1989). Research on persuasion (e.g., Jacks & Devine, 2000; Zuwerink & Devine, 1996) and agenda-setting (e.g., Althaus & Tewksbury, 2002; Kioussis, 2005) has examined and acknowledged importance as a moderator of opinion change. Accordingly, it is the purpose of this study to examine issue importance as a moderator of framing effects.

Framing Effects and Moderators

Frames can be defined as patterns of interpretation which are used to classify information sensibly and process it efficiently. Framing stresses certain aspects of reality and pushes others into the background – it has a selective function. In this way, certain attributes, judgments and decisions are suggested (Entman, 1993; Scheufele, 2000). Framing is a process, consisting of frame building (how frames emerge) and frame setting (the interplay between media frames and audience predispositions) (de Vreese, 2002; Scheufele, 2000). Previous studies have identified two kinds of news frames: issue-specific and generic (de Vreese, 2002; Semetko & Valkenburg, 2000). Issue-specific frames pertain to a specific topic, while generic news frames are applicable to a wide range of topics. This wide application of generic frames makes it easier to compare framing effects across issues and generic frames are thus utilized in the present study.

Research is accumulating on the psychological processes behind framing effects (e.g., Chong & Druckman, 2007b; Iyengar, 1991; Nelson et al., 1997; Price, Tewksbury, & Powers, 1997; Zaller, 1992). A first generation of studies conceived the framing process as an

accessibility effect (Iyengar, 1991), while subsequent studies find the psychological process to be more complex (e.g., Nelson et al., 1997; Price et al., 1997; Slothuus, 2008). Chong and Druckman (2007b) suggest three main steps. First, a consideration must be available to the individual—that is, stored in memory for use. Second, this consideration must be accessible, its knowledge must also be ready for use. Third, depending on context and motivation, a consideration may be consciously weighed against other different considerations as a person decides about the applicability of their (accessible) interpretations (see also e.g., Eagly & Chaiken, 1993; Nelson et al., 1997; Zaller, 1992).

What limits or enhances framing effects? The literature presents a number of *individual-level* moderator variables such as knowledge (e.g., Nelson et al., 1997) or values (e.g., Shen & Edwards, 2005) as well as *contextual* moderators, attempting to bring the study of framing effect closer to “real life”, such as source characteristics (e.g., Druckman, 2001; Slothuus & de Vreese, 2008), interpersonal communication (e.g., Druckman & Nelson, 2003) or competitive framing (e.g., Chong & Druckman, 2007a; 2007b; Sniderman & Theriault, 2004). On an individual level, a number of studies deal with the question of how political knowledge influences the magnitude as well as the actual processing of a framing message. However, the evidence is divided, and one group of scholars finds less knowledgeable individuals to be more susceptible to framing effects (e.g., Kinder & Sanders, 1990; Schuck & de Vreese, 2006), whereas a second group finds the opposite (Krosnick & Brannon, 1993; Nelson et al., 1997). Druckman and Nelson (2003, p. 732) ascribe the opposing results to a general failure of measuring political knowledge. Accordingly, it may not be political knowledge per se that moderates framing effects, but the availability of relevant knowledge and the existence of prior opinions on that issue. The authors measure prior opinions by using the construct of “need to evaluate”, with high need to evaluate individuals being less susceptible to framing effects.

Research aims, furthermore, at investigating framing effects in situations more akin to “daily life”. This implies providing a frame within its natural context by offering different sources, other competing frames, and social contacts (e.g., Hartman & Weber, 2006; Price, Nir, & Cappella, 2005). Druckman (2001), for example, investigates the role of source characteristics on the framing process. Taking into account that hardly any political message comes without a specific messenger, he finds that framing effects are limited by the credibility of their source.

Beyond that, framing effects may also depend on the actual issue that is being framed. For example, Iyengar (1991) differentiates between episodic and thematic framing and finds that framing effects vary according to the particular issue at stake. However, he does not offer conclusive evidence on the conditions under which issue characteristics matter. Subsequently, only a limited number of studies have devoted attention to the influence of issue characteristics on framing effects. Haider-Markel and Joslyn (2001) focus on a high salience frame, assuming that attitudes towards this frame are stronger as individuals attach high levels of importance to it. Still, the impact of this importance on the framing process has so far not been systematically examined. This is surprising, given the fact that issue importance could be a decisive variable in

what makes some frames “stronger” than others (Chong & Druckman, 2007a) and that other related research on persuasion (e.g., Jacks & Devine, 2000) has introduced issue importance as a moderator of media effects. For these reasons, this study examines issue importance as a moderator of framing effects.

Issue Importance as a Moderator of Framing Effects

When considering (political) issues, some are more important than others. This is true on a national or international, but also on an individual level. Some issues receive a great amount of attention from media, political parties, interest groups, and other actors – others are neglected (e.g., Baumgartner & Jones, 1991). At the same time, we personally care about some issues – and deem others less relevant. In framing effects research, we argue, individual issue importance can be a crucial variable in how strongly a frame can affect attitudes and opinion.

Importance is a key concept in attitude strength and change literature in social psychology (e.g., Boninger et al., 1995; Eagly & Chaiken, 1993; Krosnick, 1989; Visser, Krosnick, & Simmons, 2003). It depends on an individual’s subjective belief about an attitude and attitude object (Krosnick & Petty, 1995). Focusing on the attitude itself, importance is defined as “an individual’s subjective sense of the concern, caring, and significance he or she attaches to an attitude” (Boninger et al., 1995, p. 160). Consequently, importance is also the concern, caring, and significance an individual attaches to the attitude object, the issue of a news frame. Importance is thus—besides other factors such as extremity or knowledge—an indispensable ingredient of strong and resistant attitudes towards a (political) issue (e.g., Krosnick, 1988; Pelham, 1991).

There are a number of factors that can explain *why* such importance should moderate susceptibility to framing effects. First, Krosnick (1989) demonstrates that personally important attitudes are more accessible than less important attitudes; they are brought to mind more quickly and easily (see also Bizer & Krosnick, 2001). Jacks and Devine (2000, p. 21) examine individual differences in importance as a moderator of persuasion effects and find that high-importance individuals are more resistant to opinion change. The authors explain their findings by arguing that “attitudes of high-importance individuals are highly accessible, [so] these individuals should be able to bring quickly and easily to mind thoughts and feelings that help them defend their attitude.” Thus, when confronted with a frame covering an issue of high importance, individuals can more easily resort to stored information relating to this issue.

Second, importance can cause individuals to accumulate greater and more accurate knowledge about an issue and to “use that information as well as one’s attitude in making relevant decisions, and to design one’s actions in accord with that attitude” (Boninger et al., 1995, p. 161). Individuals consistently choose to acquire information connected to the attitudes they deem important (e.g., Krosnick, Boninger, Chaung, Berent, & Carnot, 1993). Third, important attitudes are more likely to cause attitude-behaviour consistency (Boninger et al.,

1995). Thus, “perceiving an attitude to be personally important leads people to use it in processing information, making decisions, and taking action” (p. 159-160). In sum, important attitudes are stronger, more elaborate, and more consequential, and individuals are less likely to be susceptible to framing effects when they find an issue important.

Why is it that some issues are more important to us than others? In order for an issue to be significant, an individual needs to attach a great deal of self-interest to it, which in turn motivates to differentiate and strengthen opinion (Crano, 1995). Moreover, importance is affected by the degree of identification an individual feels with a social group that has a vested interest in the issue (Gamson & Modigliani, 1989). Furthermore, individual predispositions such as values and beliefs influence issue importance. The more consistent these are with the attitude object, the more important this object becomes (Boninger et al., 1995).

However, levels of interest and concern are not independent from the information and opinion environment an individual is in. Some issues are contended, are “hot” on the political agenda; others receive only little attention. Haider-Markel and Joslyn (2001) state that the “salient” status of an issue (in their case, regulations of guns) stems from high personal importance among citizens as well as the heightened interest of elites and ongoing discussion on the issue. Indeed, heightened public attention on a particular issue may cause citizens to (1) possess more issue-relevant considerations and (2) tend to be more motivated and interested to elaborate on issue-relevant information they encounter.

When a political issue is more important to elites, individuals are more likely to be exposed to issue-relevant messages, including issue frames. While this does not automatically lead individuals to deem such issues as more important, it does provide them with more considerations relating to the issue (Zaller, 1992; Zaller & Feldman, 1992). Accordingly, on more “important” issues and in a more information-rich environment, people will tend to be aware of many of the considerations that might be emphasized in a frame, which we expect to decrease the impact of any single frame on opinion formation (see the concept of “inertial resistance” by Zaller 1992, p. 237).

In the context of framing research, Chong and Druckman (2007a) have found that exposure to multiple and competing frames motivates citizens to consider frames more carefully. Moreover, continuing focus of public discourse on a specific (political) issue may cause citizens to “recognize connections” between an issue and their personal self-interest, identification with a country, or their basic values (see “issue public hypothesis”, e.g., Krosnick, 1990, p. 74; Fournier, Blais, Nadeau, Gidengil, & Nevitte, 2003). Along this line, heightened attention of elites to an issue can affect individual issue importance.

Issue importance can manifest itself on different levels. For instance, individuals can find an issue important to them personally, to their social group, or to their nation as a whole. National importance as an indicator of attitude strength has been applied in research (e.g., RePass, 1971), most prominently in public opinion polling (in the form of the so-called “*most important problem*” question). However, attitude strength literature suggests that national

importance is not an indicator of importance but of object salience and is inconsequential cognitively and behaviourally (e.g., Boninger et al., 1995). Miller and Peterson (2004, p. 853) advocate that “measures of personal importance seem to be more appropriate for gauging a dimension of attitude strength, whereas measures of national importance are not”.

To sum up, issue importance is understood as the importance individuals attach to an attitude object. This importance is a crucial variable in the formation and change of attitudes, it causes individuals to engage in more active processing of information, to accumulate more relevant knowledge about an issue, and—finally—to act on their conviction. Thus, we hold issue importance likely to moderate the magnitude of framing effects. Moreover, issue importance is likely to affect the way frame information is perceived so that individuals—if an issue is important to them—process the frame information more elaborately and connect it with pre-existing considerations and relevant knowledge. The extent to which framing effects differ between particular issues is, however, still in lieu of empirical investigation.

Following from the above, if an attitude is important, it is stronger and therefore less likely to be altered. Thus, we expect that importance is a moderator of framing effects, with the framing of low-importance issues being more likely to affect individuals’ attitudes than the framing of high-importance issues.

H1: Effects of frames are larger for issues that are personally less important.

Beyond the magnitude of the framing effect, we expect issue importance to play a role in the way individuals express their beliefs about a framed issue. High-importance issues are associated with detailed, assertive, and complex beliefs, while low-importance issues generate indefinite, weak, and simple associations after exposure. Thus, we expect that if an attitude is considered important, individuals process information more actively and are able to express their beliefs on a more elaborate level.

H2: The degree of belief elaboration is contingent upon issue importance with a higher degree of elaboration for high-importance issues.

Moreover, framing research has moved beyond solely measuring effectual change but is interested in the psychological processes that are likely to underlie a framing effect. Thus, this study also addresses such questions. According to our expectations above, we focus on the low-importance issue scenario, as it is here that we expect large framing effects. The analysis is based on the assumption that the effect of a frame on an individual’s attitudes or opinions is mediated by other variables. One group of scholars suggests that framing effects are predominantly mediated by belief importance (e.g., Nelson et al., 1997). That means that framing affects individuals by altering the perceived importance of some aspects of an issue. However, for instance, de Vreese (2004a) shows that effects of framing can also occur in addition to affecting

belief importance. Slothuus (2008) finds framing to also be mediated by belief content changes that means by offering new considerations to the individual (see also Lecheler & de Vreese, 2009). Given the theoretical underpinnings of this study, it is possible that framing effects on a low-importance issue are mediated to a greater extent by belief content changes: If something is of low-importance, individuals have less motivation to differentiate their attitude or accumulate attitude-relevant knowledge concerning this issue. Thus, it is more likely for a framed message to add new considerations to the individual's assessment of an issue, instead of simply altering existent considerations. However, the magnitude of the dual process when different issues are examined is as yet unknown. Thus, this study examines the extent to which the two mechanisms apply by offering complementary hypotheses:

H3a: On an issue of low importance, a framing effect on opinion is mediated through belief importance change.

H3b: On an issue of low importance, a framing effect on opinion is mediated through belief content change.

Pilot Study

To investigate issue importance as a moderator of framing effects, we conducted a pilot and a main experimental study. Both studies followed a similar design and employed the same high- and low-importance issues. The pilot study aimed at testing for the first hypothesis, namely, that a low-importance frame has influence on participants whereas high-importance issues result in no clear framing effects. The main study was designed to elaborate on these findings and shed light on the psychological processes that underlie framing effects on a low-importance issue. The experimental design and results of the pilot study are described below; the main study is presented subsequently.

Design

Both the pilot and the main study consisted of two online experiments, one featuring a high-, the other a low-importance issue. The choice of the "high" and "low importance" issues for the experiments involved a two step process: First, we consulted the Danish national election studies on their listings of nationally important and non-important issues. The results indicated that over the last ten years, welfare—in particular health care and care for the elderly—has been at the top of the Danish voters' agenda. On the other hand, trade—especially international trade or trade policies—is deemed important by only few participants. On that basis, initially, we chose care for the elderly as the high-importance issue and international trade as its' low-importance equivalent. To confirm the validity of these selections, the pilot study as well as the main study contained importance measures as a second step. These measures consisted of questions for personal importance for a number of political issues, measured on a 7-point scale

(1 = not at all important to 7 = very important). The results of these measures in both pilot study and main study confirmed the classification of welfare as a high-importance and international trade as a low-importance issue.²

In both experiments, individuals were randomly assigned to one of three conditions:³ a pro, a con and a control version of an economic consequences frame (see de Vreese, 2004b; Semetko & Valkenburg, 2000).⁴ This frame was chosen for two reasons. First, the use of a generic frame across experiments ensures that results from the experimental manipulation did not stem from different frame constructions but merely from change in the issue. Second, the economic consequences frame is often used in news coverage and therefore has high external validity and is easy to construct for the research purpose (Neuman, Just, & Crigler, 1992).

The use of an online experiment presents certain challenges to experimental design. To ensure consistent high standards of our experiment, the reading time of the stimulus article as well as overall completion time of the survey questionnaire was measured for each participant. Following, only those participants were selected for analysis, which had spent more than 30 seconds on reading the stimulus article and had spent more than 7 minutes completing the questionnaire. In that way, participants were selected, which were likely to have “ignored” the stimulus articles, or which did not answer the questions thoroughly.

Procedure

The experimental procedure was as follows. First, all individuals completed an online pre-test questionnaire, including importance rating of several issues as well as variables such as political interest and party preference. Then, participants read one news article containing one of the framing conditions. Third, participants received a post-test questionnaire asking for opinion. The pilot study also included a manipulation check.⁵

Participants

For the pilot study, a research company in Denmark recruited a total of 202 individuals (aged between 18 and 74; $M = 43.38$, $SD = 13.95$; 51 % females) from their internet database.

Stimulus Material

The stimulus material comprised one news article containing the economic consequences frame in two alternative versions per experiment: a pro and a con article for the high-importance experiment and a pro and a con article for the low-importance experiment. The design of this study precluded using actually published news material. While the economic consequences frame can be found frequently in political news, the use of real news coverage would minimise the commensurability across conditions and experiments. Constructed stimulus articles ensure a high amount of control. Effort was made to give the articles the structure and language of day-to-day Danish news coverage. Basic core information on the issue was kept identical between the versions. One paragraph in the news story pointed out the positive or negative economic

consequences of the issue. Specifically, the high-importance articles provided economic consequences on contracting-out public services for the elderly in Denmark to private firms. The low-importance frames specified positive and negative economic consequences for Denmark concerning a trade agreement between China and the WTO. Participants in the control group received a nonvalence news article, only comprising the identical basic core information also provided in the framed article (see Appendix D).

Measures

In the pre-test section, *issue importance* measures consisted of questions for both personal as well as national importance for a number of political issue, measured on a 7-point scale (1 = not at all important to 7 = very important). Our main dependent variable, *opinion* towards the international trade agreement and contracting-out elderly care, was measured on a 7-point scale with higher scores indicating increased support. The means and standard deviations for all measures can be found in Appendix E.

Manipulation Check

The pilot study contained a manipulation check for each experiment. After being exposed to the stimulus material (both in the first and second experiment), participants were asked to indicate on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree) to what extent the article (1) dealt with economic aspects of the issue, (2) pointed out its advantages and (3) disadvantages (1 = strongly disagree to 7 = strongly agree). The manipulation check showed successful manipulation for both the high- and the low-importance experiment. This allowed the further experimental proceeding in the pilot study and the ascribing of differences between groups in the post-test to the experimental manipulation. Moreover, the stimulus material was deemed appropriate for proceeding in the main study and remained unchanged.⁶

Pilot Study Results

As expected, the low-importance frame had an effect on the dependent variable opinion ($F(2,161) = 5.46, p < .01$). Individuals in the pro frame condition displayed more support for the trade agreement ($M = 5.39, SD = 1.77$) than participants in the negative framing condition ($M = 4.50, SD = 1.67$). The low-importance mean comparisons also show that the mean of the control group for opinion ($M = 5.36, SD = 1.36$) lay between the pro and con condition. However, there was no framing effect found for the high-importance issue of welfare/elderly care in the first experiment. The high-importance pro and con economic consequences frames did not alter individuals' attitudes towards contracting-out elderly care ($F(2,161) = .95, p > .05$).

Pilot Study Discussion

The mean comparisons give initial support for the first hypothesis: Despite successful framing manipulation, on the high-importance issue, there was no framing effect, whereas on the low-importance issue, there are considerable framing effects. The following main study sheds more light on the psychological processes behind these framing effects.

Main Study

In the main study, the design, procedure, stimulus material, and measures described for the pilot study were replicated. In addition, the main study was designed to shed light on the psychological processes that underlie framing effects on a low-importance issue.

To assess *belief importance*, two open-ended questions were added to the questionnaire. First, participants were asked to list “*all thoughts and considerations*” that came to mind after reading the respective stimulus article. Second, participants were asked to explain “*to a friend*” the content of the news article they had just read (see Shah, Kwak, Schmierbach, & Zubric, 2004). In doing so, participants listed all those considerations that—in their view—mattered when thinking about care for the elderly and international trade (e.g., Petty & Cacioppo, 1981). The two open-ended questions—one being a commonly used cognitive response measure, the other stemming from Shah et al.’s (2004) work on cognitive mapping—increased the likelihood that the main study captured those considerations participants felt to be important after exposure. Thus, in employing an open-ended assessment of belief importance, this study offers an alternative to previously used measures.

The analysis of the two open-ended belief importance measures required the development of a coding scheme for these questions. All coded considerations fit into either of two classifications: (1) considerations that are part of the stimulus article or (2) other considerations related to the issue. Thus, we distinguished in coding between primed elements on the one hand, and spontaneous elements on the other (Shah et al., 2004, p. 108). The classification into primed (cued) and spontaneous (uncued) elements allowed the analysis to uncover, whether participants reproduced information given in the frame—as well as—which other related information was available and accessible after exposure (e.g., Zaller & Feldman, 1992). This takes the analysis of framing effects beyond measuring opinion changes and enables the study to elucidate on the psychological processes that underlie framing effects of high- and low-importance issues. An intercoder reliability test was conducted based on 160 randomly chosen answers per question and experiment and Cohen’s kappa was calculated. We set the acceptable level of Cohen’s kappa at around .60, which follows other studies (e.g., Lombard, Snyder-Duch, & Bracken, 2002) and takes into account discussion of the initiators of the coding procedure, (Shah et al., 2004). Intercoder reliability ranged from $k = .56$ to $k = .77$ for the high-importance experiment and $k = .52$ to $k = .71$ for the low-importance experiment. Although not impeccable, we consider our lowest

kappa within the realm of acceptable given the higher scores on all other coded dimensions. Thus, taking into account the wide range of scores in the reliability testing, we consider our coding procedure to be able of tapping primed and spontaneous issue-related considerations in our study (see also Shah et al., 2004, p. 110).⁷

Furthermore, the *elaboration* of the open-ended belief importance measures was assessed (see Shah et al., 2004). In accordance with our assumptions on high- and low-importance issue attitudes, this elaboration was expected to be higher for the high-importance issue (e.g., Boninger et al., 1995; Zaller, 1992). According to Shah et al. (2004, p.109), elaboration was defined as the “degree of detail in respondents’ descriptions” and measured on a 4-item scale (0 = no relevant consideration or key word given to 4 = relevant consideration given, plus at least one additional independent sentence). Then the average degree of elaboration was calculated ($M = 1.39$, $SD = .70$). Intercoder reliability was $k = .61$ for the high-importance experiment and $k = .60$ for the low-importance experiment.

To assess *belief content*, individuals were asked to agree or disagree with a number of statements about elderly care and welfare for the first experiment and international trade for the second experiment. The items were measured on a 7-point scale (1 = strongly disagree to 7 = strongly agree) and summarized in an index (see Appendix E).

Finally, the main study involved significantly more participants. A total of 2,643 online invitations were sent out to members of a Danish research company’s nationally representative panel. Overall, 1,618 individuals (aged between 18 and 74; $M = 43.38$, $SD = 13.95$; 49 % females) participated; the response rate was 61 percent (AAPOR RR1).

Main Study Results

Hypothesis 1

The results corroborate the observations of the pilot study. The means for opinion in the low-importance experiment provide further support for the first hypothesis. Participants in the pro low-importance condition supported the trade agreement more ($M = 5.27$, $SD = 1.59$) than those in the con condition ($M = 4.30$, $SD = 1.65$) ($F(2,1268) = 54.50$, $p < .001$). In addition, the low-importance mean comparisons show that the mean of the control group for opinion ($M = 5.25$, $SD = 1.66$) unexpectedly was significantly above the pro and con condition.⁸ Possible explanations for this finding are discussed below. The high-importance experiment did not show any significant differences between groups for opinion.

To provide a more nuanced test of the first hypothesis, we also look at individual variation in issue importance.⁹ Within both the high and the low issue importance conditions individuals differ in their assessment of the importance of the issue. Within the low-importance trade experiment, both those who rated trade as of high-importance and those who rated it as of low importance displayed mean opinion differences between the pro and con frames ($F(2,747) = 30.76$, $p < .001$).

Hypothesis 2

The measurement of belief importance in open-ended form allowed us to assess the degree of elaboration of these answers to test the second hypothesis. In our analysis of issue importance as a moderator of framing effects, this elaboration is an important by-product of open-ended measurement. We predicted that if an issue is found important, considerations given about this issue are more elaborate than when the issue is of no importance. Thus, high-importance issues are associated with detailed, assertive and complex beliefs, while low-importance issues generate indefinite, weak and simple associations after exposure. Confirming Hypothesis 2, the results of the analysis show a difference in average elaboration between high- ($M = 1.64, SD = .80$) and low-importance ($M = 1.33, SD = .73$) experiment ($t(1416) = 17.19; p < .001$). The difference in average elaboration shows that when exposed to the high-importance issue frames, participants were more likely to generate elaborate beliefs and support these beliefs with additional reasoning and complex sentence structure. In contrast, participants expressed their beliefs about the low-importance issue by using short and disjointed considerations and keywords. The analysis of differences in elaboration for individual variation in issue importance within both experiments shows that individuals who found the high-importance issue personally more important showed a higher average elaboration in their answers than those who indicated the issue to be unimportant to them ($t(1409) = 2.39; p < .05$). The same was found in the low-importance experiment ($t(1381) = 3.74; p < .001$) where individuals with high personal importance rated pronouncedly higher ($M = 1.26, SD = .73$) than those who did not care much about the issue ($M = 1.41, SD = .71$).

Hypotheses 3a and 3b

To address the underlying psychological processes of framing effects on a low-importance issue, we tested to what extent the effect of the frame was mediated by belief content and belief importance. Initially, the framing of the low-importance issue shows significant differences in belief content, that is in how positive or negative participants believed the impact of the trade agreement would be ($F(2,1180) = 53.76, p < .001$). Participants in the positive condition were more positive about the impact of the agreement ($M = 4.93, SD = 1.08$) than participants in the negative condition ($M = 4.26, SD = 1.17$).

The belief importance measures in the low-importance experiment illustrate differences between groups for both primed and spontaneous considerations (Table 2.1). This produces strong empirical support that the news articles did highlight different aspects of the issues and that participants reproduced this (framed) information. Moreover, participants differed in their spontaneous belief importance assessment after exposure. Table 2.1 shows that “*Denmark must participate in international trade adequately*” emerges more often in the pro than in the con and control condition ($F(2,1615) = 7.09, p < .01$).¹⁰

Table 2.1: Low-Importance Issue ‘trade’ - Overall Belief Importance

	Percentages			
	Pro (n=693)	Con (n=692)	Control (n=233)	Overall (n=1618)
<i>Primed Considerations</i>				
EU commits to abolish import duty	.10 _x (.31)	.07 _{xy} (.26)	.14 _y (.35)	.09 (.29)
China will copy Danish products	.00 _x (.03)	.19 _y (.39)	.00 _x (.00)	.08 (.28)
China will become a more important player on the international market	.10 _x (.30)	.02 _y (.16)	.06 _{xy} (.25)	.06 (.24)
<i>Spontaneous Considerations</i>				
International trade poses ethical questions	.07 (.26)	.05 (.23)	.06 (.24)	.06 (.25)
Denmark must participate in international trade adequately	.07 _x (.27)	.03 _y (.19)	.03 _y (.17)	.05 (.22)
International trade is beneficiary for Danish economy	.07 (.25)	.04 (.18)	.05 (.21)	.05 (.22)

Note. Different subscripts indicate a significant difference ($p < .05$); higher values indicate higher number of namings of this importance consideration in the particular group.

Along this line, the high-importance experiment did not show any significant differences between groups for belief content. The analysis of the open-ended belief importance measures showed that while there are differences between groups for primed considerations, there were no substantial differences between groups for uncued considerations. Thus, while participants perceived and reproduced those considerations provided in the news article, their answers were not affected when resorting to other related information.

Within the low-importance trade experiment, both those who rated trade as of high-importance and those who rated it as of low importance displayed mean belief content differences between the pro and con frames ($F(5,1172) = 23.66, p < .001$). Moreover, the analysis of belief importance shows only modest within-issue variation between those who found trade important and those participants who did not. Table 2.2 shows variation in uncued considerations: “Denmark must participate in international trade adequately” differs between high and low personal importance ($F(5,1576) = 3.64, p < .01$). There were no significant differences for high- or low-importance group within the (“high importance”) welfare experiment. That means that participants who indicated welfare to be unimportant were not affected by the frame. On the other hand, participants, who found trade to be of high importance, were affected.

Table 2.2: Belief Importance for Low-Importance Issue ‘trade’ by Perceived Personal Importance

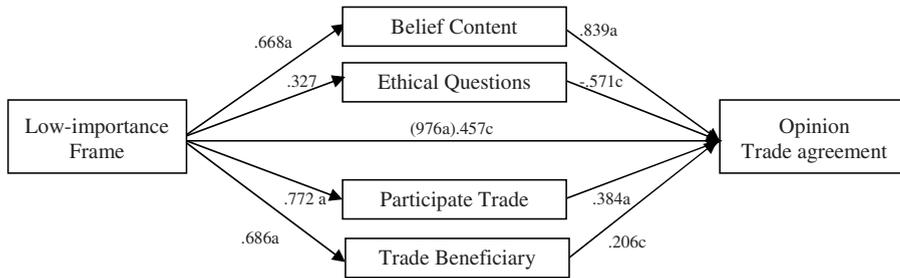
	Percentages							
	High Importance				Low Importance			
	Pro (n=382)	Con (n=376)	Control (n=136)	Overall (n=894)	Pro (n=295)	Con (n=300)	Control (n=93)	Overall (n=688)
<i>Primed</i>								
Import duty abolished	.11 _x (.31)	.07 _y (.28)	.12 _z (.33)	.09 (.29)	.10 _x (.30)	.07 _{ay} (.25)	.18 _{bz} (.38)	.10 (.30)
China will copy products	.00 _{ax} (.05)	.24 _{by} (.42)	.00 _{ay} (.00)	.10 (.30)	.00 _{ay} (.00)	.15 _{by} (.36)	.00 _{ax} (.00)	.06 (.25)
China is important player	.11 _{ax} (.31)	.02 _{by} (.16)	.09 _{ax} (.29)	.07 (.26)	.09 _{ay} (.29)	.02 _{by} (.16)	.03 _{by} (.17)	.05 (.23)
<i>Spontaneous</i>								
Ethical questions	.08 (.27)	.05 (.23)	.08 (.27)	.07 (.25)	.07 (.25)	.05 (.22)	.04 (.20)	.06 (.23)
Participation in international trade	.08 _x (.28)	.05 _y (.22)	.04 _y (.20)	.06 (.24)	.06 _{ay} (.25)	.02 _{by} (.15)	.01 _{bz} (.10)	.04 (.19)
International trade is beneficiary	.07 (.26)	.04 (.19)	.05 (.23)	.05 (.23)	.06 (.25)	.03 (.17)	.03 (.17)	.05 (.21)

Note. Different abc subscripts indicate a significant difference ($p < .05$) between conditions within one group; xyz subscripts indicate significant differences ($p < .05$) between conditions across groups; groups are divided by their individual assessment of personal importance towards the trade issue; higher values indicate higher number of namings of this importance consideration in the particular group. In coding: Primed #1= “EU commits to abolish import duty”, Primed #2= “China will copy Danish products”; Primed #3= “China will become a more important player on the international market”; Spontaneous #1= “International trade poses ethical questions”; Spontaneous #2= “Denmark must participate in international trade adequately”; Spontaneous #3= “International trade is beneficiary for Danish economy”.

To better understand the framing process in the low-importance experiment, a path model was tested. This procedure has been executed in a similar fashion by a number of studies of framing effects (e.g., Druckman & Nelson, 2003; Nelson et al., 1997). The analysis illustrates to what extent the direct effect of the low-importance frame on opinion is mediated by belief content or belief importance (see Baron & Kenny, 1986; MacKinnon, Fairchild, & Fritz, 2007).¹¹ Hypothesis 3a, which specified that framing effects on a low-importance issue are mediated by belief importance changes, can be supported (Figure 2.1). The indirect effect of the low-importance frame on opinion via “*Participate Trade*” change is significantly different from zero (*Sobel Test Statistic* = 2.39 $p < .01$).¹² However, also confirming Hypothesis 3b, the model shows that the low-importance framing process was also mediated to a great extent by belief

content changes. The indirect effect of the low-importance frame on opinion via belief content change is significantly different from zero (*Sobel Test Statistic* = 8.25, $p < .001$).

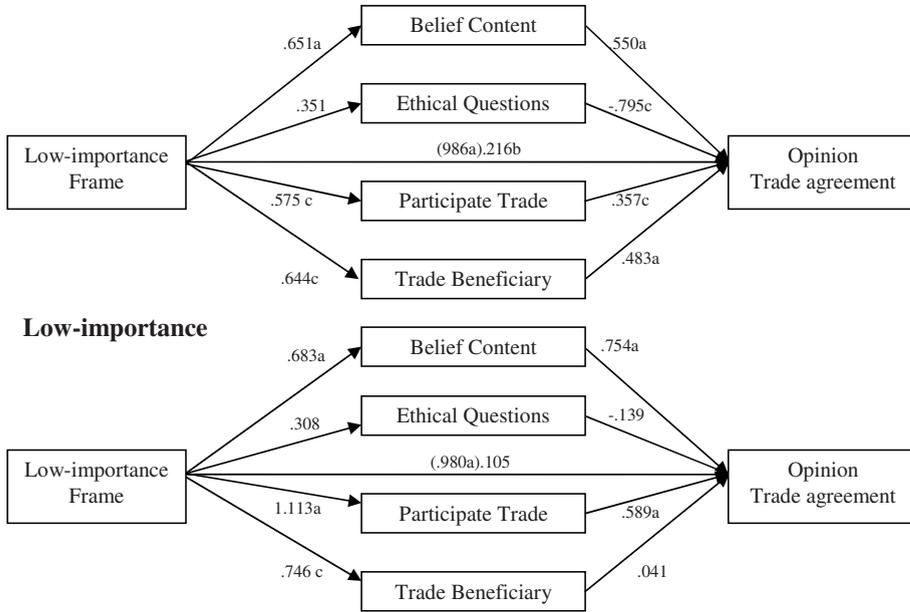
Figure 2.1: Low-importance Issue - Mediation Analysis



Note. Coefficients are unstandardized coefficients; all one-tailed significance tests; a. $p < .001$; b. $p < .01$; c. $p < .05$. Frame is coded so that 0=Con and 1=Pro Trade agreement. The importance items are coded as 1=present and 0=non present. In coding: Spontaneous #1="International trade poses ethical questions", Spontaneous #2="It is crucial for Denmark to participate in international trade adequately", Spontaneous #3="International trade is beneficiary for Danish economy overall". The belief content scale is coded so that higher values indicate a more positive effect. Opinion is coded so that a higher value indicates increased support for the trade agreement; unmediated main effect in parentheses; Sobel Test statistics for Belief Content: 8.25 ($p < 0.001$); for Belief Importance: Spontaneous #1: -1.18 ($p > .05$), Spontaneous #2: 2.39, ($p < .01$), Spontaneous #3, 1.44 ($p > .05$).

As indicated above, participants in the low issue importance experiment were divided up into a group of high and low personal importance. In an additional mediation analysis, these two groups were compared (Figure 2.2).

Figure 2.2: Low-importance Issue – Moderated Mediation Analysis



Note. Coefficients are unstandardized coefficients; all one tailed significance tests; a. $p < .001$; b. $p < .01$; c. $p < .05$. Frame is coded so that 0=Con and 1=Pro Trade agreement. The importance items are coded as 1=present and 0=non present. In coding: Spontaneous #1="International trade poses ethical questions", Spontaneous #2="It is crucial for Denmark to participate in international trade adequately", Spontaneous #3="International trade is beneficiary for Danish economy overall". The belief content scale is coded so that higher values indicate a more positive effect. Opinion is coded so that a higher value indicates increased support for the trade agreement; unmediated main effect in parentheses; High-importance Sobel Test statistics for Belief Content:6.13 ($p < 0.001$); for Belief Importance: Spontaneous #1:-1.02 ($p > .05$), Spontaneous #2:1.51, ($p > .05$, Spontaneous #3: 1.35 ($p > .05$). Low-importance Sobel Test statistics for Belief Content: 5.40 ($p < 0.001$); for Belief Importance: Spontaneous #1:-.61($p > .05$), Spontaneous #2:1.77, ($p > .05$), Spontaneous #3: .16 ($p > .05$).

This comparison indicates that for both the personal high- and low-importance groups, framing effects on opinion were primarily mediated by belief content changes. However, belief importance considerations appear to be better predictors of opinion among the high- than among low-importance groups. Yet, Sobel test statistics indicate that only belief content changes mediate framing effects. This provides additional support for Hypothesis 3b.

Main Study Discussion

The results of the main study corroborate the findings of the pilot study and shed more light on the framing of high- and low-importance issues. In the study, participants were affected by the low-importance frames in their opinion as well as their perception of the (positive or negative) impact of the trade agreement and their notion of what was important concerning the issue. The results for the high-importance experiment are remarkably different. Here, the high-importance issue did not yield effects of the frames. That means that the economic consequences frames did not play a noteworthy role in opinion formation, belief content change, or in what individuals found important.

Notably, the low-importance mean comparisons show that unlike in the pilot study, the mean opinion of the control group towards the trade agreement is more positive than the mean opinions of both con and pro groups. Explanations for this phenomenon remain speculative. However, it might be that individuals could have given, by default, less positive judgements about an issue, when exposed to a valenced frame message. In this sense, individuals have a relatively positive starting position towards an issue but are motivated to think about it more once they receive additional (biased) information, which then leads to less positive assessments.

The mean comparisons show a systematic difference in the magnitude of framing effects between high- and low-importance issues. Based on theoretical assumptions about the nature of issue importance as an individual-level moderator, this influence should also be measurable *within* each of the two experiments. However, additional comparisons for the low-importance trade experiment showed that effects did not depend to a great extent on individual importance assessments. This suggests that in this case, issue importance operated primarily as a contextual moderator of framing effects. However, interestingly, issue importance did show to affect the way beliefs about a framed issue are expressed. Our analysis showed great differences between the high- and low-importance experiments in the level of elaboration of belief importance considerations. This was also the case *within* each experiment.

To understand how the low-importance frames affected individuals in their opinion, a mediational analysis was conducted. This analysis included both belief content and spontaneous belief importance variables as potential mediators of these framing effects and showed that belief content was a primary mediator. Opinion formation or change in the low-importance experiment was mediated by altering individuals' perceived positive or negative impact of the trade agreement as well as by highlighting certain considerations of the issue over others. These findings support other studies of mediation in framing effects (e.g., Nelson et al., 1997), but also conform to extant research of strong vis-à-vis weak attitudes: If an issue is unimportant, an individual is less likely to be motivated to acquire attitude-relevant knowledge about this issue (e.g., Boninger et al., 1995, see also Chong & Druckman 2007a). Thus, frames can be expected to affect participants' opinion by adding new considerations, rather than merely endowing some considerations with greater relevance (see Lecheler & de Vreese, 2009; Slothuus, 2008). This

finding of belief content changes as primarily mediating framing effects was further corroborated in the additional analysis of personally high- and low-importance groups *within* the low-importance experiment (Figure 2.2).

Conclusion & General Discussion

Recently, scholars have examined which contextual as well as individual factors can enhance, limit or obliterate framing effects (e.g., Druckman, 2001; Sniderman & Theriault, 2004). However, only few studies have considered how framing effects may vary depending on the particular issue at stake (Haider-Markel & Joslyn, 2001; Iyengar, 1991). This article reports on two experimental studies aimed at illustrating the extent to which framing effects differ in magnitude as well as process, depending on how important an issue is.

Both studies show no effects of the high-importance welfare issue and large effects of the low-importance trade issue on opinion, belief content and belief importance. However, frames in the “low importance” experiment caused differences between the pro, con and control group across the board – almost independently of how important an individual found the issue personally. Moreover, issue importance affected the elaboration of belief importance considerations on both an individual and a contextual level. In accordance with our expectations, the framing process for effects on a low-importance issue was mediated by belief content changes. Furthermore, the strength of this mediator variable varied according to the individual importance attached to the issue.

Why were *all* individuals in the low-importance experiment affected by the frames? A first hint is provided by the mediational model for framing effects on a low-importance issue. As discussed, this analysis showed that effect on opinion was to a great extent mediated by belief content changes – for both individuals of high and low importance. That means that participants formed their opinion on basis of new information about the issue, instead of highlighting existent considerations over others. Those who found trade important did not resist or alter importance considerations, but were susceptible to changes in the content of their beliefs – simply because they did also not possess sufficient information on the issue to defend, or differentiated their attitude.

This suggests that the moderating function of issue importance is connected to the information environment an individual finds her or himself in. Following this, the low-importance issue, an international trade agreement, might have literally been too unimportant in public discourse. That means that even individuals with stronger attitudes did not process the proposal in a coherent way due to lack of contextual information on this issue (e.g., Zaller, 1992). On the other hand, continuous and immense public attention given to the high-importance issue of welfare in Denmark is likely to have armed individuals with a good set of (competing) considerations to resist the news frames. Thus, while attitudes towards welfare might be controversial, they are consolidated (see Zaller, 1992).

Our findings corroborate speculations by Kiouisis (2005, p. 7), who claims that the public attention an issue receives is connected with the strength of attitudes associated with this issue. This attention tends to “stimulate more thinking and learning about objects and attributes in people’s minds” and increased thinking about the issue might thus “lead to strengthened attitudes”. However, this suggestion is not entirely supported by studies of attitude strength. Visser et al. (2004) show that there is only a weak connection between media exposure (what people perceive) and attitude strength (how important they perceive it). In that sense, lacking exposure to information about an issue like international trade must not necessarily lead to weak attitudes throughout. Further research is needed to clarify this question.

In line with the theoretical underpinnings of this study, issue importance was expected to moderate framing effects both in its’ impact as well as processing. Important attitudes are stronger, more accessible and more elaborate – and therefore less likely to be affected by news frames (e.g., Krosnick, 1989; Boninger et al., 1995). In turn, weak attitudes with low levels of importance are more likely to be altered and this happens by adding new information to the individuals’ depot. The results of both studies partially correspond to these conjectures. Results show that the two issues differ to a great extent in their effects, but this was not fully attributable to individual assessment of issue importance. Rather, the extent to which the issues differed may be ascribed to the contextual importance differences of certain issues.

There are a few caveats to the study. First, the choice of the high- and low-importance issues was determined by the Danish election studies. As indicated above, the low-importance issue, an international trade agreement, could have—as discussed above—been too “remote”. On the other hand, attitudes on the continuously “hot” topic of welfare and state intervention could have been too consolidated. Further research involving more issues can provide clarification on this matter. Second, the low-importance mean comparisons presented show that the mean opinion of the control group towards the trade agreement is more positive than the mean opinions of both con and pro groups. Here, individuals could have given, by default, less positive judgements about an issue, when exposed to a biased (pro or con) frame message.

So far, issue importance has virtually been neglected in framing research. This article provided first insights into how high- and low-importance framing effects might differ in magnitude and process and what the methodological suppositions for studies in this area of research are. Further research should follow two paths. First, examine the significance of individual issue importance and its’ importance for framing effects. Second, compare the influence of public issue importance or media importance on individual framing effects and process.

Notes

¹ An earlier version of this paper was awarded a Top Student Paper Award at the 2008 conference of the International Communication Association (ICA) by the Mass Communication Division of the ICA.

² Personal importance of high-importance issue “welfare and elderly care” is as follows: pilot ($M=5.74$, $SD=1.25$), and main ($M=5.66$, $SD=1.42$); for low-importance issue “international trade” it was: pilot ($M=4.67$, $SD=1.53$), and main ($M=4.68$, $SD=1.63$); Pilot: $t(199)=8.71$; $p < .001$; Main: $t(1580)=20.50$; $p < .001$).

³ Although previous studies of framing effects have not employed a control condition, we include the control group for the overall mean comparisons. Following the reasoning of Druckman and Nelson (2003, p. 736), we argue that an overall comparison with a control condition can give an idea of the magnitude of the framing effect and serves as an “alternative and underappreciated evaluative standard that reveals the impact of frames on unadulterated opinions”. However, in our analysis, we do not focus on this comparison.

⁴ The design of both pilot and main study also included different sources of frames. These sources are not the focus of the present study and were therefore neglected. However, when taken into account, the results of both studies were not affected.

⁵ Participants completed the experimental procedure for the initial (high-importance) issue, followed by the same procedure for the other issue. To make sure that this direct succession of experiments with different issue did not influence the results, one part of the participants did not partake in the first, but only the second experiment. Analyses revealed no significant differences between this group and the other participants. The two experiments were separated by measures of political knowledge. In the second experiment, this group did not react significantly different from those individuals who took part in both experiments in terms of overall support for the trade agreement ($t(147)=-.54$, $p > .05$), belief content ($t(151)=-2.42$, $p > .05$) or any of the belief importance measures. The same was found for the second study.

⁶ For the high-importance experiment, an analysis of variance showed no significant mean differences between pro ($M=4.97$, $SD=1.70$), con ($M=4.69$, $SD=1.80$), and control ($M=4.15$, $SD=1.82$) group for the first, general statement ($F(2, 164)=2.06$, $p < .130$). However, there was a significant mean difference between participants in pro ($M=4.80$, $SD=1.67$), con ($M=3.30$, $SD=1.83$), and control ($M=4.31$, $SD=1.543$) for the second (advantages) statement ($F(2, 163)=13.46$, $p < .001$); and for the third (disadvantages) statement; pro ($M=3.37$, $SD=1.66$), con ($M=4.33$, $SD=1.82$) and control ($M=4.04$, $SD=1.80$) at ($F(2,163)=5.42$, $p < .01$). The manipulation check was also successful for the second (low-importance) experiment: the economic consequences statement showed no significant mean differences for pro ($M=5.67$, $SD=1.43$), con ($M=5.65$, $SD=1.36$) and control ($M=5.56$, $SD=1.31$) condition ($F(2,188)=.07$, $p > .05$). The statement, asking whether the article was about advantages of the international trade agreement showed significant differences for pro ($M=5.57$, $SD=1.52$), con ($M=3.62$, $SD=1.74$)

and control ($M=4.96$, $SD=1.42$) condition ($F(2,177)=28.72$, $p < .001$). Finally, the third statement pointing out differences also yielded significant mean differences of pro ($M=2.92$, $SD=1.64$), con ($M=5.57$, $SD=1.41$) and control ($M=2.88$, $SD=1.70$) condition ($F(2, 182)=65.75$, $p < .001$).

⁷ To test the consistency of coding, intercoder reliability was calculated for the first three considerations or key words per question and experiment. For the high-importance experiment, first question (“*all thoughts and considerations*”): consideration/ keyword1 $k=.77$, consideration/keyword2 $k = .56$, consideration/ keyword3 $k = .61$, Second question (“*to a friend*”) consideration/ keyword1 $k = .61$, consideration/ keyword2 $k = .66$, consideration/ keyword3 $k = .77$. For the low-importance experiment, first question: consideration/keyword1 $k = .71$, consideration/ keyword2 $k = .57$, consideration/ keyword3 $k = .58$; Second question consideration/ keyword1 $k = .63$, consideration/ keyword2 $k = .52$, consideration/ keyword3 $k = .66$.

⁸ A between condition randomization check on age, gender and occupation performed at the outset of our frame analysis revealed a successful randomization with no between-group differences. The treatment and control groups did also not differ for our pre-intervention measures of personal importance of the high ($F_{[2,1408]}=.41$, $p = .66$) and low-importance issue ($F(2,1380) = .07$, $p = .93$); nor for national importance of the high ($F(2,1406) = .643$, $p = .526$) and low-importance issue ($F(2,1392) = .03$, $p = .94$). Likewise, there was no significant difference for other variables such as political knowledge, need for cognition, need to evaluate or political interest.

⁹ Personal importance was measured on a scale from 1 to 7 with higher values indicating more importance. Following practise in dichotomisation, the cut-off for the within-issue comparison of high versus low-importance was made at the mean of the overall sample (high-importance, $M = 5.66$, $SD = 1.42$; low-importance ($M = 4.68$, $SD = 1.63$))

¹⁰ For the analysis, the two open-ended belief importance measures were combined to tap both cued and uncued responses. However, when analysed separately, the measures led to the same substantial findings.

¹¹ The comparison between the experimental groups shows that participants in both high and low-importance experiment differ in their “primed” considerations. While this provides strong empirical support for the fact that participants understood and reproduced the framed information, it tells us less about the underlying psychological processes of the framing effect. Thus, when constructing the path model for our mediation analysis – only spontaneous (uncued) belief importance considerations were included.

¹² For the Sobel test ($a*b/\text{SQRT}(b^2*sa^2 + a^2*sb^2)$); a = raw (unstandardized) regression coefficient for the relation between independent variable and mediator; sa = standard error of a ; b = raw coefficient for the association between the mediator and the dependent variable (controlling for the independent variable), and sb = standard error of b . (see e.g., Sobel, 1982; MacKinnon, Warsi, & Dwyer, 1995).

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Chapter 3

GETTING REAL: THE DURATION OF FRAMING EFFECTS

Manuscript under review

Abstract

A growing number of studies test the effects of news framing on citizens' understanding of politics. By employing experimental designs, these studies report significant effects for a multitude of issues and frames. However, what happens to the framing effect after initial exposure? Based on a "classic" framing experiment ($n = 625$), this paper traces framing effects across a number of delayed time points: after one day, one week, and two weeks. Our results show that framing effects are surprisingly persistent. The duration of framing effects depended on a person's level of political knowledge, with moderately knowledgeable individuals displaying most persistent framing effects. Effects on individuals with high or low levels of political knowledge dissipated much quicker.

“Suppose the effect no longer persists 10 min after treatment. In what real-world scenario would such an effect matter?” (Gaines, Kuklinski, & Quirk, 2007, p. 5)

Introduction

This chapter is guided by a simple question: what if Gaines and colleagues are right? There is a great amount of studies that test the effects of media framing on citizens’ understanding of politics. Largely based on experimental data, these studies report significant effects over a wide array of issues and frames, and have thereby established a solid empirical basis for the “existence” of framing effects (e.g., Berinsky & Kinder, 2006; Druckman, 2001a; Nelson, Oxley, & Clawson, 1997; Slothuus, 2008). The majority of extant framing experiments stress the importance of their findings for politics and political communication, and therefore transcend a simple cause-and-effect model (Gaines et al., 2007; Kahneman, 2000). Yet, the results of these framing experiments are often based on one-shot experimental settings, where the magnitude of the framing effect is tested only immediately after exposure to a frame. Thus, the duration during which the effects endure remains an open question. What happens to the framing effect after the initial exposure? Does it simply vanish, or does it persist? Can or should a one-shot media stimulus have lasting influence on real-life opinions and attitudes? These questions are of obvious importance to framing researchers. Without knowing about the *duration* of framing effects, researchers cannot make convincing arguments about the significance of their findings for politics (Gaines et al., 2007). Accordingly, existing framing experiments may even have exaggerated the influence of media frames on opinion formation – by focusing too much on the establishment of causality rather than including framing into a dynamic model of political communication flows (see also Druckman, 2004). “Enough already with the experiments” demands Kinder (2007, p. 157) consequently, asking for “methodological diversification, experiments and studies oriented to the world outside” (but see Kinder & Palfrey, 1993).

So far, only a handful of experimental studies have taken the duration of framing effects into consideration. Notably, Tewksbury, Jones, Peske, Raymond, and Vig (2000) find that news frames have a curbed, yet still significant, effect on audience perceptions of a political issue a full three weeks after exposure. Druckman and Nelson (2003) report, however, that the framing effects they found had dissipated only ten days after initial exposure (see also Chong & Druckman, 2008). De Vreese (2004) also suggests that framing effects perish quickly with effects being muted after two weeks, even in—or possibly because of—the almost total absence of related elite information in the interim period. However, despite these findings, framing research has still fallen very much short of any more systematic investigation of the *duration* of framing effects.

This study attempts to trace framing effects over time. In our theoretical framework, we combine the scarce information available about the duration of framing effects. Embedded in a

news framing experiment, we then test the magnitude of a framing effect immediately after exposure and at three additional delayed points in time (after one day, one week, and two weeks). We also pay attention to the *conditionality* of framing effects, and trace the influence of differing levels of political knowledge across time. We thus aim to provide a conceptual blueprint for the overdue integration of a time perspective into framing effects research. For too long, framing effect studies have relied almost exclusively on the assumption that their results can be generalized and used to make predictions about real-life politics.

Experimental Framing Effects Research

There is robust empirical evidence for the impact that news frames have on how citizens make sense of politics, and studies have covered a broad range of issues and framing scenarios (see Levy, 2002; Druckman, 2001b). As a result, framing has become ubiquitous in communications research, and serves as one of the most popular approaches for investigating media effects.

Framing Effects Theory

What theoretical assumptions are framing effects studies based on? In the most general sense, frames can be conceived as patterns of interpretation that are used to classify information sensibly and process it efficiently. Framing stresses certain aspects of reality and pushes others into the background; it has a selective function. In this way, certain attributes, judgments and decisions are suggested (Entman, 1993; D. A. Scheufele, 2000).

Framing studies typically employ either equivalency or emphasis frames (Druckman, 2001b). Equivalency frames refer to logically alike content, which is presented or phrased differently (e.g., Kahneman & Tversky, 1984). Emphasis frames are closer to “real” journalistic news coverage and present “qualitatively different yet potentially relevant considerations” (Chong & Druckman, 2007a, p. 114). Research has, moreover, worked with two alternative operationalizations of frames in the news, namely issue-specific and generic frames (Semetko & Valkenburg, 2000). Issue-specific frames pertain to a specific topic, while generic news frames are applicable to a wide range of topics. This wide application of generic frames makes it easier to compare framing effects across issues and generic frames have thus been utilized in framing experiments (see e.g., Lecheler et al., 2009 for a recent example). It is, moreover, important to note that news frames used in empirical framing studies are characterized by a specific valence (see e.g., Druckman, 2004). This valence pertains to one of the most fundamental characteristics of political discourse, namely that elites attempt to affect support for or rejection of an issue by emphasizing the positive or negative aspects of it. According to de Vreese and Boomgaarden (2003, p. 376), valenced emphasis frames have the capacity to affect opinion on and support for an issue, while neutral emphasis frames are more likely to affect issue interpretation (see also Bizer & Petty, 2005).¹

Based on the conjectural “existence” of framing effects, one of the main goals of current studies is to describe the psychological processes that underlie framing effects and thus enable them (e.g., Lecheler & de Vreese, 2009; Nelson et al., 1997; Price, Tewksbury, & Powers, 1997). Initially, studies conceived these processes as accessibility effects (e.g., Iyengar, 1991). Accessibility effects function by making considerations in the individual’s mind more salient and therefore more likely to be used when forming an opinion (see also Nabi, 2003; Price & Tewksbury, 1997). However, subsequent research suggests that mediating processes of framing—or the “black box” between exposure and effect—might be more complex (e.g., D.A. Scheufele, 2000; Matthes, 2007). For instance, Chong and Druckman (2007a, p.6) delineate framing effects to be mediated via three consecutive steps. First, a consideration must be available to the individual, that is, stored in memory for use. Second, this consideration must be accessible, its’ knowledge must also be “ready for use”. Third, depending on the context and motivation, a consideration may be consciously weighed against other considerations as a person decides about the applicability of their (accessible) interpretations. Thus far, extant research has widely examined and supported this “belief importance change” model of framing effects (see also Lecheler & de Vreese, 2009; Nelson et al., 1997; B. Scheufele, 2004).

Based on the advancing description of cognitive mediation processes, scholars have recently turned to a third complementary explanation for framing effects, namely that news framing also functions by adding *new* beliefs to an individual’s belief content (see Lecheler & de Vreese, 2009; Shah et al., 2004; Slothuus, 2008). This mediational model alludes to one of the most established mechanisms in media effects research - the persuasive effect (see e.g., Petty & Cacioppo, 1986; Eagly & Chaiken, 1993; Zaller, 1992). Originally, belief content change had been widely disregarded in framing effects, because it was argued that framing “operate[s] by activating information *already at the recipients’ disposal*, stored in long-term memory” (Nelson et al., 1997, p. 225, italics in original). However, political news frames often cover information that is remote and complex to the individual, and may therefore regularly convey importance change, *as well as* new information to the individual. Slothuus (2008, p.7) proposes a “dual-process” model of framing effects that combines belief importance and belief content change. Results of his experimental study show that frames do indeed affect opinion via both proposed mechanisms, with belief content change being more significant for individuals with lower political knowledge.

Another important aspect in framing research is the study of moderators, that is, of variables that can enhance, limit or even obliterate a framing effect (e.g., Chong & Druckman, 2007a). By exploring moderators, framing studies take into consideration the fact that the magnitude (as well as process) of framing must depend on individual as well as circumstantial characteristics of the respective framing scenario. So far, research has identified a number of individual-level moderator variables such as political knowledge (e.g., Nelson et al., 1997) or values (e.g., Shen & Edwards, 2005) as well as contextual moderators, attempting to bring the study of framing closer to “real life”, such as source characteristics (e.g., Druckman, 2001a),

issue characteristics (e.g., Iyengar, 1991; Lecheler et al., 2009), interpersonal communication (e.g., Druckman & Nelson, 2003) or competitive framing (e.g., Chong & Druckman, 2007b; Sniderman & Theriault, 2004).

Among these, political knowledge emerges as one of the most prominent moderating variables of framing. However, despite the effort of a growing number of studies, the empirical evidence remains very much divided: One group of scholars thinks that less knowledgeable individuals are more susceptible to framing effects (e.g., Kinder & Sanders, 1990; Schuck & de Vreese, 2006). A second group, however, suggests the opposite (Krosnick & Brannon, 1993; Nelson et al., 1997). These results notwithstanding, the differing impact of political knowledge on the magnitude of framing effects could hinge on a number of factors, such as the type of effect or dependent variable at stake (Lecheler & de Vreese, 2009). We will address the role of political knowledge further below.

Framing Experiments

A large majority of available results on framing effects stems from experimental studies (Druckman, 2004; Kinder, 2007; but see Gerber, Karlan, & Bergan, 2009). This seems natural, given the fact that a well-designed experiment is a primary means of determining cause and effect, and for disentangling the complex processes that account for the effect (e.g., Kinder & Palfrey, 1993; Lavine, Lodge, Polichak, & Taber, 2002; McDermott, 2002).

Framing experiments have created a solid empirical basis of the existence and basic mechanisms of framing for future framing studies to build on. However, the extensive use of experimentation has left some researchers speculate to what extent “realism” must play a larger role in future framing effects research (e.g., Barabas & Jerit, 2008; Kinder, 2007). Kinder (2007, p. 157), for instance, criticises the use of experimental designs for future framing studies. The author emphasises that framing experiments may have exaggerated the power of the media, simply because they ensure that “frames reach their intended audiences”, instead of being deflected off a typically uninvolved media user. As a remedy, he suggests the use of real-life events to generate natural experiments. However, Kinder also acknowledges that doing so requires a “decisive shift in the deployment of frames in some real-world setting” – a condition very rarely fulfilled (see Boomgaarden & de Vreese, 2007; Gerber et al., 2009).

How *can* researchers—in the absence of such events—keep track of realism in their framing effect studies, and still retain the qualities that a good experimental design offers? A number of recent studies suggests a greater focus on “experimental realism” (McDermott, 2002, p. 333) in their design: Druckman (2004, p. 685), for instance, challenges the generalizability and persistence of many discovered framing effects. He suggests a greater focus on the experimental frame exposure scenario, the “context of the study”. Chong and Druckman (2007b) present their participants with competing framing scenarios – yet still within an experiment. In doing so, the authors create a more realistic setting, as most media exposure on a particular issue is characterized not just by repetition of one specific, but a multitude of competing frames (see

also Jerit, 2009; B. Scheufele, 2004; Sniderman & Theriault, 2004). Future studies still need to test in experimentation how repetitive and consonant exposure to news frames changes magnitude as well as process of framing effects (see Noelle-Neumann, 1973; Peter, 2004).

The contestability of extant framing effects research does not only depend on the exposure scenario itself, but also on the over-time persistence of the produced effect. All expressed criticism on the generalizability of framing effects alludes to the necessity of including the variable “time” into future studies (Chong & Druckman, 2007a). After all, a time-persistent framing effect allows researchers to draw conclusions on the political and societal relevance of their results. If experimental framing effects prove to be very short-lived, one must continue to question the applicability of purely experimental designs for framing effects studies. De Vreese (2004, p. 206) argues that longitudinal experimental designs are a “worthwhile path to pursue in the quest to disentangle the robustness and persistency of effects”. Gaines et al. (2007) strongly advocate the further use of survey experiments in social science research, but only if these are enriched with a focus on time and the duration of effects. The authors even suggest that

determining the rates of decay of various treatment effects and deriving the political implications could be one of the most informative tasks that users of survey experiments undertake in the future (p. 6).

Future framing effects research must, thus, not move away from employing purely experimental designs, nor must it continue on producing simple immediate measurement results. By accompanying the participant from the laboratory to the outside world, realism and experimental standardization can be united. This is what this study attempts to accomplish.

The Duration of Framing Effects

The greater part of extant framing effects studies emphasizes the relevance of their results for politics (see Druckman, 2004; Kahneman, 2000). However, such assumptions cannot be sustained without further investigation of the persistence or duration of these results (Gaines et al., 2007). Only recently have framing scholars actually begun to include duration into their designs (e.g., Druckman & Nelson, 2003). With a small number of studies under way, knowledge and data regarding the rate of decay of framing effects after initial exposure and measurement remains inconclusive.

Tracing the effects of media messages over time is of course not a novel idea. Already in 1951, Hovland and Weiss presented their study on learning effects over time. The authors found that individuals tend to forget the source of a message – but are still affected by its content after weeks. What went down in history as the “ sleeper effect ” initiated a consistent line of studies in learning, persuasion or agenda-setting effects research, all of which included time as a significant variable in their designs (e.g., Iyengar & Kinder, 1987; Kleinnijenhuis, van Hoof, & Oegema,

2006; Mutz & Reeves, 2005; Wanta & Hu, 1994). Despite these efforts, scholars continue to be bashful when it comes to examining the over-time persistence of their effects. Studies that *do* consider durability arrive, moreover, at equivocal results, only test one delayed time point, or fail to put full analytical focus on their over-time design. So far, these studies have not established a substantive or empirical standard on *when* exactly a framing effect could be described as “lasting” or not (Gaines et al., 2007).

Tewksbury et al. (2000, p. 818) find a weaker, yet still significant, effect of advocate frames on issue interpretation three weeks after initial exposure. Cautiously, the authors conclude that “exposure to a single news article ... was sufficient to partially direct the comments made by subjects some time later”. Conversely, Druckman and Nelson (2003) report that their issue framing effect on opinion had dissipated only ten days after initial exposure (see also Chong & Druckman, 2008). De Vreese (2004) also suggests that framing effects perish, after only two weeks. He indicates that the dilution of effects of a strategic frame on political cynicism may be ascribed to the almost total absence of access to related elite information in the interim period during data collection (see also Peter, 2004). The conclusions drawn by a majority of studies on duration of framing effects let us very carefully suggest that one-shot framing effects might dilute relatively quickly, and that only multiple exposure to (the same) news frames can produce lasting effects. Thus, so far, the theoretical backbone regarding the duration of framing must remain speculative, as none of the existing studies present substantial ideas on a standard of how to perceive the power of framing effects over time.

A starting point for understanding the duration of framing effects is a look at the psychological processes that enable the effect, that is, the mediators of framing over time. As discussed above, some authors hold framing effects to be mediated by accessibility changes, i.e. by making certain considerations more salient and therefore more likely to be used when forming an opinion (e.g., Iyengar, 1991; Nabi, 2003; Price & Tewksbury, 1997). According to Feldman and Lynch (1988), accessibility is likely to dwindle quickly, depending on how much time has elapsed since its last activation. The exact rate of decay depends on factors such as the total number of repetitions so far, or the strength of related attitudes (see also Fazio, 1995). A majority of framing authors, however, argue that framing effects are applicability effects, which means that a news frame renders certain belief considerations more important. These important belief considerations are, in turn, more likely to be incorporated into subsequent judgments (e.g., Nelson et al., 1997; D.A. Scheufele, 1999). An applicability effect model suggests that news frames alter the composition of an issue attitude, and a stronger and stable effect might be the result (see B. Scheufele, 2004). Yet, again, we do not have sufficient empirical evidence as to how long exactly belief importance changes are likely to last.

Some answers are provided by extant literature on learning and memory, where scholars have argued that at least parts of learned information sticks in memory for a while, ready for later activation (e.g., by means of a “sleeper effect” as described by Lodge et al., 1995; see also Chong & Druckman, 2008). It is important to note that learning effects can involve the learning

of new belief considerations, but also the learning of an evaluative judgment connected to the respective news frame (see also Matthes, 2007; Slothuus, 2008). Yet, rates of forgetting apply to learned information also, albeit forgetting is held to be a much slower process than accessibility-decay (e.g., Hovland & Weiss, 1951; Lodge et al., 1995). We assume that the cognitive process that underlies news framing over time is a combination of accessibility, applicability, and learning effects, with the extent to which each process applies depending on a number of individual or contextual characteristics, such as familiarity with the issue or prior beliefs (e.g., Chong & Druckman, 2007a; Fazio, 1995; B. Scheufele, 2004).

In sum, this article aims to answer some of many open questions regarding the duration of framing effects. Extant studies point towards a quick dissolution of the effects. However, one must consider these findings as provisional, not only because there is still some evidence of persistent framing effects (Tewksbury et al., 2000). Rather, because a majority of the gathered data stems from studies that have considered only one delayed time point and have failed to put full focus on the study of framing over time.

Political Knowledge as a Moderator of Framing Effects over Time

Whatever the rate of decay of framing effects over time may be, it is likely to vary from individual to individual. A rapidly growing number of studies focus on variables that cause such individual differences, that is, variables that moderate the magnitude as well as process of framing effects (e.g., Druckman & Nelson, 2003; Shen & Edwards, 2005). Thus far, a number of individual and contextual moderator variables of framing have been identified (for a summary, see Chong & Druckman, 2007a). Among these, political knowledge has emerged as one of the most intuitive and intriguing moderators of framing. However, studies on the duration of framing effects have so far not addressed its impact over time.²

As indicated above, empirical evidence on the *immediate* effects of political knowledge is still inconsistent. One set of studies suggest that more knowledgeable individuals must be affected to a greater extent by frames (e.g., Krosnick & Brannon, 1993; Nelson et al., 1997). The rationale behind this is that only individuals with higher levels of knowledge can comprehend and integrate a framed message into their mental stockpile. Yet, a second group of studies argues that individuals with higher levels of knowledge are also more likely to *resist* a frame, exactly because they potentially have considered the issue sufficiently enough to allow them to argue against a message (e.g., Chong & Druckman, 2007a). Moreover, as social psychology literature assures, high levels of knowledge often co-occur with strong attitudes and high levels of personal importance attached to a (political) issue (e.g., Wood, Rhodes, & Biek, 1995). It is these strong attitudes, which provide an attitudinal shield against a news frame, and often lead knowledgeable individuals to halt a news frame's effects on subsequent judgments (Haider-Markel & Joslyn, 2001; Lecheler et al., 2009).

Along these lines, low knowledge individuals should be more susceptible to *immediate* frame exposure, simply because they do not possess enough relevant consideration to initially “fight off” the frame. However, the strong effect some experimental frames have on individuals with low levels of knowledge may be facilitated by forced exposure and the dependent variable at stake. Low knowledge individuals may therefore be more susceptible to a “persuasive” framing effect (i.e. a framing effect on opinion via belief importance change *as well as* via the acquisition of *new* beliefs as expressed by Slothuus (2008)), which is not only connected with the lasting integration of a judgment, but also with the reception of new information about an issue. Higher knowledge individuals, though, may be able to actively process information and incorporate it into their existing opinions (i.e. a “classic” framing effect that occurs when certain available beliefs are rendered more important than others). Accordingly, future framing studies may be required to make use of extant knowledge in persuasion literature, take frames as an independent variable and therefore distinguish between the classic “framing effect” and the—complementary—“effects of a frame” (see Lecheler & de Vreese, 2009; D.A. Scheufele, 1999).

The immediate moderating influence of political knowledge on framing effects may not necessarily be mirrored in its *over-time* impact. Investigating political knowledge as a moderator over time requires a consideration of its quality as a processing variable, that is, as a promoter or preventer of effective integration of framed information into the individual’s mental stockpile. Lower knowledge individuals might be prone to a more significant immediate framing effect, but they are also less likely to actively and lastingly integrate the new information into their overall mental stockpile (e.g., Lecheler & de Vreese, 2009). Higher knowledge individuals possess this ability, but are also more likely to resist integration of a news frame, or to quickly relapse to their broad stock of available considerations. Consequently, only individuals who are sufficiently motivated, who display vulnerability to being framed *and* are knowledgeable enough to also integrate the framed message might be affected on a long-term basis. In persuasion research, Zaller (1992, p. 19) refers to this group of individuals as the “moderately aware”, and labels them as most susceptible to media effects, because “they pay enough attention”, but “lack the resources to resist”. Surprisingly, Zaller’s three-group solution on the moderating power of political knowledge has been largely neglected in extant framing research (for an exception, see Slothuus, 2008).

In sum, we note that no extant study on the duration of framing effects has examined how one of the most significant moderators of framing research, political knowledge, functions over time. This is surprising given the central role political knowledge plays in political communication research, and framing research in particular. Putting emphasis on the durability of framing effects requires a more systematic analysis of the rate of decay of the effect across multiple time points and under the inclusion of moderators.

Hypotheses and Research Questions

We formulate two sets of hypothesis plus a research question. Based on an abundance of framing studies, we assume that news frames have a significant immediate impact on the dependent variable, support for a specific issue. Yet, extant studies have furnished us with limited systematic information about the persistence of framing effects. Therefore, we formulated a research question.

H1: News frames affect opinion, so that a news frame stressing “opportunities” results in higher levels of support for an issue, and a news frame stressing “risks” in lower levels of support.

RQ1: Do framing effects persist over time?

Second, we argue that this decay differs from individual to individual. Based on extant studies, we assume that individuals with lower levels of political knowledge will initially be more affected by our frames, simply because they do not possess the mental stockpile to resist the considerations emphasized by the news frame. When focusing on the over-time effect of political knowledge, and thus on the quality of knowledge as a processing variable, we carefully suggest that Zaller’s (1992) “moderately” aware should be affected most persistently. However, given the paucity of relevant research on the influence of political knowledge on framing effects over time, we pose a second research question

H2: Individuals with low levels of political knowledge are more affected by news frames than individuals with moderate or high levels of political knowledge.

RQ2: Do individuals with moderate levels of knowledge display the most persistent framing effects?

Method

To investigate the duration of framing effects, we conducted an online survey experiment with four measurement points among a representative sample of Dutch citizens. As a research subject, we chose the issue of the enlargement of the European Union (EU). Specifically, we tested framing effects on support for the economic development of the EU’s two newest members, Bulgaria and Romania. Overshadowed by the “big bang” enlargement of 2004 with ten new EU member states, Bulgaria and Romania (who entered the EU in January 2007) continue to receive relatively little media attention. This made our experimental design easier to put into practice: First, we expected media coverage in the interim-post exposure period to be

restricted (de Vreese, 2004). Second, we also assumed that pre-treatment exposure to one of our frames was limited (Chong & Druckman, 2008).

General Design

In a single-factor, post-test only, between-subjects experimental survey design, we randomly assigned participants to one of three conditions. These conditions represented two alternative versions of the “economic consequences” frame (see Semetko & Valkenburg, 2000). Additionally, the design included a control condition. Specifically, one frame pointed out the opportunities Bulgaria and Romania presented for the EU market. The second news frame emphasized the risks the two new EU countries bear for the EU market. Using alternative versions of the same generic frame construction is a good way to guarantee a high amount of control in experimental framing research, particularly when the focus lies on the psychological processes that underlie news framing. This is done to ensure commensurability of the effects across conditions. At the same time, external validity was not compromised, because the reference to economic considerations and consequences is one of the most relevant and discussed aspects in the formation of public opinion towards the EU (e.g., d’Haenens, 2005; de Vreese & Boomgaarden, 2003; McLaren, 2007; Semetko & Valkenburg, 2000) and can therefore be found frequently in real political news coverage on EU integration (e.g., de Vreese et al., 2001; Maier & Rittberger, 2008).

To investigate the durability of the framing effects, we re-tested at three delayed measurement points: after one day (t_2), one week (t_3), and two weeks (t_4). To create a clean experimental design, each participant was only tested at a maximum of two points in time. This means that, after being tested immediately after exposure (t_1), participants were purposely split up into groups, and each participant was assigned to only one additional delayed measurement point. We made sure that the groups were split fairly and that each delayed post-test group contained an equal number of participants in the opportunity, risk, and control condition. During their delayed post-test session, participants were re-interviewed on the basis of the same measures that were used in the immediate post-test.

Interim Period

We included a number of variables to control for any intervening influences that might have occurred during the interim period between first and second measurement. In addition to a number of deflective “filler” questions, the delayed post-test questionnaires t_2 to t_4 also contained measurements of issue-specific media exposure during the interim period. Results showed that participants had been exposed to a minimal level of issue-specific news pieces during their respective interim period (only six percent of all participants had been exposed to issue-specific news). Second, we asked participants, how much attention they had paid to issue-related news during the interim period (1 = “no attention” to 4 = “a great deal of attention”). This measurement revealed that participants paid very little attention to related news ($M = 1.26$, $SD =$

.61). Third, we asked participants whether they had discussed the issue with someone else (e.g., family or friends) during the interim period (1 = “I did not discuss it” to 4 = “I discussed it quite a number of times”). Our findings suggested that hardly any participant had discussed the issue ($M = 1.16$, $SD = .57$). Lastly, we conducted a content analysis of all major print media in the Netherlands during the interim period. The results of the interim content analysis showed that there was virtually no relevant news coverage during the data collection period.³

Sample

CentERdata at the University of Tilburg (The Netherlands) recruited a total of 625 individuals (42.7% female, aged between 16 and 92 [$M = 51.67$, $SD = 15.38$]) from their representative web-panel consisting of approximately 2,000 households across the Netherlands. Recruiting into their panel was done using phone, online and face-to-face contacts. Members of their panels are contacted on a regular basis via an online survey tool and are offered incentives for completing online questionnaires on their home computer. The average response rate was 48 percent (AAPOR RR1).⁴ We chose the rather large sample size in this study to make sure that, with the prospect of decreasing response rates over time, each delayed time group did contain a large enough number of participants per message condition (t_2 : $n = 243$, t_3 : $n = 184$, t_4 : $n = 198$). Moreover, we deemed a large sample size necessary to be able to adequately control for news exposure in the interim period.

Procedure

The experimental procedure consisted of three main steps per participant. First, all participants completed an online pre-test survey, including questions relating to socio-demographic variables, prior attitudes, and political knowledge. Following that, participants in the two t_1 treatment groups were exposed to one constructed news article containing either the opportunity or risk frame manipulation. Then, all participants received the online t_1 post-test questionnaire, asking for the dependent variable of opinion on the economic benefits of Bulgaria and Romania within the EU. Participants in the control group moved directly from t_1 pre- to the t_1 post-test questionnaire without treatment.

Next, participants were assigned to one delayed post-test group (t_2 to t_4). This was to ensure that no participant was tested at more than two points in time, as more frequent testing (and therefore the repeated exposure to the same questionnaire) would have threatened the validity of the experimental design (e.g., McDermott, 2002). At the end of the t_1 questionnaire, each participant was informed that they would be contacted one more time for the purpose of doing a follow-up on the present study (participants did not know that they would be re-asked the same questions). The delayed online post-tests (at t_2 to t_4) were then conducted after the respective delay. The test questionnaires at times t_2 to t_4 did not contain additional news frames. Following the delayed post-test, all participants were debriefed.

The design also included a manipulation check (see below). A between condition randomization check on age, gender and occupation performed at the outset of the analysis revealed successful randomization with no between-group differences for the overall t_1 group. An additional randomization check for each of the time groups (t_2 to t_4) did also show a successful splitting into subgroups. The treatment and control groups also did not differ with respect to our pre-intervention moderator variable ($F(2, 622) = 1.42, p = .24$).

Stimulus Material

The stimulus material comprised one news article per condition at t_1 , containing the economic consequences frame in an opportunity or a risk version. We manipulated an article about EU investment in the Bulgarian and Romanian market after the countries' EU accession in 2007. The design of this study recommended using constructed rather than actually published news material: While the economic consequences frame can be found frequently in current political news items and in EU news in particular (e.g., de Vreese, 2009; Maier & Rittberger, 2008), the use of real news coverage would have minimized the commensurability across conditions. Constructed stimulus articles ensured a high amount of control. Effort was made to adapt the presentation and writing of the articles to the structure and language of day-to-day Dutch news coverage. Following previous studies with experimental design, basic core information within the news article was kept identical between the two frame versions (e.g., de Vreese, 2004; Price et al., 1997), while one paragraph in the news story pointed out a number of opportunities or risks regarding the economic consequences of Bulgaria and Romania within the EU market (see underlined text, Appendix B).

Manipulation Check

After being exposed to the stimulus material, participants were asked to indicate on a seven-point scale (1 = "strongly disagree" to 7 = "strongly agree") to what extent the article dealt with the advantages of the issue. The manipulation check showed successful manipulation. Participants in the opportunity condition ($M = 5.94, SD = 1.63$) perceived their article to be more advantageous than participants in the risk condition ($M = 2.35, SD = 1.93$) ($t(612) = 2.75, p < .001$). This allowed the further experimental proceeding with the design and the ascribing of differences between groups in the post-test to the experimental manipulation.

Measures

Although we employed an experimental design, we included a number of *control variables* in our design. Four variables were used as *socio-demographic* control variables, namely gender (42.7% female), age ($M = 51.67, SD = 15.38$) and education ($M = 3.61, SD = 1.48, \text{range} = 1-6$; participants asked for highest completed degree). Extant studies state that political predispositions, represented by prior attitudes to an issue, play an important role when determining framing effects (e.g., Brewer, 2001; Chong & Druckman, 2007a). To measure *prior*

attitudes towards the EU, participants were presented with two scenarios, where opposing opinions were represented by a person “A” and a person “B” (Slothuus, 2008). With each scenario, participants had to indicate with which person’s opinion they agreed to a greater extent ($M = 3.27$, $SD = 1.01$) (for scenarios and scaling, see Appendix C).

The dependent variable of *opinion*— support for the perceived economic benefits of the EU membership of Bulgaria and Romania—was measured according to two items on a seven-point scale with higher scores indicating increased support for the issue ($t_1 M = 3.73$, $SD = 1.28$; $t_2 M = 3.61$, $SD = 1.25$; $t_3 M = 3.81$, $SD = 1.28$; $t_4 M = 3.76$, $SD = 1.28$; Cronbach’s alpha = .68). Levels of *political knowledge* are best measured using factual rather than perceived knowledge on an issue (Delli Carpini & Keeter, 1993). Thus, political knowledge was tapped by asking five factual multiple choice questions asking for both national and EU-related knowledge (see Appendix C). The items were chosen to ensure a sufficient amount of variation in our sample. EU-related knowledge questions often yield low threshold means, and render an adequate split of a sample difficult (e.g., Schuck & de Vreese, 2006). Extant literature on the definition and measurement of political knowledge indicates that national knowledge can also be used as an indicator in EU-related studies (e.g., Hobolt, 2007).⁵ The variable ($M = .59$; $SD = .29$) is an additive index from 0 to 1. Cronbach’s alpha for this scale was .67. In line with Zaller (1992), we divided participants into three groups: low political knowledge (0-1 correct answer, $n = 144$), moderate political knowledge (2-3 correct answers, $n = 168$), and high political knowledge (4-5 correct answers, $n = 303$).

Results

In this study, we present a test of the duration of framing effects over time, and analyze how this duration depends on differing levels of political knowledge. We examined duration in four steps. First, we established whether a classic experimental survey design results in a significant initial news framing effect. Second, we traced this effect across three delayed time points. Third, we determined the immediate moderating effect of political knowledge. Finally, we looked at the conditionality of the decay, depending on differing levels of political knowledge.

Immediate Framing Effect

We predicted that, if an individual is exposed to a news frame, this would initially affect the dependent variable opinion. The results support our expectations. We find that participants in the opportunity economic consequences frame condition supported Bulgaria and Romania more ($M = 4.37$, $SD = 1.12$) than those in the risk condition ($M = 3.27$, $SD = 1.20$). Participants in the control condition were, on average, found to fall between these two values ($M = 3.54$, $SD = 1.25$, $F(2,614) = 47.23$; $p < .001$). Thus, the frame had a strong immediate effect on our chosen

dependent variable, and *HI* can be supported. This enables our further analysis of the dissipation of this effect across time.⁶

Framing Effects over Time

Our study traces effects across multiple delayed time points, and can therefore produce stronger claims on the short- or long-term persistence of framing effects. We incorporated three additional delayed time points: after one day (t_2), one week (t_3), and two weeks (t_4). Table 3.1 shows mean differences and significances between the opportunity, risk, and control condition immediately and at all delayed time points. We cautiously suggested a quick dissolution of the effects. However, surprisingly, we find that the difference between the opportunity and risk condition remain significant until t_4 , which is a full two weeks after initial exposure. This indicates that experimental framing effects have the chance to persist over time. However, the means also demonstrate that the effect had weakened considerably during the time period.

Table 3.1: Framing Effects Over Time

	Opportunity (n = 211)	Risk (n = 206)	Control (n = 208)
immediate (t_1)	4.37 ^{ax} (1.12)	3.27 ^{bx} (1.20)	3.54 ^{bx} (1.25)
after one day (t_2)	4.19 ^{ax} (1.14)	3.26 ^{bx} (1.16)	3.37 ^{bx} (1.23)
after one week (t_3)	4.07 ^{ay} (1.57)	2.72 ^{bx} (1.24)	3.42 ^{bx} (1.35)
after two weeks (t_4)	3.97 ^{ay} (1.02)	3.16 ^{bx} (1.49)	3.64 ^{bx} (1.36)

Note. Different *abc* superscripts indicate a significant difference ($p < .05$) between conditions within one time group; different *xyz* superscripts indicate a significant difference ($p < .05$) within a condition between t_1 and one other time point (t_2, t_3, t_4); higher mean values indicate increased support for the economic benefits of Bulgaria and Romania within the EU.

A closer comparison shows an interesting dynamic in the dissipation of the framing effects. After one day, the means differed only very slightly. However, one week after exposure (t_3), participants in the t_3 risk condition displayed even less support for Bulgaria and Romania within the EU than the overall t_1 group immediately after frame exposure – even though the shifts were not significant. Participants in the t_3 opportunity condition, however, showed opposite effects, i.e. were significantly less positive than the t_1 opportunity condition mean ($t(40) = 3.79, p < .001$). T_4 results solidify this trend of a relatively consistent risk framing effect, whereas the opportunity framing effect continued to fade significantly ($t(34) = 2.22, p < .05$). These findings indicate a difference in the decay of effects of opportunity and risk news frames, in that opportunity frames (which were initially more effective) dissipated quicker than the risk framing effects. Possible explanations for this dynamic will be discussed below.

Immediate Effect of Political Knowledge as a Moderator

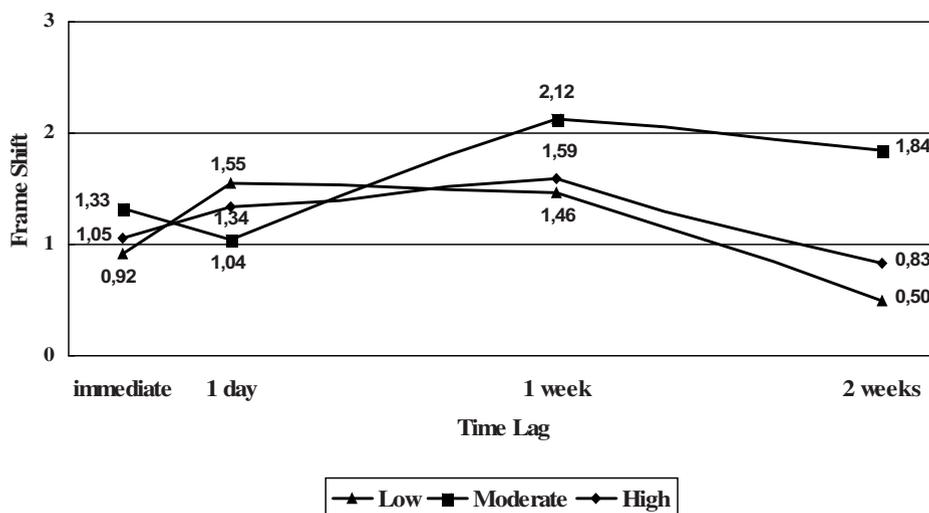
We also examined the influence of differing levels of political knowledge on the decay of framing effects. Based on extant studies, we predicted that *immediate* framing effects are stronger among individuals with lower levels of political knowledge, because these individuals are less able to resist a framed argument (e.g., Lecheler & de Vreese, 2010; Schuck & de Vreese, 2006). We compare the “frame shift” of these two groups, that is, the absolute difference between opportunity and risk condition in level of support (e.g., Chong & Druckman, 2008). As our study does not investigate within-subject change across all time points (see experimental design), we use this measure to illustrate the magnitude of the framing effect over time.

Contrary to our prediction, the overall frame shift mean comparison immediately after exposure (t_1) does not show a significant difference between high, moderate and low knowledge groups. To solidify these initial findings, we regressed our dependent variable of opinion on a dummy variable of frame exposure (1 = opportunity frame exposure), and added our control variables to the model.⁷ We also added a measure of prior attitudes towards the EU to the model, and therefore controlled for events that had shaped participants’ opinions prior to our framing experiment (see Brewer, 2001; Chong & Druckman, 2008; Shen & Edwards, 2005). A comparison of main effect coefficients across the three knowledge groups shows strong influences of the frame on opinion across the board. The frame had thus more or less equally strong effects on all three knowledge groups at t_1 , and the results of both the mean comparison and the regression analysis do not lend support for *H2*.

Effect of Political Knowledge as a Moderator over Time

Political knowledge did not function as a moderator at t_1 . Looking at the role this variable plays across the delayed measurement points in Figure 3.1 shows that, over time, political knowledge emerges as an important moderator of framing effects.

Figure 3.1: Framing Effects over Time – Three Different Levels of Political Knowledge



Given the scarcity of relevant research, we did not formulate a hypothesis concerning political knowledge as a moderator over time, but a directional research question (*RQ2*). Based on Zaller's work (1992), we asked whether moderately politically knowledgeable individuals would display the most durable framing effects, due to their susceptibility to being framed, and their capability of actively integrating the frame into their inventory. The analysis demonstrates that this is indeed the case in our study. Figure 3.1 shows that, as time progresses, both effects on individuals with low and high knowledge levels dissipate to a substantial extent, while the moderately knowledgeable continue to be affected by t_1 frame exposure. A closer look at the progression line shows that this mechanism only surfaces, after some days had passed: After one day, we do not find substantial difference between high (frame shift = 1.34), moderate (frame shift = 1.04), and low knowledge individuals (frame shift = 1.55). However, one week after exposure, the mean comparison shows strong framing effects for the moderately knowledgeable participant group (frame shift = 2.12), while high (frame shift = 1.59) and low knowledge individuals (frame shift = 1.46) show lower shifts. Two weeks after exposure, moderately knowledgeable participants still displayed a surprisingly strong frame shift (= 1.84, $t(24) = 3.23$, $p < .01$). Effects on individuals in the low (frame shift = .50, $t(10) = 0.53$, $p > .05$) and high group (frame shift = .83, $t(61) = 2.42$, $p < .05$), however, had diluted more substantially.⁸

A more conservative test of this effect development, a regression analysis for each delayed time point for the three knowledge groups, confirmed these findings. As in the t_1 regression analysis, we included control variables into each model. This means that we again incorporated prior attitudes towards the EU into the models, and therefore accounted for a determining predictor of opinion besides experimentally induced frame exposure. Table 3.2 shows that—after two weeks—framing effects on participants with low levels of political knowledge had dissipated substantially (Model 1). A similar trend is visible for high knowledge participants, although we still detect a significant effect of frame exposure (Model 3). However, Model 2 shows that our group of moderately politically knowledgeable was still most affected by t_1 frame exposure. Beyond the main effects, we find an interesting dynamic regarding the influence of prior attitudes towards the EU on opinion over time: While the low and moderately aware showed no significant effect of these prior attitudes on the dependent variable, this was not the case for the highly knowledgeable, and Model 3 shows prior attitudes towards the EU as a significant predictor of t_4 opinion for high knowledge participants. This further corroborates our initial suggestions of the effect of political knowledge on framing effects on opinion formation over time.

Table 3.2: Regression Models Predicting Opinion - t_4 (after 2 weeks)

	Model 1	Model 2	Model 3
	Low Knowledge	Moderate Knowledge	High Knowledge
<i>Controls</i>			
Age	-.363(.157)	-.077(.223)	.014(.107)
Gender (1=fem)	-.378(.300)	.117(.618)	.275(.287)
Education	.172(.116)	.007(.224)	.114(.105)
Prior Attitudes / EU	.015(.921)	.293(.335)	.645***(.154)
<i>Main Effects</i>			
Frame (1=opp)	.194(.309)	1.74**(.569)	.906*(.375)
Constant	4.87**(1.09)	2.13(2.08)	.522(.826)
Adjusted R ²	.380	.191	.290
N	15	20	58

Note. Ordinary least squares regression. Data are unstandardized regression coefficients and standard errors (in parentheses), * $p < .05$; ** $p < .01$; *** $p < .001$.

Overall, our results show that political knowledge has the ability to influence the magnitude (and probably process) of framing effects over time.

Discussion

Framing experiments are omnipresent in communication research, and they have established a solid empirical basis on the mechanisms that enable framing effects. But how useful are these experiments for making predictions about real-life politics? Based on recent criticism on the generalizability and robustness of framing effects results an increasing number of scholars focus on creating somewhat more “realistic” research designs (e.g., Chong & Druckman, 2008). One fundamental part of such realism is the examination of the *duration* of framing effects (Gaines et al., 2007). However, so far, only very few studies have collected data on the duration of framing effects, and existing results are tentative. This article augments a framing experiment with a number of delayed measurement points, as well as with a moderator analysis for all these points. In doing so, we aim to introduce effect duration as a standard variable for future framing research, and we view our results as an important first step.

The results of our experiment showed a strong immediate effect of a framed news article on opinion towards the economic benefits of Bulgaria and Romania in the EU. To tap rate of decay, we tested the magnitude of this effect at three additional delayed time points (respectively, after one day, one week, and two weeks). Our framing effect proved to be surprisingly resistant to dilution – but still faded considerably over the chosen time period of two weeks. Next, we analyzed whether the speed of the decay depended on differing levels of political knowledge. Contradictory to our expectations, we found no immediate moderating effect of political knowledge. However, over time, participants with moderate levels of political knowledge displayed most consistent framing effects compared to participants with low or high knowledge levels.

We believe that our findings on the general decay of framing effects add substantially to extant framing literature. We show that a framing effect can persist beyond initial exposure. In fact, the effects in our study proved to be extraordinarily robust. This contradicts both common perceptions in present literature on the duration of framing effects as fragile snapshots of opinion formation, as well as past claims of a quick dissolution of an experimentally generated news framing effect (e.g., Chong & Druckman, 2008; de Vreese, 2004; Druckman & Nelson, 2003). However, our results lend theoretical as well as methodological support to those many framing effects experiments that have based their real-life predications on one-shot experimental designs. We believe that the use of experimental (survey) designs in framing effect research should be encouraged – but under consideration of both experimental realism (e.g., the creation of a more complex exposure scenario), and the real-life persistence of the effects. Future studies could, for example, test persistence by exposing participants to multiple frames over time (see Gaines et al., 2007; Peter, 2004). We conclude that framing experiments can indeed bring something more permanent and effectual into being than had been assumed by some scholars (e.g., Kinder, 2007; Sniderman & Grob, 1996). Based on such assertions, our results also open up plenty of theoretical questions. Most importantly, we believe that future studies are obliged to explore the

relationship between (non-)persistent framing effects and the psychological processes that enable learning effects (see Lecheler & de Vreese, 2009). The long-term acquisition of framed information *must* go hand in hand with the “learning” of considerations. Consequently, learning mechanisms, such as the named “sleeper effect”, could apply to framing also. Based on recent empirical evidence which shows that with every frame, an individual also acquires new belief content (Slothuus, 2008), framing scholars should also put more emphasis on the role of persuasive serial position effects in a dynamic over-time framing scenario (see Chong & Druckman, 2008).

We also traced the impact of one of the most important moderator variables in framing effects research over time: political knowledge. Against expectations, we did not find an immediate effect of political knowledge on the magnitude of the framing effects. Potential reasons for this non-finding are discussed below. More importantly, we note that, in a “one-shot” study, this finding would have led us to discard political knowledge as a moderator variable. Nonetheless, political knowledge played a decisive role over time, especially on a more “long-term” basis (after one and two weeks). We ascribe the fact that the moderately politically knowledgeable were affected most consistently by our frames to Zaller’s (1992) argumentation on the nonlinear effects of political knowledge on the formation of public opinion. While we still argue that low knowledge individuals are bound to be most susceptible to immediate (forced) frame exposure (see Schuck & de Vreese, 2006), these individuals are prone to not engage and process political information thoroughly after exposure (Zaller, 1992, p. 21). High knowledge individuals may have been initially affected in our study, however, these individuals are more likely to encounter other (competing) information in the interim period, and have a higher ability of rejecting a political argument after some time (p. 121). Thus, we are left with the moderately knowledgeable, a group characterized by a certain level of cognitive engagement, but without access to a plethora of possibly competing considerations on the issue.

There are a number of caveats in our study. We tested effects of a set of frames, concerning *one* particular issue, and could only acknowledge *one* moderator variable. Also, our particular interim period was characterized by an extraordinarily small amount of elite information on the framed issue (see also de Vreese, 2004). While these conditions were ideal from a methodological point of view, they rendered our design more artificial than originally intended. This leaves us with the question of how quickly our effects would have dissipated, had we chosen another, potentially more omnipresent, issue. The use of a different framing conceptualization is also likely to have affected our results (see e.g., Matthes, 2009), and we could only touch upon the plethora of processing variables which we believe will moderate the duration of framing effects. Gaines et al. (2007, p. 6) argue that “one frame’s effects [might] last longer than another’s”, and we hope that future studies will examine these variations. Lastly, given the scarcity of relevant research, we had no clear theoretical assumption about how to pick the delayed measurement points in our study. Future studies must build on our design, and determine the optimum time-lags step by step.

The slightly puzzling differences between framing effects for opportunity and risk news frames are another aspect for further discussion and research. Intuitively, and based on literature, we expected the negatively valenced risk frame to be more effective immediately after exposure (Meffert, Chung, Joiner, Waks, & Garst, 2006; Soroka, 2006). This was not the case. Explanations for this phenomenon must remain cautious. We assume that individuals exposed to the opportunity frame were somewhat “surprised” by its content, given the overall negative tone and public opinion towards the European Union and its endeavors in the Netherlands. This surprise might have left participants with a more profound impression of what they had read, while the risk condition experienced some kind of a “floor-effect”. Only further study on valenced news framing over time across issues and frames can uncover the mechanisms behind our finding in this study.

Another potential limitation of our study was that political knowledge did not emerge as a moderator of framing effects immediately after exposure. This may be connected with the personal importance many individuals attach to the chosen issue of EU enlargement. While the European Union is perceived to be important on a national level, individual attitudes connected to it are generally weak, because citizens often find them of little consequence for their personal lives. Lecheler et al. (2009) argue that, when an issue is of little personal importance, and has received only relatively little news coverage on a national agenda, framing effects are likely to be much stronger and across the board. Nevertheless, we want to stress that political knowledge emerged as an important processing variable over time. Our finding highlights the strong need to determine the relationship of knowledge with psychological variables such as attitude strength and extremity, which is a connection many political communication studies do not make. The duration of framing effects has been shamefully neglected in past framing research. Slowly but steadily, however, more and more studies pop up that do consider the generalizability and strength of their results. This article aims to contribute to this development by providing first insights into how long a one-shot framing effect can actually last. While our results are surely only a drop in the bucket, they are a drop that was long overdue: To consider the persistence or context of experimental framing research is perhaps one of the most exciting tasks of our research field. Future studies should therefore not only explore mere decay rates. They should also focus on the (theoretical) circumstances that are likely to speed up, slow down or stop the decay of framing effects, and further develop the necessary research designs to test framing effects over time.

Notes

¹ The literature argues, moreover, a “negativity bias” when it comes to valenced media content. This means that the effects of negative information are likely to dominate over positive information (e.g., Meffert et al., 2006; Soroka, 2006; Vliegenthart et al., 2008). Framing studies support this finding, and indicate that negatively valenced frames are very powerful in affecting peoples’ opinion and attitudes (e.g., Cappella & Jamieson, 1997).

² Chong and Druckman (2008, p. 14) do not test for political knowledge, “because of sample size considerations, and because [they] have no theoretical expectation that over-time effects will be specified by knowledge”. Instead, the authors choose the variable “processing style” as a determinative information variable required for examining the decay of framing effects (see Hastie & Parks, 1986).

³ We coded ten major print news outlets of the Netherlands for (1) issue, (2) presence of the “economic consequences” frame, and (3) tone. The analysis only included 20 issue-relevant articles published within the data collection period. The economic consequences frame did not feature prominently in the coded articles ($M = .25$, $SD = .35$; three items: (1) “Is there a mention of the costs/degree of expense involved?”, (2) “Is there a reference to economic consequences of pursuing or not pursuing a course of action?”, and (3) “Is there a mention of financial losses or gains now or in the future?”; (yes = 1, no = 0); score built by adding items and dividing by total number of items; Cronbach’s $\alpha = .745$; see Semetko & Valkenburg, 2000). The tone of the articles was overall more negative than positive ($M = 3.86$, $SD = .37$; tone measured on 5-point scale from 1 = only positive to 5 = only negative). Intercoder reliability was $\alpha = .66$.

⁴ Due to re-testing, we expected lower response rates at the delayed time points; response rates for t_2 group: 40 percent, t_3 group: 56 percent, t_4 group 49 percent.

⁵ We also tested our moderator analysis based on two separate scales, one for national and one for EU-related knowledge. The results of this test did not differ substantially from the overall result.

⁶ We report our immediate framing effects result for all 625 participants. After t_1 , we split up participants into three delayed post-test groups. All reports of delayed framing effects are thus only based on a sub-set of the sample. To make sure, that these subsets are comparable across time (i.e., that we split up the groups in a fair manner), we analyzed whether t_1 results for each re-test group mirrored the results of the overall t_1 group which had included all participants. The analysis showed that the different time subgroups do not deviate substantially from the overall group results: t_2 group: opportunity ($M = 4.22$, $SD = 1.31$), risk ($M = 3.15$, $SD = 1.14$), control ($M = 3.49$, $SD = 1.23$) ($F(2, 195) = 15.03$, $p < .001$); t_3 group: opportunity ($M = 4.60$, $SD = 1.18$), risk ($M = 3.26$, $SD = 1.26$), control ($M = 3.58$, $SD = 1.02$), ($F(2,141) = 17.87$, $p < .001$); t_4 group : opportunity ($M = 4.19$, $SD = 1.12$), risk ($M = 3.30$, $SD = 1.30$), control ($M = 3.77$, $SD = 1.28$), ($F(2,152) = 6.44$, $p < .01$)).

⁷ Regression tables for t_1 , t_2 and t_3 can be found in Appendix F.

⁸ For t_2 group: high knowledge: frame shift = 1.34, $t(76) = 3.83$, $p < .001$; moderate knowledge: frame shift = 1.04, $t(28) = 2.22$, $p < .05$; low knowledge: frame shift = 1.558, $t(30) = 2.92$, $p < .01$. For t_3 group: high knowledge: frame shift = 1.59, $t(39) = 3.64$, $p < .01$; moderate knowledge: frame shift = 2.12, $t(22) = 3.65$, $p < .01$; low knowledge: frame shift = 1.46, $t(27) = 2.38$, $p < .015$.

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WHAT A DIFFERENCE A DAY MADE? THE EFFECTS OF REPETITIVE AND COMPETITIVE NEWS FRAMING OVER TIME¹

Manuscript under review

Abstract

Based on a “classic” framing experiment ($n = 1,324$), this study empirically tests the dynamic nature of framing effects over time. We integrate (1) multiple frame exposures as well as (2) various tests for duration of framing effects into our design. Our results show that exposure to repetitive news frames has a consolidating effect on opinion formation. This effect is stronger the shorter the delay between two exposures. Competitive news framing is characterised by recency effects; i.e. the latest frame has the strongest impact on opinion formation. Political knowledge functions as a moderator for both effect mechanisms. Participants with higher levels of political knowledge are less prone to recency effects, but more likely to develop a consolidation effect. The results of this study have important methodological and substantive ramifications for framing effects research, as well as for our understanding of the real-life impact of framed media messages on public opinion.

Introduction

Kahneman (2000) wrote that framing effects are “less significant for their contribution to psychology than for their importance in the real world” (p. xv). But, how valuable are existing results in framing research in terms of this real-life adaptability? A majority of news framing effect studies *do* emphasize the relevance of their results for actual politics or political communication (e.g., Berinsky & Kinder, 2006; Nelson, Oxley, & Clawson, 1997; Valkenburg, Semetko, & de Vreese, 1999). The substantive and methodological foundations of such conclusions are, however, still unclear. So far, only a fraction of studies have actually empirically assessed the persistence of their results in a real-life context.

This of course does not invalidate existing studies. Framing studies have provided a solid theoretical and empirical foundation from which future studies can depart to evaluate how “the apparent variability of opinion as a function of the framing of an issue” must be understood (Sniderman & Theriault, 2004, p. 145). In recent years, researchers have begun to consider tests of the *duration of effects* as one necessary development of the study of framing effects (e.g., de Vreese, 2004; Druckman & Nelson, 2003; Tewksbury et al., 2000). Only by investigating duration, goes the argument, can we make convincing statements about the significance of existing findings, and refute criticism of the “value” of framing theory for politics and political communication (Gaines, Kuklinski, & Quirk, 2007; Tewksbury & Scheufele, 2009).

Recently, we suggested that framing effects evoked by a single news frame can be relatively persistent, with visible effects even a full two weeks after exposure (Lecheler & de Vreese, 2009a). These results support claims of the real-life applicability of framing effects (see also Tewksbury et al., 2000). However, they have also opened up a plethora of new questions on the role of framing effects in a dynamic media use scenario. Consequently, we propose a more advanced account of the duration of framing effects. Following claims by Gaines et al. (2007) and others, in this study we measured effect duration across a number of delayed time points. However, we also enriched our design with multiple frame exposures over time, some repetitive, others competitive in nature (e.g., Sniderman & Theriault, 2004). In doing so, we mimicked a dynamic media use scenario, and moved one step further in the direction of a more “realistic” study of news framing (see also Chong & Druckman, 2008).

Our theoretical framework takes its starting point in the psychology of framing effects, and the influences of repetitive and competitive exposure on framing effects. We then combined these insights with recent results on the duration of framing effects. Embedded in a “classic” framing experiment, we tested the magnitude of a framing effect immediately and at four delayed time points. In addition, we investigated the effects of re-exposure to either a repetitive or a competitive news frame. We investigated the conditionality of the found effects, and in particular the role of political knowledge as a moderator. It is our aim to advance the temporal dimension in framing research. We believe that, for too long, framing effect studies have relied

on the mere assumption that their results can be generalized and used to make predictions about real-life politics.

The Effects of Repetitive and Competitive News Framing

Investigating news framing effects is fascinating, because it offers the researcher a tool to explain why “(often small) changes in the presentation of an issue or an event produce (sometimes larger) changes of opinion” or other outcome variables (Chong & Druckman, 2007a, p. 104). Framing scholars have undertaken considerable effort to produce a coherent theory of framing effects (e.g., Chong & Druckman, 2007a; Entman, 1993; Scheufele, 2000). While there are still open questions, frames can generally be defined as patterns of interpretation that are used to classify information and process it efficiently. Frames stress certain aspects of reality and push others into the background, they have a selective function. In this way, certain attributes, judgments, and decisions are suggested (e.g., Scheufele, 2000).

Framing studies typically employ either equivalency or emphasis frames. Equivalency frames refer to logically alike content, which is presented or phrased differently (see e.g., Kahneman & Tversky, 1984). Emphasis frames are closer to “real” journalistic news coverage and present “qualitatively different yet potentially relevant considerations” (Chong & Druckman, 2007a, p. 114). Research has, moreover, worked with two alternative operationalizations of frames in the news, namely issue-specific and generic frames (Semetko & Valkenburg, 2000). Issue-specific frames pertain to a specific topic, while generic news frames are applicable to a wide range of topics. The wide application of generic frames makes it easier to compare framing effects across issues and generic frames have thus been utilized in framing experiments (see e.g., Lecheler, de Vreese, & Slothuus, 2009 for a recent example). It is, moreover, important to note that generic news frames used in empirical framing studies are in most cases characterized by a specific valence. This valence pertains to one of the most fundamental characteristics of political discourse, namely that (political) elites attempt to purposively affect support or rejection for an issue by emphasizing the positive or negative aspects of it. According to de Vreese and Boomgaarden (2003), valenced emphasis frames have the capacity to affect opinion on and support for an issue, while neutral emphasis frames are more likely to affect issue interpretation (see also Bizer & Petty, 2005).

Studies often take a rather microscopic view of the influence of news frames on how citizens make sense of politics. This means that, in their design, these studies have very successfully measured the effects of only *one* frame at a time (e.g., Nelson et al., 1997). Building on this strong empirical foundation on the “existence” of framing effects, a necessary next step is to evaluate the “meaning” of these effects in a more realistic setting that adheres to the dynamics of day-to-day news use. In this respect, research has yet to deliver a satisfying account of the role of news framing *within* politics, where the dynamics of argumentation, dispute, and consensus are the order of the day. Such an endeavor can build upon the groundwork of Zaller (1992,

1996), who developed a comprehensive model for the effects of dynamic media communication flows on opinion formation. According to Zaller, the media only have a substantial effect when their content is repeatedly presented in one consistent way; i.e. it must be *one-sided* (see also Noelle-Neumann, 1973; Peter, 2004). *Two-sided information*, the exposure to competing and conflicting messages, leads to an annulment of potential media effects (see also de Vreese & Boomgaarden, 2006a). Political communication can thus involve either the (1) *repetition of* or (2) *competition between* news frame messages over time and the outcome of these two is likely to vary. The existing literature on framing processes offers a number of explanations for the psychological mechanisms that may underlie these different effects.

Repetitive exposure to news frames has been addressed regularly, albeit often not in a systematic way. Rather, a number of scholars have incorporated multiple exposures to the same news frames as a means to achieve greater “experimental realism” in their designs. Berinsky and Kinder (2006, p. 644), for instance, presented a treatment consisting of five repetitive frames. The authors argued that, in doing so, they were able to capture “the ways in which different media outlets could present the same information in qualitatively different ways” (see also Valkenburg et al. 1999). Yet, these studies do not address how framing effects stemming from multiple exposure compare in magnitude and process to effects of being exposed to only one frame.

The influence of repeated framing has, nevertheless, been widely discussed elsewhere. A number of political communication scholars have argued that repetitive news framing leads to a higher and more constant level of *accessibility* (e.g., Iyengar, 1991; Price & Tewksbury, 1997; Cappella & Jamieson, 1997; Nabi, 2003). This argument is based on psychological literature, which sees repetition as one of the major determinants of strong and stable attitudes (e.g., Holland, Verplanken & van Knippenberg, 2003). Price and Tewksbury (1997) incorporated the concept of repetitive exposure into their framing effect model and argued that frequent repetition heightens the accessibility of applicable information, and thus guarantees the influence of a frame on a long term basis as well. Similarly, Iyengar (1991) found that, at least in politics, people rely most on information that is continuously made accessible to them in the news media (see e.g., Cappella & Jamieson, 1997; Nabi, 2003).

Repetition also resonates in research on learning, memory and recall: Judd and Brauer (1995), for instance, argued that repetition leads to a strengthening of mental links between an attitude object or issue and related beliefs, which enables individuals to retrieve evaluative judgments connected to this issue more aptly. This argument is reminiscent of more recent studies of framing, which have found that the level of entrance applicability also decides the strength and longevity of a framing effect. Accordingly, framing effects depend “on individual evaluations of the quality of frames” and not on how often they were received (Chong & Druckman, 2007b, p. 651). We believe that accessibility and applicability must be understood not as contradictory, but as complementary factors. Heightened accessibility increases the

likelihood of stable attitude changes. However, if entrance applicability levels are low, repetition is likely to be ineffective (see e.g., Baden, 2009; Matthes, 2007).

Competitive news framing has received quite a bit of attention in political communication and framing literature, possibly because the study of dispute and dissent is one of the most fascinating aspects in political communication research (Neuman, Just, & Crigler, 1992). As elucidated above, Zaller (1992, 1996) argued that exposure to two-sided information should lead to the obliteration of media effects, as conflicting measures simply cancel each other out. Several framing scholars have successfully tested this proposition. Sniderman and Theriault (2004) had one additional condition in their experimental design, where two competing news frames were presented at the same time. Results indicated that competitive framing increased the influence of personal beliefs and decreased the effects of news framing (see also Hansen, 2007). These findings indicate a strong connection to the basic principles of motivated reasoning (Chong & Druckman, 2007a; Druckman & Bolsen, 2009), where the so-called “disconfirmation bias” stands as a central mechanism that “protect[s] or even bolster[s] ... prior attitudes and beliefs in the face of discrepant evidence” (Taber, Cann, & Kucsova, 2009, p. 138; see also Kunda, 1990; Taber & Lodge, 2006). Chong and Druckman (2007b, p. 651) elaborate on these findings, and examine the effects of competitive framing with frames of varying strengths.² They show that competitive framing “tend[s] to stimulate individuals to deliberate on the merits of alternative interpretations”, which increases the potential of rejecting “weaker” frames in communication.

Framing research has, thus, widely explored the influences of repetitive and competitive news framing on the magnitude as well as the process of framing, and has shown that repetitive framing has the potential to strengthen framing effects, whereas competitive framing may annihilate these effects and enable a return to extant personal beliefs and values as the foundations of political attitudes. Yet, the results of repetitive and competitive news framing studies have mostly been based on one-shot experimental settings, where the magnitude of the framing effect was tested only immediately after exposure to a frame. Thus, the robustness of the effects over time remains an open question.

Dynamic Framing Effects over Time

What happens when multiple news frames are presented sequentially, across longer stretches of time? What role does the length of the period between two frame exposures play? Without knowing more about the duration and persistence of framing effects, researchers cannot make convincing arguments about their significance for daily politics. Along these lines, Gaines et al. (2007) strongly advocated the use of survey experiments to test news framing effects, but only if these are enriched with a focus on *both* multiple exposures and the duration of effects.

The study of the duration of framing effects is still in its infancy, with only a handful of rather straightforward studies published. Researchers have tested the duration of framing effects by exposing participants to one strong news frame, followed by one immediate and one delayed

measurement (e.g., Druckman & Nelson, 2003). Noticeably, very little reasoning for the exact length of the chosen interim period was provided. One group of researchers has concluded that framing effects dissipate quickly (e.g., de Vreese, 2004; Druckman & Nelson, 2003), whereas a second group argued that framing effects can be persistent over time (e.g., Lecheler & de Vreese, 2009a; Tewksbury et al., 2000). None of the existing studies specifically discussed why and when a framing effect would be persistent *enough* to be called “lasting” as opposed to “transitory” or “fleeting” (see Gaines et al., 2007). On a more general level, we question the quality of a lasting or non-lasting news framing effect if this result only holds in the vacuum of a single exposure.

Above we discussed the effects of a consonant and repetitive news frame flow on the magnitude and process of framing effects. Initially, based on the given assumptions about heightened accessibility through repetition, one could assume that a sequence of repetitive frames over time would function as a multiplier of effects: the more exposure, the stronger the effect and so on (e.g., Price & Tewksbury, 1997). However, such an accessibility-based model of repetitive framing must take into account the expected rate of decay of accessibility itself. We assume that any steady flow of consonant news framing includes a “dry spell” during which no exposure takes place. How does such a gap in exposure affect the expected influence of repetition on a framing effect? According to Feldman and Lynch (1988), accessibility dwindles quickly, depending on how much time has elapsed since the last activation. The exact rate of decay depends on a number of factors, such as the total number of repetitions so far, and the strength and stability of related attitudes (see also Fazio, 1995). In politics, aside from a small number of highly contended issues, previous exposure to political issues is likely to be limited, and the literature suggests that political attitudes are volatile (Zaller, 1992). Thus, given the decline of accessibility and the special characteristics of political issues, we assume that repetition only has a mildly strengthening influence on initial framing effects, because any additive effects are watered down by the time that elapses between two exposures (Zaller, 1996).

A model of repetitive framing effects must also consider that individuals will *learn* the information that is presented to them repeatedly. Here, learning can mean the gradual acquisition of new belief considerations (e.g., Slothuus, 2008), or the learning of an evaluative judgment connected to a news frame (e.g., Matthes, 2007). Yet, rates of forgetting limit this learning process over time, even though forgetting is held to be a much slower process than accessibility-decay (e.g., Hovland & Weiss, 1951; Lodge et al., 1995). Thus, repetition may also function as a decelerator of forgetting. With every repetition, new or already forgotten information is “filled-in”. We assume that the cognitive process that underlies repetitive news framing is a combination of both accessibility-based and learning-based mechanisms, with the extent to which each process applies depending on a number of individual or contextual characteristics, such as the total number of repetitions or prior beliefs (e.g., Fazio, 1995). We will discuss some of these characteristics in the next section.

In sum, we hypothesize that the effects of repetitive framing are of a consolidating or stabilizing nature: repetition plays certainly a role in strengthening and reinforcing an effect, but is limited by the delay between two news frame exposures. Considering a decline in accessibility levels and forgetting, we assume that the consolidating effect should be more pronounced, the shorter the period between repeated exposures. Our hypotheses read as follows:

H1a: If an individual is repeatedly exposed to the same news frame over time, initial framing effects are consolidated. [*consolidation hypothesis*]

H1b: This consolidation effect is more pronounced, the shorter the interim period between two exposures is.

Research on the effects of competitive framing has focused on how the presentation of two contradictory news frames at the same time changes the magnitude and process of framing effects (e.g., Sniderman & Theriault, 2004). Studies in the field have shown that competitive framing leads to an annulment of effects, as individuals rely on personal beliefs and values when confronted with conflicting information. Along these lines, only news frames with high levels of applicability produce significant effects in competitive environments (Chong & Druckman, 2007b). What role does competitive framing play when frames are presented across longer periods of time? Given the apparent instability of framing effects in competitive scenarios, one could model competitive framing over time as an ineluctable back and forth between the two conflicting messages. This is reminiscent of one of the more prominent findings in the psychological literature on memory and knowledge: that of serial position effects, where the first (primacy effect) and the last item (recency effect) in a list are more dominant in recall than items placed in the middle (see e.g., Howard & Kahana, 2002; Murdock, 1962; Neath, 1993). Results stemming from, for instance, persuasion research confirm the dominance of recency effects in communication, where the latest media exposure shapes attitudes and behavior more strongly (e.g., Carlson & Russo, 2001; Haugtvedt & Wegener, 1994). This positions recency effects in a more accessibility-based model of framing research, where the latest news framing exposure could substantially heighten the accessibility of the framed issue considerations, which in turn might increase the likelihood of this last frame to be considered when forming opinion.

Chong and Druckman (2008) found empirical support for this assumption, and pioneered the temporal competitive exposure approach to news framing research. The authors combined one re-test after three weeks with exposure to different competitive news frames over time. They argued that individuals who are prone to on-line processing³ show a greater amount of inertia, and recency effects are then less likely to occur. Yet, early learning and the retrieval of an extant evaluative judgment at a later point in time are also susceptible to the principles of forgetting. Interestingly, Chong and Druckman also showed that the traditional characteristics of competitive framing, increased deliberation on the issue and a decrease of media influence, do not apply to competitive framing over time. On the contrary, “when competing messages are

received at different points in time, there is no assurance that individuals will deliberately evaluate the opposing arguments” (p. 30).

Given these initial findings, and corroborating research in persuasion and memory-based research, we assume a dominance of recency effects for sequential competitive news framing. Taking diminishing accessibility and forgetting into account, we also assume that this recency effect is stronger the further apart in time the two exposures are. We formulated the following hypotheses:

H2a: If an individual is exposed to competing news frames over time, the most recent frame will be more influential on opinion. [*recency hypothesis*]

H2b: This recency effect is stronger, the longer the interim period between the two exposures is.

Political Knowledge as a Moderator of Framing Effects over Time

A key aim of framing effects research is the specification of the conditions under which framing effects take place, and the determination of which variables either enhance or limit them (e.g., Druckman, 2001; Lecheler et al., 2009; Shen & Edwards, 2005). Political knowledge has emerged as an important moderator of susceptibility to framing effects (e.g., Cappella & Jamieson, 1997; Price, Tewksbury, & Powers, 1997). Yet, evidence of the role of political knowledge within the framing process is divided. Some scholars suggest that less knowledgeable individuals are more susceptible to framing effects, because of their inability to counter-argue a framed message (e.g., Haider-Markel & Joslyn, 2001; Kinder & Sanders, 1990; Schuck & de Vreese, 2006). Other studies argue that only knowledgeable individuals can be affected by news framing, because they possess the adequate mental stockpile to understand and process a framed message (e.g. Druckman & Nelson, 2003; Nelson et al., 1997).

Different routes of processing a framed message are thus central to the influence of political knowledge, and a closer look at studies that focus on the underlying psychological mechanisms of framing provides some first answers to conflicting research findings. Traditionally, framing is perceived to be mediated by belief importance change; i.e. by shifting the weights of available and accessible considerations (e.g., Nelson et al., 1997). Naturally, this conception of framing effects requires the availability of a great number of belief considerations, which points to the abilities of more knowledgeable individuals. High knowledge individuals possess a wider variety of available considerations, and can process and integrate framed considerations more quickly and efficiently (e.g., Druckman & Nelson, 2003). However, high levels of knowledge are directly related to strong attitudes, which can obliterate media influences (e.g., Haider-Markel & Joslyn, 2001; Lecheler et al., 2009).

Recently, Slothuus (2008) found that individuals with *moderate* levels of political knowledge were also framed, but primarily via belief content change, i.e., by making new beliefs

available. However, this only applied when they possessed a basic level of related knowledge, which enabled them to process the given information (Zaller, 1992). This leads us to believe that lower knowledge individuals can be framed to a great extent, but via a different route (see also Lecheler & de Vreese, 2009b). The extent to which each path applies hinges on the contextual nature of the issue at stake and the dependent variable tested.

It is the function of political knowledge as a processing variable that matters for the study of framing over time. Based on the above, we assume that individuals with higher levels of knowledge will display more pronounced consolidating effects. If these individuals are framed, then they are able to integrate a continuous communication flow into their mental stockpile quickly. With a wider range of available belief considerations, knowledgeable individuals are also able to associate and embed a frame more easily. We thus predict the following:

H3: The consolidating effect of repetitive news framing is more pronounced for high knowledge individuals. [moderated consolidation hypothesis]

For competitive news framing, we predict that individuals with lower levels of political knowledge will display more susceptibility to a recency effect, because of their inability to integrate and counter-argue a framed message. Knowledgeable individuals, however, will base a later judgment predominantly on the earlier frame encounter, and are therefore less prone to recency effects (e.g., Chong & Druckman, 2008; Haugtvedt & Wegener, 1994). We predict:

H4: The recency effect of competitive framing exposure is stronger for low knowledge individuals. [moderated recency hypothesis]

Method

To investigate the effects of repetitive and competitive news framing over time, we conducted an online survey experiment with five measurement points among a representative sample from the Netherlands. As a research subject, we chose the issue of the enlargement of the European Union (EU). Specifically, we tested news framing effects on support for the economic development of the EU's two newest members, Bulgaria and Romania. Unlike previous EU enlargements, the entry of Bulgaria and Romania into the EU in January 2007 received relatively little media attention. This made our experimental design easier to put into practice, because pre-treatment exposure to one of our generic frames was relatively unlikely (e.g., Chong & Druckman, 2008) and the media coverage in the interim post-exposure periods was limited (e.g., de Vreese, 2004). In our study, we first established whether a generic news frame had a significant immediate effect on our dependent variable opinion. Second, we allocated our sample into subgroups, and traced the effects of repetitive and competitive framing across four delayed

measurement points. Third, we tested the influence of political knowledge on these effects across the groups and across all delayed time points.

General Design

In a single-factor, post-tests only, between-subjects experimental survey design, we initially randomly assigned participants to one of two conditions. These conditions represented two alternative versions of a generic news frame, the “economic consequences” frame. Specifically, one frame pointed out the *opportunities* Bulgaria and Romania presented to the EU market, and was thus positive in evaluative direction. The second frame emphasized the *risks* the two new EU countries pose for the EU market, and was thus negative in valence (see also Schuck & de Vreese, 2006). The use of alternative versions of one generic frame ensures commensurability of the effects across conditions. However, external validity in our study was high, as both the opportunity and risk version of the economic consequences news frame are to be found in real political news coverage on EU integration and enlargement (e.g., Neuman et al., 1992; Schuck & de Vreese, 2006; Semetko & Valkenburg, 2000).

Our design also required participants to be assigned to a frame exposure scenario (repetitive, competitive, single/no re-exposure). We used single exposure as our “control” condition; participants in this group received only one frame at t_1 . To create a clean experimental design, each participant was only tested at a maximum of two points in time. This means that, after being tested immediately after a first exposure (t_1), participants were split up into “time groups” and each participant was assigned to only one additional delayed measurement point: after 15 minutes (t_2), one day (t_3), one week (t_4), and two weeks (t_5). This procedure left us with an overall count of 24 experimental conditions (for an overview, see Appendix A). We made sure that each delayed time group contained an equal number of participants for each condition. During the delayed post-test sessions, participants were re-interviewed on the basis of the same measures that were used in the immediate post-test.

Interim Period

We included a number of variables to control for any intervening influences that might have occurred during the interim period between the first and second measurements. In addition to a number of deflective “filler” questions, the delayed post-test questionnaires used at t_3 , t_4 and t_5 also contained measurements of issue-specific media exposure during the interim period. Results showed that participants had been exposed to a minimal level of issue-specific news pieces during their respective interim period (only six percent of all participants had been exposed to issue-specific news). Second, we asked participants how much attention they had paid to news about Bulgaria, Romania and the EU during the interim period (1 = “no attention” to 4 = “a great deal of attention”). This measurement revealed that participants paid very little attention to related news ($M = 1.26$, $SD = .61$). Third, we asked participants whether they had discussed the issue with someone else (e.g., family or friends) during the interim period (1 = “I

did not discuss it” to 4 = “I discussed it quite a number of times”). Our findings suggested that hardly any participant had discussed the issue ($M = 1.16$, $SD = .57$). Lastly, we conducted a content analysis of all major print media in the Netherlands during the interim period. The results of the interim content analysis showed that there was virtually no relevant news coverage during the data collection period.⁴

Sample

CentERdata at the University of Tilburg (The Netherlands) recruited a total of 1,324 individuals (44.8% female, aged between 16 and 92 [$M = 51.20$, $SD = 15.68$]) from their representative database consisting of approximately 2,000 households across the Netherlands.⁵ Recruitment into the company’s database was done using phone, online and face-to-face contacts. Members of their panels are contacted on a regular basis via an online survey tool and are offered incentives for completing online questionnaires on their home computer. The average response rate for t_1 was 54 percent (AAPOR RR1). The recontact rate for the sample for t_2 was 87 percent ($n = 241$), for t_3 60 percent ($n = 484$), for t_4 82 percent ($n = 320$), and for t_5 79 percent ($n = 279$).

Procedure

The experimental procedure consisted of three main steps per participant: First, all participants completed an online pre-test survey, including questions relating to media use, prior attitudes, and political knowledge. Following this, participants were exposed to one news article containing either of the two economic consequences frames. Then, all participants received the online t_1 post-test questionnaire, containing a manipulation check (see below) and stating the dependent variable.

In the next step, each participant was assigned to a re-exposure group (repetitive, competitive, single/no re-exposure). Also, we divided all participants into several post-test groups (t_2 to t_5). This was done to ensure that no participant would be tested at more than two points in time. We chose this procedure to guarantee a comparable experimental setting, independently of the length of time that had passed between the two exposures (e.g., McDermott, 2002). At completing the t_1 questionnaire, each participant was informed that he or she would be contacted one more time for the purpose of a follow-up study. Participants did not know that they would be asked the same questions again in this follow-up. The delayed repetitive or competitive news frame manipulation and post-test (at t_2 to t_5) were then conducted after the respective delay. Participants in the single exposure group did not receive an additional news frame. Following the delayed post-test, all participants were debriefed.

A between condition randomization check on age, gender and occupation performed at the outset of the analysis revealed successful randomization with no between-group differences for the overall t_1 group. Additional randomization checks for each of the delayed post-test groups

(t_2 to t_5) also showed successful randomization for these subgroups. Conditions also did not differ with respect to our pre-intervention moderator variable of political knowledge.⁶

Stimulus Material

The stimulus material consisted of one news article per condition at t_1 and one additional news article at t_2 to t_5 for the repetitive and competitive treatment conditions. The news articles each contained one version of an economic consequences frame, varied to express either the *opportunities* or the *risks* of having Bulgaria and Romania as new EU member states within the EU market (see Appendices B & G). Articles thus varied both in their arguments and in evaluative direction. Specifically, we manipulated an article about investment in the Bulgarian and Romanian market after the countries' accession in 2007. Given the design of the study, it was better to use constructed rather than actually published news material, as the use of real news coverage would have minimized the commensurability across conditions. We made sure to choose a research issue which can logically be presented in terms of economic consequences, which is the case for EU enlargement (e.g., de Vreese, Peter, & Semetko, 2001; Semetko & Valkenburg, 2000). We undertook considerable effort to adjust the news articles to the common lay-out and journalistic style of day-to-day Dutch news coverage. Following the example of other studies, we kept the basic core information within each news article identical, while some paragraphs in the story pointed out the alternative economic consequences of the issue (see underlined text, Appendices B & G) (e.g., Price et al., 1997).

Manipulation Check

Directly after exposure to our first news frames, all participants were asked to indicate to what extent the article had dealt with the positive or negative consequences of the issue (1 = "strongly agree" to 7 = "strongly disagree"). The check showed successful manipulation. Participants in the positive opportunity condition ($M = 5.94$, $SD = 1.63$) perceived their article to be more positive than participants in the negative risk condition ($M = 2.35$, $SD = 1.93$) ($t(612) = 2.75$, $p < .001$). This allowed the further experimental proceeding with the design and the ascribing of differences between groups in the post-test to the experimental manipulation.

Measures

The dependent variable—*opinion* as in perception of economic benefits of Bulgaria and Romania within the EU market—was measured with two items on a seven-point scale, with higher scores indicating increased support for the issue (t_1 : $M = 3.78$, $SD = 1.33$, t_2 : $M = 3.79$, $SD = 1.32$; t_3 : $M = 3.72$, $SD = 1.29$; t_4 : $M = 3.90$, $SD = 1.37$; t_5 : $M = 3.74$, $SD = 1.36$; Cronbach's alpha = .67; Pearson's $r = .49$, $p < .001$). The moderator variable of *political knowledge* was measured with five factual multiple choice questions on both national and EU politics ($M=2.48$, $SD=1.14$). Differing levels of political knowledge are best measured using factual rather than perceived knowledge on an issue (Delli Carpini & Keeter, 1993). The items were chosen to

ensure a sufficient amount of variation in our sample. EU-related knowledge questions often yield low threshold means, and render an adequate split of a sample difficult (e.g., Schuck & de Vreese, 2006). Extant literature on the definition and measurement of political knowledge indicates that national knowledge can also be used as an indicator in EU-related studies (e.g., Hobolt, 2007). Cronbach's alpha for this scale was .67 (for all measures, see Appendix C).

Also, in an earlier study, we divided our sample of political knowledge into three levels, namely high, low, and moderately knowledgeable (Lecheler & de Vreese, 2009a). In the current study, we could not test three groups due to sample size considerations and thus had to draw on a two-group analysis of high versus low knowledge individuals. We reinforce our sub-group analysis by analyzing interaction effects also, and do therefore deem the present two-group solution to be a good oversight of the effects of political knowledge on framing.

Results

We examined repetitive and competitive news framing over time in two main steps: First, we traced the effects of both frame scenarios across four delayed time points. Then, we tested the conditionality of the found effects, and introduced political knowledge as a moderator variable.⁷

The Consolidation Hypothesis

We predicted that, if an individual is repeatedly exposed to the same news frame over time, framing effects are consolidated or stabilized (*H1a*). There were two repetitive news framing scenarios in our study: (1) exposure to an economic consequences opportunity frame at t_1 , followed by a second opportunity frame at t_n (indicated by "O→O" in the analysis), and (2) an economic consequences risk frame at t_1 , followed by another risk frame at t_n (indicated by "R→R" in the analysis). The first columns of Table 4.1 show the means for all time groups and both repetitive exposure scenarios. The mean comparisons show a remarkable consolidation effect across time. For O→O, all time groups displayed comparable mean levels, with small accumulative shifts, albeit not at a significant level. Participants who were exposed to two risk versions of the economic consequences frame (R→R) also showed consistent opinion levels across all time groups. However, the direction of tendential change between means was not in all groups systematic. Possible explanations for this irregularity are discussed in the next section. Yet, given these results, *H1a* can be supported.

We also predicted that the consolidating effect of repetitive framing exposure is not consistent across time, but likely to be more pronounced the shorter the delay between both exposures is (*H1b*). Mean comparisons indicate that time group t_2 (after 15 minutes) showed almost identical means for both repetitive frame scenarios. Along these lines, time group t_3 (after one day) showed a larger absolute change, or frame shift, between first and second opinion measurement (O→O frame shift = .21; R→R frame shift = .23). However, this level of change did not remain constant across the remaining time points (after one week and two weeks), and it

did also not always occur in the expected direction (after one week: $O \rightarrow O$ frame shift = .03, $R \rightarrow R$ frame shift = .28, after two weeks: $O \rightarrow O$ frame shift = .24, $R \rightarrow R$ frame shift = .25). Overall, our findings did not show a clear pattern, and do thus not support *H1b*.

Table 4.1: Repetitive and Competitive Framing over Time

	Repetitive Framing					Competitive Framing				
	t_1	t_2	t_3	t_4	t_5	t_1	t_2	t_3	t_4	t_5
	$O \rightarrow O$					$O \rightarrow R$				
n=21/25	4.54 (1.71)	4.61 (1.67)				4.10 (1.36)	3.86 (1.17)			
n=44/24	4.31 (1.33)		4.52 (1.40)			4.14 (1.07)		3.81 (1.55)		
n=46/36	4.51 (1.68)			4.48 (1.65)		4.45* (1.21)			3.97* (1.37)	
n=27/33	4.00 (1.68)				4.24 (1.47)	4.46** (1.23)				3.51** (1.25)
	$R \rightarrow R$					$R \rightarrow O$				
n=30/21	3.23 (1.43)	3.30 (1.49)				2.71** (1.29)	3.33** (1.22)			
n=36/38	3.06 (1.33)		2.83 (1.36)			3.32** (1.21)		3.92** (1.18)		
n=34/41	2.98 (1.37)			2.70 (1.51)		3.39** (1.09)			4.03** (1.16)	
n=32/25	3.20 (1.40)				3.45 (1.36)	3.38** (1.55)				3.94** (1.38)

Note. $O \rightarrow O$ = Opportunity Frame—lag—Opportunity Frame; $R \rightarrow R$ = Risk Frame—lag—Risk Frame, $O \rightarrow R$ = Opportunity Frame—lag—Risk Frame; $R \rightarrow O$ = Risk Frame—lag—Opportunity Frame; t_1 = immediate measurement; t_2 = re-measured after 15 minutes; t_3 = after 1 day; t_4 = after 1 week; t_5 = after two weeks; * $p < .05$; ** $p < .01$; *** $p < .001$.

The Recency Hypothesis

For competitive news framing, we predicted that, if an individual is exposed to competing news frames over time, opinion at a delayed time point will be predominantly shaped by the latest frame exposure (*H2a*). We tested two competitive news framing scenarios: (1) exposure to an economic consequences opportunity frame at t_1 , followed by a risk frame at t_n ($O \rightarrow R$), and (2) a risk frame at t_1 , followed by an opportunity frame at t_n ($R \rightarrow O$). Table 4.1 illustrates all mean differences for competitive framing across time groups. The results supported our expectations. The mean comparison showed a “flimsy” framing effect, with significant recency effects for all time points of $R \rightarrow O$ (t_2 : $t(20) = -.295, p < .01$; t_3 : $t(37) = -3.22, p < .01$; t_4 : $t(40) = -.329, p < .01$; t_5 : $t(24) = -.282, p < .01$), and two time points for the $O \rightarrow R$ scenario (t_4 : $t(35) = 2.12, p < .05$; t_5 : $t(32) = 3.99, p < .001$). *H2a* is thus supported.

The above results also provide a first indication for an answer to *H2b*, which states that recency effects are likely to be stronger the longer the interim period between first and second news frame exposure. The results of the over-time mean comparisons only partially support this prediction. Participants exposed to $R \rightarrow O$ displayed significant and strong shifts across all measured delayed time points. However, while all frame shifts occurred into the expected direction, participants in the $O \rightarrow R$ scenario only displayed significant shifts after a somewhat longer interim period, namely after one (t_4) and two weeks (t_5) respectively. *H2b* is thus only partially supported.

Moderated Consolidation Hypothesis

For repetitive news framing, we predicted that the consolidating effect of framing would be more pronounced the higher in knowledge individuals are (*H3*). We took two steps in testing the influence of political knowledge: First, we conducted a subgroup analysis. Second, we tested a regression model, in which we added interaction terms for frame scenario and level of political knowledge.

Table 4.2: Repetitive Framing over Time by Level of Political Knowledge

	High Political Knowledge					Low Political Knowledge				
	t_1	t_2	t_3	t_4	t_5	t_1	t_2	t_3	t_4	t_5
$O \rightarrow O$										
	3.85	3.80				5.18	5.36			
n=10/11	(1.88)	(1.85)				(1.32)	(1.09)			
	4.34		4.62			4.28		4.39		
n=25/19	(1.51)		(1.47)			(1.04)		(1.33)		
	4.85			4.77		4.15			4.18	
n=24/22	(1.41)			(1.75)		(1.29)			(1.52)	
	4.05				4.31	3.87				4.05
n=19/8	(1.66)				(1.45)	(1.82)				(1.52)
$R \rightarrow R$										
	3.43	3.43				2.68	2.93			
n=22/8	(1.45)	(1.59)				(1.30)	(1.20)			
	3.37		3.00			2.16		2.33		
n=27/9	(1.26)		(1.29)			(1.98)		(1.19)		
	3.02			2.57		2.92			2.92	
n=21/13	(1.49)			(1.61)		(1.20)			(1.36)	
	3.38				3.61	2.86				3.13
n=21/18	(1.34)				(1.21)	(1.53)				(1.64)

Note. $O \rightarrow O$ = Opportunity Frame—lag—Opportunity Frame; $R \rightarrow R$ = Risk Frame—lag—Risk Frame; t_1 = immediate measurement; t_2 = re-measured after 15 minutes; t_3 = after 1 day; t_4 = after 1 week; t_5 = after two weeks; *p < .05; **p < .01; ***p < .001.

Table 4.2 shows mean comparisons for high and low knowledge individuals across time. The group comparison suggests some variation between high and low knowledge individuals for both repetitive news framing scenarios. These first results only partially support our assumption of the moderating influence of political knowledge. For instance, for time group t_3 (after one day), frame shift comparisons for $O \rightarrow O$ showed that high knowledge individuals displayed a somewhat stronger shift (= .28) than low knowledge individuals (= .11). A similar pattern can be observed for the negative $R \rightarrow R$ group, where high knowledge individuals showed a clearer pattern of consolidating effects in all time groups except t_5 (after two weeks). In sum, the subgroup analysis offers tentative support for a short-term moderating effect of political knowledge.

Further analysis was provided by an OLS regression model for each time group. We added interaction effects between the respective frame scenario and political knowledge to this model.⁸ The first columns of Table 4.3 show that there was indeed a difference in framing effects according to differing levels of political knowledge. Models t_2 , t_3 , and even t_4 show a moderating effect of political knowledge on absolute change between opinions at t_1 and t_n opinion for the $O \rightarrow O$ frame exposure scenario.⁹ The coefficients indicate that the combination of two positive news frames led knowledgeable participants to a stronger increase in support for Bulgaria and Romania within the EU market than it did for low knowledge participants. In addition, model t_3 also showed a significant interaction between frame exposure to $R \rightarrow R$ and political knowledge. Figure 4.1 illustrates the influence of differing levels of political knowledge in one of our time group results (re-exposure after one day). Our analysis illustrates, however, that results were not consistent across all time groups, which means that only some of our delayed measurements show support for *H3*. This suggests that this hypothesis is in need of adjustment according to the dynamic nature of over time experimentation. However, we believe that we can propose an argument for the short-term effect of political knowledge on the consolidating effect of repetitive framing.

Table 4.3: Explaining the Effects of Political Knowledge on Repetitive and Competitive Framing Exposure over Time (Dependent Variable = Change in Opinion between t_1 and t_n [1-7])

Variable	Repetitive Framing					Competitive Framing				
	Model t_2	Model t_3	Model t_4	Model t_5	Model t_5	Model t_2	Model t_3	Model t_4	Model t_5	Model t_5
O→O Exposure	-.502(.292)	-.237(.323)	-1.04(.483)*	-.748(.584)		1.14(.429)**	.737(-4.01)	.063(.457)		.040(.526)
R→R Exposure	.210(.390)	-.610(.392)	-.188(.455)	-.609(.535)		.192(.502)	1.08(.374)**	-.103(.380)		-.988(.504)
O→O*Pol. Knowledge	.292(.145)*	.186(.109)*	.373(.178)*	.233(.191)		-.352(.159)*	-.177(.149)	.081(.157)		.102(.179)
R→R*Pol. Knowledge	-.021(.125)	.252(.124)*	.147(.162)	.198(.180)		.056(.172)	-.284(.134)*	.137(.146)		.382(.192)*
O→R Exposure										
R→O Exposure										
O→R*Pol. Knowledge										
R→O*Pol. Knowledge										
Political Knowledge	-.026(.068)	.062(.048)	-.072(.088)	-.182(.106)*		-.026(.082)	.102(.072)	-.072(.081)		-.182(.113)
Constant	.533(.199)**	.413(.157)**	1.03(.230)***	1.46(.308)***		.533(.240)*	.317(.209)	1.03(.212)***		1.46(.327)
Adjusted R ²	.03	.07	.01	-.01		.08	.04	-.01		.03
N	98	199	143	118		93	181	140		117

Note. Ordinary least squares regression. Data are unstandardized regression coefficients and standard errors (in parentheses), * $p < .05$, ** $p < .01$, *** $p < .001$, all tests are one-tailed; O→O = Opportunity Frame—lag—Opportunity Frame; R→R = Risk Frame—lag—Risk Frame; O→R = Opportunity Frame—lag—Risk Frame; R→O = Risk Frame—lag—Opportunity Frame; t_1 = immediate measurement; t_2 = re-measured after 15 minutes; t_3 = after 1 day; t_4 = after 1 week; t_5 = after two weeks.

Moderated Recency Hypothesis

For competitive news framing over time, we predicted that a recency effect is stronger for low knowledge individuals (*H4*). The means for high and low knowledge individuals in Table 4.4 indicate a difference in recency effects between participants of differing political knowledge in some of the time groups. For instance, in time group t_2 (after 15 minutes), high knowledge individuals were less prone to change in support than low knowledge individuals. A similar pattern can be seen in group t_3 (after one day).

Table 4.4: Competitive Framing over Time by Level of Political Knowledge

	High Political Knowledge					Low Political Knowledge				
	t_1	t_2	t_3	t_4	t_5	t_1	t_2	t_3	t_4	t_5
O→R										
n=11/14	4.00 (1.51)	3.86 (1.24)				4.17* (1.29)	3.50* (1.14)			
n=11/13	4.45 (.789)		4.13 (1.22)			3.88 (1.24)		3.53 (1.79)		
n=22/14	4.72 (1.27)			4.29 (1.25)		4.03 (1.00)			3.46 (1.36)	
n=20/13	4.82** (1.15)				3.87** (1.46)	3.92 (1.18)				2.96 (1.49)
R→O										
n=13/21	2.80** (1.37)	3.53** (1.40)				2.56 (1.20)	3.00 (.755)			
n=18/38	3.52** (1.40)		4.02** (1.35)			3.15* (1.01)		3.82* (1.02)		
n=19/41	3.52** (1.28)			4.42** (1.07)		3.27 (.922)			3.70 (1.17)	
n=11/25	3.18 (1.53)				3.90 (1.04)	3.53 (1.61)				3.96 (1.64)

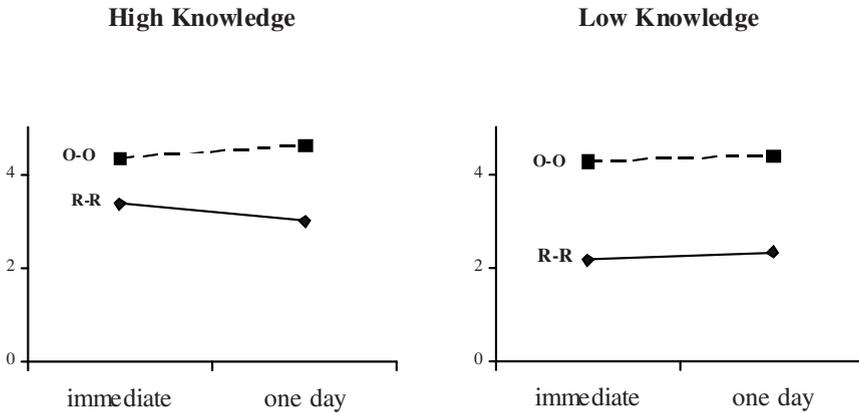
Note. O→R = Opportunity Frame—lag—Risk Frame, R→O = Risk Frame—lag—Opportunity Frame; t_1 = immediate measurement; t_2 = re-measured after 15 minutes; t_3 = after 1 day; t_4 = after 1 week; t_5 = after two weeks; * p < .05; ** p < .01; *** p < .001.

We also tested a regression model for competitive framing, with interaction effects for frame exposure and political knowledge. The models show significant effects of political knowledge on framing effects for two short-term time groups, namely t_2 (after 15 minutes), and t_3 (after one day). The negative coefficients indicate a smaller absolute t_2 change between first and second frame exposure for individuals with higher political knowledge. Figure 4.1 demonstrates change of opinion by political knowledge for participants who were re-framed and re-tested one

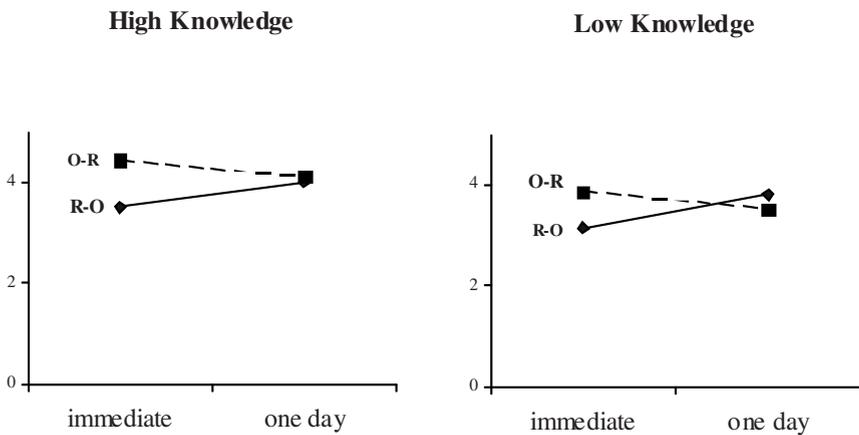
day after initial exposure. *H4* is thus partially supported. Political knowledge only has a short-term effect on the propensity for recency effects.

Figure 4.1: The Moderating Effects of Political Knowledge on Framing Effects - Model *t*₃ (after one day).

(1) Repetitive Framing



(2) Competitive Framing



Note. O→O = Opportunity Frame—lag—Opportunity Frame; R→R = Risk Frame—lag—Risk Frame; O→R = Opportunity Frame—lag—Risk Frame; R→O = Risk Frame—lag—Opportunity Frame.

Discussion

Research has very successfully shown how news frames can affect political opinion and behavior. A necessary next step is to determine what exact role these framing effects play in the political arena, where complex communication processes shape our daily media use (see e.g., Gaines et al., 2007; Sniderman & Theriault, 2004). Accordingly, in this study we discuss the possibilities and benefits of testing the persistence of experimental news framing effects, and enriched our own experimental study with a test of the effects of repetitive and competitive news framing over time.

Our analysis shows that repetitive news framing has a consolidating effect on opinion formation. When a news frame is repeated, effects did not add up, but stayed at a more or less comparable level across time. Competitive news framing in our study was characterized by strong recency effects; i.e. the latest frame exposure was decisive for opinion formation. Yet, for one of our framing scenarios, this only occurred after a longer time lag, namely after one week. Our results also show the influence of differing levels of political knowledge on the dynamic framing process. Against our expectations, political knowledge only exhibited a short-term influence on consolidation and recency effects. When the delay between first and second exposure was relatively short, we detected stronger consolidation and weaker recency effects for participants with a higher level of political knowledge.

The mechanisms shown in this study are substantial for furthering our theoretical and methodological understanding of the study of framing effects. We report a *stable* and consolidated effect in cases where repetition took place, and a *flimsy* framing effect in competitive scenarios. These results support previous theoretical as well as empirical arguments made in political communication literature – and test these by means of a clear experimental design. Our results sustain the idea that repeated exposure to consonant media content enables strong media effects (Zaller, 1992; Peter, 2004). Along these lines, repetition is held to enable both heightened levels of accessibility as well as streamlined learning of applicable information and evaluative judgments (see e.g., Iyengar, 1991). Further research is needed to clarify, to what extent both are present during the process. Our findings also lead us to assume that repetitive news framing is by no means the only key to a strong media framing effect, especially not when repetitive frames are presented sequentially over time and not, as is common in many studies, at the same time. Lastly, the inclusion of longer interim periods between two repetitive frame exposures raises the question, what role recency effects play for repetitive framing, i.e., *when* an initial effect has dissipated to such an extent that individuals can be considered “clean slates”.

Our findings on competitive news framing show that most delayed frame exposures led to a substantial opinion reversal. This supports the results of Chong and Druckman (2008), who reported that the original effects of competition (i.e., a more conscious evaluation of competing messages, which leads to a decrease in media effects) are not valid for competitive framing over time. Rather, “[e]ven when individuals have been previously exposed to alternative frames, they

tend to be susceptible to the most recent frame they encounter, including weak frames” (p. 29-30). These findings seem to bode ill for both a theory of emancipated media users and for long-term framing effects. But, is news framing over time really characterized by a continuous back and forth? One of our news frame scenarios showed that this is not necessarily the case: if the delay between two dissonant frames is short (in our case, up to one day long), then a second frame did not produce significant recency effects. This means that initial frame exposure did play a role in the process. The extent to which first and second frame exposure interact must, however, be subject of future research projects.

We chose political knowledge as the main moderator in our study for a number of reasons: First, we believe that the concept of political knowledge and sophistication is central to the study of political communication, where it can function as a moderator, but also as an independent or dependent variable (see e.g., de Vreese & Boomgaarden, 2006b). Second, we argue that political knowledge is a variable that not only affects the magnitude of framing effects (as tested in extant studies), but also functions as a processing variable. We found that political knowledge had only a short-term moderating influence on repetitive and competitive news framing over time. The “short-term” results can be explained in terms of the propensity of high knowledge individuals to possess higher levels of accessibility, and to process and recall information more quickly than individuals with lower levels of knowledge (e.g., Fazio, 1995; Haugtvedt & Wegener, 1994). As this accessibility diminishes quickly, future studies must concentrate on the role of learning in framing over time and determine, for instance, how many exposures are necessary to learn a news frame over time. We observe that the lack of a long-term moderating influence was also connected to the issue used in this study: EU politics. The chosen issue is generally characterized by low levels of media interest as well as personal importance, which could have resulted in only minimal learning effects over time. In their seminal study on on-line learning, Lodge et al. (1995, p. 315) argue that “recall of campaign information appears dismal even under the best of circumstances, that is, when the information is processed by knowledgeable citizens or is processed in depth.”

Recency effects also depend on a number of other individual or contextual variables, only a few of which we could discuss in this study. Framing scholars should test how, for instance, the strength and nature of prior beliefs, or specific characteristics of the issue at stake, limit recency effects over time (see Chong & Druckman, 2008). Moreover, research on repetitive and competitive framing is necessary in light of Bennett and Iyengar’s (2008, p. 724-5) remarks on the increasing fragmentation of audiences into “smaller, like-minded subsets of the electorate”, which select media according to already existing beliefs. Here, the media have little more than “reinforcement effects”, no matter if information is presented in a consonant or dissonant way (see also Bennett & Iyengar, 2010; Holbert, Garrett, & Gleason, 2010). In light of this “minimal effects” discussion, we also hope for comparisons between US and European audiences, where we expect differing processes of fragmentation to take place.

There are a number of caveats in our study. Generally, we are aware of the delicateness of a study like ours. Including multiple exposures and various tests of duration into an experimental survey design required making sometimes difficult decisions of downsizing the design on one end rather than on another. Second, we found slightly puzzling differences between over-time effects of opportunity and risk frames on our dependent variable. Intuitively (and based on the literature), we expected the negatively valenced risk frame to be more effective (e.g., Soroka, 2006). This was not the case. Explanations for this phenomenon remain speculative. We assume that individuals exposed to the opportunity frame were somewhat “surprised” by its content, given the overall negative tone towards the European Union and its endeavors in the Netherlands. This surprise might have left participants with a more profound impression of what they had read, while the negative condition involved some kind of a “floor-effect” (see also Boomgaarden, 2007).

Third, given the scarcity of relevant research on the duration of framing effects, we had limited theoretical guidance about how to define the delayed measurement points in our study. Future studies should build on our design, and determine the optimum time lags step-by-step. The optimization of various rates of decay of news framing effects could also eventually leave us with a more substantiated expectation of when a framing effect can be called “lasting”, “transitory” or “fleeting”. Moreover, our interim period was characterized by an extraordinarily small amount of elite information on the frame issue (see also de Vreese, 2004). While this was ideal from a methodological point of view, it rendered our design more artificial than originally intended. This leaves us with the question of how quickly our effects would have dissipated, had we chosen a more omnipresent issue. Gaines et al. (2007, p. 6) discussed the possibility that durability might depend on the actual issue of a frame – and suggested that “one frame’s effects [might] last longer than another’s”.

Survey experiments have created a strong empirical building block for framing effects theory. However, these studies have often assumed a long-term influence of framing by means of a short-term methodology. To create a more holistic approach to the study of news framing, researchers need to go one step further and consider the function of news framing within a dynamic political communication flow. This includes tests for multiple exposures to various frames, as well as the tracing of effects over time. We view our results as one small step in a long line of future studies dealing with these new and exciting dimensions of framing research.

Notes

¹ An earlier version of this chapter was awarded a Top Paper Award at the 2010 conference of the Media Effects Division of the German Communication Association (DGPK).

² “Strength” is defined as depending on the “qualities of frames ... such as the credibility of their source and their relationship to consensus values and prior beliefs” (Chong & Druckman, 2007b, p. 639).

³ When on-line processing occurs, “judgments are formed when the information is encountered”, i.e. when an individual first processes new information (Matthes, 2007, p. 56). This judgment can then be retrieved at a later point in time; a subsequent judgment does thus not depend on a re-evaluation of the stored information (see also Hastie & Parks, 1986).

⁴ We coded ten major print news outlets of the Netherlands for (1) issue, (2) presence of the “economic consequences” frame, and (3) tone. Ultimately, the analysis only included 20 issue-relevant articles published within the data collection period. The economic consequences frame did not feature prominently in the coded articles ($M = .25$, $SD = .35$). Measurement consisted of three items: (1) “Is there a mention of the costs/degree of expense involved?”, (2) “Is there a reference to economic consequences of pursuing or not pursuing a course of action?”, and (3) “Is there a mention of financial losses or gains now or in the future?”. Questions were answered with a yes (1) or a no (0), and the score was built by adding items and dividing by total number of items. Cronbach’s alpha was .745. (see Semetko & Valkenburg, 2000; de Vreese et al., 2001). The tone of the articles was overall more negative than positive ($M = 3.86$, $SD = .37$; tone measured on a 5-point scale from 1 = only positive to 5 = only negative). Krippendorff’s alpha was .66.

⁵ We compared our sample with the official census records of the Netherlands (2009). Results showed high compliance between sample and population on key socio-demographic data.

⁶ Overall t_1 : $t(1322) = .455$, $p > .05$; at t_2 : $F(2,238) = .04$, $p > .05$; t_3 : $F(2,481) = 2.17$, $p > .05$; t_4 : $F(2,317) = 2.07$, $p > .05$; t_5 : $F(2,276) = .276$, $p > .05$.

⁷ We found a significant immediate news framing effect for our two news frames, even though we did not focus on this effect in our analysis. Results showed that participants in the opportunity condition displayed higher levels of support at t_1 ($M=4.27$, $SD = 1.26$) than participants in the risk condition ($M = 3.29$, $SD = 1.22$) ($t(1231) = 13.73$, $p < .001$). We also tested whether each post-test group of participants (t_2 to t_5) displayed analogous results at t_1 . This analysis was performed to guarantee that the results in each time group mirror the results of the overall t_1 group. The analysis showed that the different time subgroups did not deviate substantially from the overall group results. All subgroups show a similar significant t_1 framing effect in the expected direction. Thus, t_2 group: opportunity ($M = 4.35$, $SD = 1.32$), risk ($M = 3.30$, $SD = 1.20$), ($t(234) = 6.61$, $p < .001$) ; t_3 group: opportunity ($M = 4.17$, $SD = 1.25$), risk ($M = 3.27$, $SD = 1.18$), ($t(396) = 7.35$, $p < .001$); t_4 group : opportunity ($M = 4.49$, $SD = 1.27$), risk

($M = 3.27$, $SD = 1.17$), ($t(318) = 8.89$, $p < .001$); $t5$ group : opportunity ($M = 4.09$, $SD = 1.27$), risk ($M = 3.35$, $SD = 1.35$), ($t(277) = 4.62$, $p < .001$)

⁸ Although we employed an experimental design, we included a number of control variables in our analysis. A number of variables were used as *socio-demographic* control variables, namely gender, age, and education ($M = 3.61$, $SD = 1.48$, range = 1-6; participants were asked for their highest completed degree). Extant studies also state that political predispositions, represented by prior attitudes on an issue, play an important role when determining framing effects (e.g., Brewer, 2001; Chong & Druckman, 2007a). To measure *prior attitudes* towards the EU, participants were presented with two scenarios, where opposing opinions were represented by a person “A” and a person “B” (Slothuus, 2008). With each scenario, participants had to indicate, with which person’s opinion they agreed with to a greater extent ($M = 3.27$, $SD = 1.01$) (for scenarios and scaling, see Appendix C).

⁹ The reported regression models used absolute change in support as dependent variable (e.g., Singer & Willett, 2003; Taris, 2000). We also tested our models with opinion at t_n support and relative change in support as dependent variable. The results of these alternative tests did not change our findings substantially.

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Conclusion

A growing number of studies investigate news frames and their effects on citizens' political understanding, attitudes and behaviour. However, how news framing effects really "work", both in terms of the psychological processes and the variables they depend on is still debated in the literature. Moreover, for too long, researchers have ignored the question of how long framing effects last over time. In this dissertation, we report empirical evidence in support of *more than one psychological process* that mediates news framing effects. Moreover, we propose that effects depend to a large extent on the issue at stake and on how *important* that issue is. On the topic of duration, we find that news frames can have *more than flimsy effects* and that the *over-time persistence* of these effects depends on the amount of consonant or dissonant news framing an individual is exposed to. Given these findings, we believe that this dissertation contributes in a fundamental way to extant models of news framing effects. In this last section, we present these contributions, discuss some limitations of our research, and conclude with directions for future research.

Summary of Research Findings

In *Chapter 1*, we tested a multiple-mediation model of news framing effects on political attitudes. In a survey experiment, we investigated two mediation processes: belief importance change and belief content change. Our analysis showed that news framing effects are mediated by both processes. However, in terms of explanatory power, belief content change mattered more than belief importance change. We also tested whether this mediation model depended on differing levels of political knowledge. Our results indicate that participants with higher levels of political knowledge were affected to a greater extent via both mediation processes. The results of this study show that a news frame can cause different types of effects on political attitudes. They also corroborate recent findings (Slothuus, 2008) that indicate the ability of news frames to add previously inaccessible or unavailable content to a person's beliefs about an issue.

In *Chapter 2*, we argue that news framing effects depend on the importance of an issue. In two survey experiments, we examined to what extent different levels of issue importance moderate the processing of a framed message and the magnitude of a news framing effect. Our findings showed no news framing effects for a high contextual-importance welfare issue, and rather large effects for a low contextual-importance trade issue. However, news frames in the "low importance" issue experiment caused effects across the board, almost independently of how important an individual found the issue personally. We also found that if individuals attached higher personal importance to an issue, they were more affected by belief importance changes whereas if they attached lower importance to an issue, they were affected more via belief content changes. High personal importance did, moreover, increase the elaboration of belief importance considerations. This chapter is one of the first to present variation in framing effects between

different issues in one experimental study. Moreover, the results indicate that not only personal but also contextual levels of importance are likely to matter for the individual-level analysis of news framing effects.

In *Chapter 3*, we investigated how long news framing effects last over time. We conducted a “classic” framing experiment, but augmented it with three delayed measurement points (after one day, one week, and two weeks). Our results showed a news framing effect that was surprisingly resistant to dilution. We also analysed whether the rate of decay of a news framing effect depended on different levels of political knowledge. We found no immediate moderating effect of knowledge, but could show that individuals with more moderate levels of political knowledge were affected most persistently over time. This chapter contains one of only a few empirical studies that combine a framing experiment with delayed opinion measurements, and the first to include more than one delayed measurement. Our results challenge previous assumptions regarding the short-term nature of news framing effects.

In *Chapter 4*, we again tested the duration of news framing effects, but this time at four delayed time points (after 15 minutes, one day, one week, and two weeks). Moreover, we added multiple exposures to repetitive and competitive news frames over time to our experimental design. Our analysis showed that repetitive news framing had a consolidating effect on political attitudes. This means that additional exposure to news framing did not for the most part intensify the framing effect, but led to more or less consolidated opinions across time. Yet, news framing effects could become stronger, if the time span between first and second frame exposure was relatively short. Competitive news framing showed strong recency effects, i.e., the last news frame exposure was more influential for opinion formation. Yet, for one of our framing scenarios, this effect only took place when the delay was longer than one week. We also found that political knowledge had a short-term influence on both consolidation and recency effects. When the delay between first and second exposure was relatively short, individuals with higher levels of knowledge displayed more pronounced consolidation effects and weaker recency effects. The experiment in this chapter is the first to test both consonant and dissonant news framing across multiple delayed time points. The results contribute to our understanding of the real influence news frames have on political attitudes.

Implications for Framing Theory

Mediated News Framing Effects

Understanding by which psychological processes news frames can affect citizens’ sense-making of politics is critical to the study of framing effects (see e.g., Druckman & Nelson, 2003; Igartua & Cheng, 2009; Nelson et al., 1997). In fact, the study of mediation is the key to the conceptualization of framing as an autonomous media effects theory: The notion that a news frame works by rendering certain beliefs more important, and therefore more likely to be included in subsequent judgments, is central to several models of the psychology of framing

effects (e.g., Nelson et al., 1997; Scheufele, 1999). Based on this assumption, researchers have argued that framing is distinct from other communication effects such as persuasion and agenda-setting. Yet, as our research findings show, news frames can have other effects that go beyond this “traditional” news framing effect model. These results indicate that the news framing process can only be adequately explained by multiple mediation models (see e.g., Slothuus, 2008), which has consequences for our theoretical understanding of what a “framing effect” actually is.

In sum, our results showed that news framing effects are mediated by rendering certain belief considerations more important. But, we also found strong empirical evidence that news frames cause belief content changes, i.e., that they can add new beliefs to an individual’s mental stockpile. What is more, we report that this second mediator dominated the framing process. This corroborates recent findings by Slothuus (2008), who presented a “dual-process” model of news framing via both belief importance and belief content change. It extends Slothuus’ research findings by showing which process prevails, and by transporting this relatively new model to a different context and another set of news frames.

The integration of our research findings into framing theory requires a reconsideration of the boundaries between framing and persuasion theory (see Tewksbury & Scheufele, 2009). Such reconsideration is not only valuable for the dual-process model, but also for framing scholars who test other mediators in news framing research, such as studies that investigate emotions versus cognition as mediators of framing. The road to a more integrative model of news framing begins with Scheufele’s (1999) suggestion that news frames ought to be considered as independent variables in the research process. Yet, despite introducing this potentially more integrative model, Tewksbury and Scheufele (2009) continue to adhere to the old definition of a framing effect as belief importance change. Following this, any other process caused by a news frame, such as belief content change or emotional effects, could not be denoted as a “framing effect”, but as one possible “effect of a news frame”.

The distinction between these two conceptualizations is more than a play on words. The first, rather narrow, definition of news framing effects has helped to establish framing in the political communication literature. However, we consider this restricted conceptualization to be obstructive to research that seeks to investigate media content *in combination with* the effects this content may have. The strongest feature of the framing concept is that it allows researchers to study how the news “frame” an issue, and how these frames can affect the individual. We therefore agree with Slothuus (2008), who argued that a framing effect must be “any effect of a frame in communication on a receiver’s opinion” (p. 22). Nevertheless, we acknowledge that only future research that looks at mediators of framing can provide further insights into the exact relation between the different processing routes of news framing. Along these lines, a clear terminology is important, also because framing scholars have alluded to the “persuasive power” of news framing in the past (e.g., Callaghan & Schnell, 2009; Chong and Druckman, 2007a), and because there are studies of framing that adapt variables and theoretical assumptions developed

in persuasion. For instance, Igartua and Cheng (2009) argue that news framing effects are also mediated by heuristic processing, comparable to a peripheral route in persuasion's Elaboration Likelihood Model (Petty & Cacioppo, see also Matthes, 2007).

How Importance Matters in News Framing Effects Research

In studying moderator variables, scholars show that framing is no "magic bullet" theory, but that there are individual and contextual differences that can limit how the media affect citizens' understanding of politics. Picking up on this, Chapter 2 tested *issue importance* as another moderating variable of news framing effects.

Our conception of issue importance was initially inspired by the so-called "*most important problem*" question. In public opinion polling, citizens are often asked to indicate what they consider the most important issues on the national agenda. This perception could also affect susceptibility to news framing effects, in that information on more important issues should be processed differently from that on issues citizens do not care about. However, a look at the psychological literature showed that importance is far more likely to matter on an idiosyncratic level, in the form of personal importance judgments (e.g., Boninger et al., 1995). When an issue is personally important, attitudes are stronger, more accessible and more elaborate – and therefore less likely to be affected by news framing (e.g., Krosnick, 1989). Low levels of importance, on the other hand, are connected with weak attitudes – so we expected larger news framing effects. However, our results showed that this is not necessarily the case. The effects we report vary mainly by issue, and can therefore not be fully attributed to personal importance. We tested two issues—welfare and international trade. News framing of a low contextual-importance international trade issue resulted in large effects, whereas the high-importance welfare issue did not result in any framing effects.

Some indication of *why* this was the case was provided by a mediation analysis of the dual-process model, which we also tested in Chapter 1. This analysis indicated that both individuals with high and low personal importance judgments were affected to a great extent via belief content, that is, via the addition of new beliefs about the issue. Even participants who found trade personally important did not resist the news frame, but were susceptible to changes in the content of their beliefs – probably because they did also not possess sufficient information on the issue to resist a frame.

This leads us to conclude that the moderating function of issue importance is likely to be connected with the information environment an individual finds her or himself in (see also Boomgaarden & Vliegenthart, 2009; Hopmann et al., in press). The low-importance issue, international trade, might literally have been "too" unimportant in public discourse. This means that even individuals with stronger attitudes did not possess enough information for an applicability effect to take place, due to a lack of contextual information on the issue (see Zaller, 1992). Conversely, continuous public attention to the high-importance issue of welfare in Denmark is likely to have equipped individuals with a good set of (competing) considerations to

resist the news frames. Thus, while attitudes towards welfare can be controversial, they might also be more stable given the higher importance attached to this issue (see Zaller, 1992). Our findings corroborate speculations by Kiouisis (2005, p. 7), who claims that the public attention an issue receives is connected with the strength of the attitudes associated with this issue. This attention tends to “stimulate more thinking and learning about objects and attributes in people’s minds”, and increased thinking about the issue might “lead to strengthened attitudes”. Yet, only further research investigating other political issues and news frames can clarify the relationship between contextual- and individual-level moderators.

Based on our findings, we believe that researchers aiming to tap individual-level framing effects must pay attention to the information environment experiments are conducted in, be it by controlling for pre-treatment exposure to a frame (Chong & Druckman, 2008), or by combining framing experiments with a content analysis that can assess the context of an issue frame (Schuck & de Vreese, 2006). Also, our results illustrate that studies aiming at attitudinal framing effects—which seems to receive increasing attention within the field—could benefit from the knowledge contained in the large body of social psychological literature concerned with attitude strength. To name only a few examples, framing effects could also depend on attitude extremity, interest, and involvement (for an overview see Krosnick & Petty, 1995).

The (Nonlinear) Effects of Political Knowledge on News Framing

The concept of knowledge is central to the study of political communication, where it can function as a moderator, but also as an independent or dependent variable (see e.g., Brewer, 2003; de Vreese & Boomgaarden, 2006b; Neijens & de Vreese, 2009). Thus far, the empirical evidence regarding the role political knowledge plays in the framing process is somewhat inconclusive. Some authors argue that higher levels of political knowledge cause greater framing effects, because individuals have a greater stock of available considerations that can be rendered applicable by a frame (e.g., Nelson et al., 1997). Yet, such a wider stock of considerations is also likely to coincide with stronger and more stable attitudes, which would typically decrease the influence news framing can have (see Chapter 2). This assumption is supported by a second group of authors, who have reported stronger framing effects for low knowledge individuals (e.g., Haider-Markel & Joslyn, 2001; Schuck & de Vreese, 2006). Given these mixed results, we also analysed political knowledge as a moderator of news framing. Specifically, we included knowledge into our analysis of the mediational processes of framing (Chapter 1), effect decay (Chapter 3), and the persistence of news framing effects over time (Chapter 4).

In Chapter 1, we found that both individuals with higher and with lower levels of knowledge were strongly affected by a news frame – via both belief importance and belief content change. Overall, knowledgeable individuals displayed stronger framing effects via both mediation processes, with belief content change playing a particularly important role. This supports assumptions of belief importance as a significant mediator of framing effects (Nelson et al., 1997). However, it also corroborates research findings that show the importance of belief

content change in the news framing process (Slothuus, 2008). The significant role belief content change played in our mediation analysis shows that, as far as political news framing is concerned, news frames are likely to convey previously unavailable information, even for knowledgeable citizens. While this provides some insights into the different mechanisms of news framing, it opens up new questions about the role that the accessibility and availability of beliefs plays in the framing process (see also Baden & de Vreese, 2008). For example, Lodge et al. (1995) argue that citizens do not retain information they are exposed to during the course of a political campaign, but stick to initial judgments that are then recalled and updated at a later point in time (see also Matthes, 2007). Accordingly, future research must determine the role that the acquisition of new beliefs really plays in the framing process, and how it is connected with a person's overall level of political knowledge.

We also reported a difference in the immediate and the time-delayed impact of political knowledge on framing effects (Chapter 3). In this study, political knowledge did not have an immediate moderating influence on opinion (potential reasons for this are argued in the discussion section of Chapter 3). However, we found that individuals with moderate levels of political knowledge displayed the most consistent news framing effects over time. We ascribe this to the nonlinear moderating effect of political knowledge as noted by Zaller (1992). While we still argue that low knowledge individuals are likely to be the most susceptible to immediate (forced) frame exposure and attitudinal framing effects (see Haider-Markel & Joslyn, 2001), these individuals are prone to not engage and process political information thoroughly after exposure (Zaller, 1992, p. 21). High knowledge individuals may have been initially affected in our study; however, they are more likely to encounter other (competing) information in the interim period, and have a higher ability of rejecting a political argument after some time (p. 121). Thus, we are left with the moderately knowledgeable, a group characterized by a certain level of cognitive engagement, but without access to a plethora of possibly competing considerations on the issue.

In Chapter 4, we assumed that different levels of political knowledge can affect the processing of framed information, and therefore the persistence of news framing effects. Our findings show that knowledgeable individuals displayed more stable news framing effects when exposed to repetitive news frames, probably because they possess higher levels of belief-accessibility, and were able to integrate framed information into their overall mental stockpile quickly. When exposed to competitive news framing, knowledgeable individuals showed less propensity for recency effects, i.e., they displayed greater inertia. However, we could only observe these mechanisms for some of our delayed measurements, namely for those up to one day after initial news frame exposure.

The fact that we only witnessed "short-term" results can be explained in terms of the propensity of high knowledge individuals to possess higher levels of belief-accessibility, and to process and recall information more quickly than individuals with lower levels of knowledge (e.g., Fazio, 1995; Haugtvedt & Wegener, 1994). As this accessibility diminishes rapidly, future

studies must concentrate on the role of learning from frames over time to determine, for instance, how many exposures are necessary to “learn” a news frame over time. We assume that the lack of a long-term moderating influence was also connected to the issue used in this study, EU politics. This issue is generally characterized by low levels of media interest as well as personal importance, which could have resulted in only minimal learning effects over time. In their seminal study of on-line learning, Lodge et al. (1995, p. 315) argue that “recall of campaign information appears dismal even under the best of circumstances, that is, when the information is processed by knowledgeable citizens or is processed in depth.” In sum, we argue that political knowledge is a variable that not only affects the *magnitude* of framing effects (as tested in extant studies), but also functions as a *processing* variable, i.e., it affects the way framing effects are synthesized and persist over time.

The Dynamics of News Framing Effects over Time

So far only a few scholars have evaluated the duration of framing effects (e.g., de Vreese, 2004; Tewksbury et al., 2000), and the question of how framing effects last when more than one news frame is supplied over time has received even less attention in the literature (see Chong & Druckman, 2008). Extant research findings on the duration of news framing are mixed, with some authors arguing that news frames can have persistent effects (e.g., Tewksbury & Scheufele, 2009; Tewksbury et al., 2000), whereas others assume a quick dissolution of news framing effects (e.g., de Vreese, 2004; Druckman & Nelson, 2003). The results presented in Chapter 3 support a more long-term conceptualisation of news framing effects; we found significant effects for up to two weeks after initial exposure. These results provide substantial leverage to existing framing experiments that, based on their short-term experimental measurement of framing effects, could only speculate as to a long-term influence of news framing. Our results thus encourage the further use of framing experiments in the field, but under consistent consideration of the duration of framing effects, simply because “one frame’s effects [might] last longer than another’s” (Gaines et al., 2007, p. 6). In sum, we suggest that frames can actually generate more permanent and more influential attitude changes than has been assumed by some scholars (e.g., Kinder, 2007; Sniderman & Grob, 1996). Along these lines, our results provide the first contours of a theory of framing effects over time.

Chapter 4 applies the idea that the genuine significance of news framing effects in communication flows can be tested, namely by means of exposing an individual to either repetitive or competitive news frames over time. In doing so, this chapter built upon the groundwork of Zaller (1992, 1996), who developed a comprehensive model for the effects of dynamic media communication flows on opinion formation. According to Zaller, the media only have a substantial effect when their content is repeatedly presented in one consistent way; i.e. it must be one-sided (see also Noelle-Neumann, 1973; Peter, 2004). Two-sided information, the exposure to competing and conflicting messages, leads to an annulment of potential media effects (see also de Vreese & Boomgaarden, 2006a; Sniderman & Theriault, 2004). In our study,

we report a consolidating effect when repetition took place, and a rather flimsy framing effect in competitive scenarios. These results provide initial support for Zaller's (1992) argument, and we are the first to test these by means of an experimental design.

In general, our findings support the idea that repetitive news framing leads to strong and consistent results. However, they do not sustain expectations of repetition as a multiplier of effects. We have discussed several works that allude to the assumption that repetition increases the accessibility of belief considerations, which in turn leads to stronger framing effects (e.g., Iyengar, 1991). However, as we could not find evidence for such a mechanism in our study, we concur with authors who tend to dismiss the notion of heightened accessibility as a facilitator of greater news framing effects (e.g., Chong & Druckman, 2007b, Scheufele, 1999). For example, Chong and Druckman (2007b) argue that "repetition plays a minor role in determining a frame's effect and seems to matter only when the frame is strong" (p. 646). Consequently, the magnitude of a framing effect may depend to a larger extent on other qualities of a frame, such as Chong and Druckman's concept of "strength".

Because we did not investigate the psychological processes of repetitive news framing over time, we can only speculate on the role accessibility and applicability really play in the repetitive framing process. The dismissal of accessibility as a mediator of news framing effects in the literature sometimes seems a little hasty, probably also because accessibility has proven to be difficult to tap by empirical investigation (see Baden & de Vreese, 2008 for a discussion). We conclude that while repetitive news framing does seem to impact consolidation and duration of framing effects, this repetition does not significantly increase the magnitude of effects. There seems to be a law of diminishing returns in effect. Nevertheless, future research projects must identify the intermediary processes that play a role for multiple frame exposure, also in light of the dual-process model we presented in the first two chapters of this dissertation.

A handful of studies have shown that competitive news framing generally results in a decrease of news framing effects, as individuals—when faced with dissonant information—tend to re-evaluate a framed message in light of pre-existing beliefs and values (e.g., Chong & Druckman, 2007b; Hansen, 2007; Sniderman & Theriault, 2004). Yet, our analysis indicated that this pattern is not mirrored in the over-time impact of competitive news framing. Our results showed strong recency effects over time, which means that the latest news frame exposure was more influential on opinion formation. These results coincide with a recent argument by Chong and Druckman (2008), who find that "[e]ven when individuals have been previously exposed to alternative frames, they tend to be susceptible to the most recent frame they encounter, including weak frames." (p. 29-30). At first glance, these findings bode ill for an emancipated media user, as well as for a theory of long-term news framing effects. But, is news framing over time really characterized by a continuous sway of opinions? One of our news frame scenarios showed that, if the delay between two dissonant frames was relatively short (in our case, up to one day), then a second frame did not produce significant recency effects. This indicates that recency effects depend on the time that elapses between two exposures.

In sum, our analyses provide first insights into the dynamics of news framing effects over time. Nevertheless, what we could not supply, simply because this branch of framing theory is still so unexplored, is a more normative view of framing effects over time. As we have argued above, there are authors who conceptualize news framing effects as being “long-term” as opposed to “mid-“ or “short-term” (see Tewksbury & Scheufele, 2009). Yet, what we do not know is when a framing effect can be considered long *enough* to matter in the political communication process. This is also a task for future integrative research projects. Without empirical investigation, any theoretical argument about the longevity of a frame is vague. However, the development of a theoretical argument about temporal framing effects is vital for the development of framing effects theory in the near future.

Limitations & Suggestions for Future Research

All four studies in this dissertation sought to investigate fundamental processes of news framing by means of survey experimentation. The limitations of the particular research findings are discussed in the respective chapters. However, in this section, we address some of the more general limitations of the research conducted, and combine them with directions and suggestions for future research.

A first limitation stems from the ongoing discussion in the literature about what actually constitutes a news frame and how it can be operationalized in research (e.g., Carragee & Roefs, 2004; Matthes, 2009; Matthes & Kohring, 2008). Since there is some disagreement about this issue in the literature, framing effect studies have made use of different frame conceptualizations in their study designs. Because different frames are likely to have different effects, the generalizability of the respective research findings could be at risk (see Druckman, 2004; Levin et al., 1998). For example, Iyengar (2009) suggests that the use of emphasis frames limits the commensurability of news framing effects, because “different words may convey more than differences in perspective and different individuals may “read” the same word quite differently” (p. 188). Consequently, he proposes the use of equivalency frames as a “more precise definition” (p. 190) in future effects studies (see also Shah et al., 2009). Thus, future research must determine the precise effects of varying frame conceptualizations. Such comparisons can, moreover, also shed light on what actually constitutes a “framing effect” as opposed to a persuasive, or learning effect. As we argue above, a news frame must be seen as an independent variable that can have a multitude of effects. The extent to which these effects depend on the respective precision or form of the conceptualized frame remains open for further empirical investigation.

A second limitation of the research reported in this dissertation is that all our findings are based on survey experiments. A majority of framing effects studies make use of survey experiments (e.g., Berinsky & Kinder, 2006; de Vreese, 2004; Druckman & Nelson, 2003; Nelson et al., 1997). However, framing experiments have also been scolded for lack of external

validity, which could limit the generalizability of the research findings (Barabas & Jerit, 2008; Kinder, 2007). We have addressed this issue in Chapters 3 and 4 of this dissertation, where we improved the experimental design by including a test for effect duration and multiple exposure sessions. While these measures are steps in the right direction (see also Gaines et al., 2007; Tewksbury & Scheufele, 2009), there are other points for improvement we could not take into account.

For instance, in our survey experiments, participants were forcefully exposed to a news stimulus. This does not mirror “real life” news exposure, where users can decide more or less actively to pay attention and process a news frame. Consequently, Kinder (2007, p. 157) suggests the use of real-life events to generate natural experiments. However, he also acknowledges that doing so requires a “decisive shift in the deployment of frames in some real world setting”, which is a condition that is very rarely fulfilled (see Boomgaarden & de Vreese, 2007). On a similar note, Barabas and Jerit (2008) have compared the results from a laboratory experiment with a natural experiment and found that the latter only had a moderated effect on participants, while a laboratory experiment generated strong effects (see also Gerber et al., 2009). Consequently, we suggest that future studies make use not only of duration testing and multiple exposure settings to increase experimental realism, but also encourage the use of real-world settings in experimental studies.

Lastly, we want to mention the context of our research as a potential limitation. We purposely did not design the experiments in this dissertation as case studies, but aimed at showing the basic psychological processes of news framing effects. However, quite naturally, no study of media effects is devoid of the context in which it was conducted. The experiments in this dissertation were executed in European countries, and focused on European issues. Moreover, many of the attitudinal effects we analysed were concerned with European Union integration, a process that is of low salience even to many European citizens (see e.g., Eurobarometer 71). While our findings did convey some insights as to how individuals respond to news about the European Union (for example, we found that more positively valenced EU frames yield greater effects than negative valence), we did not focus on these findings in this dissertation (but see Lecheler & de Vreese, 2010).

In general, we believe that our results can adequately illustrate the fundamental psychological processes of news framing. Nevertheless, particularly our duration and persistence results are in need of further empirical investigation. By following up with the participants outside of the laboratory, we could test how powerful news frames are over time. Yet, this approach also increases the influence of a variety of cultural, national, or personal variables that could affect attitudes and opinions in the interim phase between frame exposure and delayed measurement. For example, the embedding of the frame in the national media culture could have played a role in that the familiarity with a specific frame concept could increase or decrease persistence of effects (see Carragee & Roefs, 2004). Also, the social integration of the

participants can affect decay, due to interpersonal contacts and discussions (see Druckman & Nelson, 2003).

In light of the differentiated media effects paradigm, researchers must also consider recent arguments by Bennett and Iyengar (2008, p. 724-5), who point to the increasing fragmentation of audiences into “smaller, like-minded subsets of the electorate”, which select media according to already existing beliefs. Here, the media should have little more than “reinforcement effects”, no matter if information is presented in a consonant or dissonant way (see also Bennett & Iyengar, 2010; Holbert, Garrett, & Gleason, 2010). In light of this “minimal effects” argument, comparisons between US and European audiences could be made, where we would expect differing processes of fragmentation and therefore also different media effects.

Beyond these general limitations, we recommend that further studies strongly focus on determining other mediators of framing effects, such as emotions, narratives and perceptions of public opinion (Chong & Druckman, 2007a). Among these, emotions emerge as a most interesting—and long neglected—category. Indeed, there are a number of recent studies that recognize the importance of studying the role of emotion in news framing research (e.g., Nabi, 2003; Gross & Brewer, 2007; Druckman & McDermott, 2008; Schuck & de Vreese, 2009). Some of these studies take emotions as outcome variables (Gross & Brewer, 2007), while most presume that emotions must be an important mediator between frames in communication and their effects. These studies point to the lack of a systematic account of the role of emotions as mediators of framing effects. For example, Holm (2009, p. 24) argues that there is, thus far, no empirical investigation of “when the cognitive route is likely to dominate the emotional route and vice versa” in the framing process, and whether the interplay between the two routes depends on situational factors, or on individual characteristics of the citizen (see also Keer, van den Putte, & Neijens, 2010). Gross and Brewer (2007) highlight the normative implications of integrating emotionality into the framing process, both regarding the actual benefits of evoking specific emotions by framing an issue, and the unanswered question of whether emotions facilitate or inhibit public deliberation. Beyond that, future research projects must investigate the role of emotion for specific issues of different political contexts, for political participation and action, and disentangle the differences between discrete emotions that play a role in the framing process

Concluding, we believe that this dissertation has supplied a number of research findings that add to a theory of news framing effects, but also to the understanding of the role media effects play in political communication. We show that researchers must think more about what actually constitutes a “framing effect”, and that a dissociation of framing from other media effects concepts is not necessarily the ideal way to go in creating a more advanced framing theory. We also provide the first contours of a theory of news framing effects over time. Our results initially support the notion of a long-term influence of news frames on political attitudes, but also prompt questions about how stable these effects really are. Future research must

continue to determine in what ways and to what extent our daily life is affected by how the news “frame” politics.

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Appendix

Appendix A	Chapter 1, Chapter 3, Chapter 4 - Overview Experimental Design	150
Appendix B	Chapter 1, Chapter 3, Chapter 4 - Stimulus Material (t_1 only)	151
Appendix C	Chapter 1, Chapter 3, Chapter 4 - Overview Variables	152
Appendix D	Chapter 2 - Stimulus Material	154
Appendix E	Chapter 2 - Overview Variables	156
Appendix F	Chapter 3 - Regression Tables for t_1 , t_2 , and t_3	158
Appendix G	Chapter 4 - Stimulus Material (delayed exposure)	161

Appendix A: Chapter 1, Chapter 3, Chapter 4 - Overview Experimental Design

#	t ₁	t ₂	t ₃	t ₄	t ₅	
1	x	x				t ₂ Control
2	x	OPP				t ₂ Single / Control
3	x	RISK				t ₂ Single / Control
4	OPP	x				t ₂ Single (Opp)
5	OPP	OPP				t ₂ Repetitive (Opp)
6	OPP	RISK				t ₂ Competitive (Opp → Risk)
7	RISK	x				t ₂ Single (Risk)
8	RISK	OPP				t ₂ Competitive (Risk → Opp)
9	RISK	RISK				t ₂ Repetitive (Risk)
10	x		x			t ₃ Control
11	OPP		x			t ₃ Single (Opp)
12	OPP		OPP			t ₃ Repetitive (Opp)
13	OPP		RISK			t ₃ Competitive (Opp → Risk)
14	RISK		x			t ₃ Single (Risk)
15	RISK		OPP			t ₃ Competitive (Risk → Opp)
16	RISK		RISK			t ₃ Repetitive (Risk)
17	x			x		t ₄ Control
18	OPP			x		t ₄ Single (Opp)
19	OPP			OPP		t ₄ Repetitive (Opp)
20	OPP			RISK		t ₄ Competitive (Opp → Risk)
21	RISK			X		t ₄ Single (Risk)
22	RISK			OPP		t ₄ Competitive (Risk → Opp)
23	RISK			RISK		t ₄ Repetitive (Risk)
24	x				x	t ₅ Control
25	OPP				x	t ₅ Single (Opp)
26	OPP				OPP	t ₅ Repetitive (Opp)
27	OPP				RISK	t ₅ Competitive (Opp → Risk)
28	RISK				x	t ₅ Single (Risk)
29	RISK				OPP	t ₅ Competitive (Risk → Opp)
30	RISK				RISK	t ₅ Repetitive(Risk)

Note. Opp = Opportunity Economic Consequences Frame; Risk = Risk Economic Consequences Frame; t₂= after 15 minutes, t₃=after 1 day, t₄=after 1 week, t₅=after 2 weeks.

Appendix B: Chapters 1, 3, & 4 - Stimulus Material (*t₁* only)

(Opportunity and Risk [in parentheses] Economic Consequences Frame Condition)

(Translation from Dutch Original)

European Commission: New members Bulgaria and Romania are EU's potential new markets (still EU's economic ugly sisters)

Even though Bulgaria and Romania only just had their membership to the European Union (EU) approved, they are already attracting large investment from all over Europe. With a new agreement with the EU regional development fund ahead, things are looking bright in the East. (spurring discussion about their growingly obscure investment markets. Even with a new agreement with the EU regional development fund ahead, the situation is unlikely to improve.)

On 1 January 2007, Bulgaria and Romania joined the EU, taking the membership of the bloc from 25 to 27 member states. The two countries applied to join the EU in the early 1990s, along with eight other states of Central and Eastern Europe.

Last week, the EU's Regional Fund, which concentrates on economic development, presented a new cooperation agreement between the two newcomers and other countries such as Germany, the UK or the Netherlands. (But the) The agreement, which involves financial incentives for European companies investing in the new member states and guarantees of fair competition, is bound to establish Bulgaria and Romania on the international investment map (is unlikely to establish Bulgaria and Romania on the international investment map).

"We are gaining from the agreement, because it gives us the opportunity to move to where the critical growth today is", says Ian Hudson, President of a British multinational products and services company. Last

month, Hudson announced the opening of first offices in the two countries: "Eastern and Central Europe are important markets; they are growing at an enormous speed", says Hudson ("We are not sure about the agreement", says Ian Hudson, President of a British multinational products and services company. Last month, Hudson announced the closing of all offices in the two countries: "Eastern and Central Europe are important markets; but there are still too many difficulties", says Hudson.)

Romania has averaged an annual economic growth rate of 5.8 percent over the past five years, making it one of Europe's fastest growing economies. Bulgaria is not too dissimilar, with growth seen at 5 percent this year, and an economy that is shifting towards the more modern sectors of technology and tourism.(Even though Romania has averaged an annual economic growth rate of 5.8 percent over the past five years, it is one of the poorest members of the EU, with a GDP per head about a third of the EU average. Bulgaria, with growth seen at 5 percent this year is raising concerns among critics about mass migration and the states' ability to implement reforms while keeping state finances in order.)

"Bulgaria and Romania are chances for European investors to establish themselves in a growing market" says Olli Rehn, the EU's Enlargement Commissioner. "The EU, and all its' member states, can and will benefit from these two fresh economic forces on board", Rehn said in Brussels. (Many observers are questioning, whether the two newcomers will be able to keep up with Europe's economic growth plan. "Bulgaria and Romania still have a long way to establish themselves in a growing market" says Olli Rehn, the EU's Enlargement Commissioner.)

Appendix C: Chapters 1, 3, & 4 - Overview Variables

(Descriptives in the respective Chapters)

Pre-test Measures

Gender: Male = 0; female = 1.

Age: Measured in years.

Education: Six levels of education from lowest to highest (Dutch originals): (1) primary education, (2) pre-vocational secondary education, (3) senior general secondary education, (4) secondary vocational education, (5) higher professional education, (6) university.

Prior Attitudes towards the EU

Two items measured in the form of opposing statements: “First a question about the enlargement of the European Union. A says: Further enlargement will weaken the EU. – B says: Further enlargement of the EU is a necessary next step in the development of the EU. Do you mostly agree with A or B?” and “Now a question about the membership of the Netherlands within the European Union. A says: The membership of the Netherlands in the EU is a good thing. – B says: The membership of the Netherlands in the EU is a bad thing. Do you mostly agree with A or B?”. Response categories for both scenarios were “1=strongly agree with A”, “2=Somewhat agree with A”, “3=Somewhat agree with B”, “4=Strongly agree with B”, “5=Do not agree with either A or B” and “8=I don’t know” (recoded to fit scale from 1=negative prior attitude to EU to 5=positive prior attitude to EU).

Political Knowledge

Five item index scale ranging from 0 to 1, with higher values indicating higher level of political knowledge, “Which parties are at present members of the Dutch government?” “Femke Halsema belongs to which party?”, “André Rouvoet belongs to which party?”, “Who is the current president of the European Commission?”, “Which state is not yet a member of the European Union?”.

Post-test Measures

Opinion

Two item index scale; asked on a scale from 1 to 7 with higher values indicating more support, “To what extent do you support the idea that an agreement for economical cooperation between the EU and Bulgaria and Romania will be profitable for investors?”; “To what extent do you support the idea that Bulgaria and Romania are an asset to the economic growth of the European Union?”.

Belief Importance

Four statements, rated from 1 to 7 with higher values indicating higher importance, “Agreement contributes towards cooperation companies and new EU members”; “Agreement is only a small step compared to much bigger necessary changes”; “Bulgaria and Romania can be new

investment markets”; “Bulgarian and Romanian markets are still characterized by difficulties”.

Belief Content

Four item index scale reaching from 1 to 7 with higher values indicating more positive impact expected from trade with Bulgaria and Romania, “Bulgaria and Romania are rapidly growing economies”, “Bulgaria and Romania’s economy raises concerns among Europeans”, “Bulgaria and Romania will keep up with Europe’s economic growth”, “Bulgaria and Romania were not ready to become EU members”.

Appendix D: Chapter 2 - Stimulus Material

(Positive and Negative [in parentheses] Economic Consequences Frame Condition)

(Translation from Danish Original)

(1) High-importance Issue

More contracting-out can improve (reduce) quality of in-home help for senior citizens

The municipalities are willing (refuse) to let private companies take over more public services, including more sensitive fields such as care of the elderly.

This announcement is made after the Danish council for contracting out shows in a new report that the number of public services provided by private companies has been fixed on about 10% since 1990. At the same time, there is a big difference in how much the municipalities contract-out, even though the council points out that private services in average cost 15% less than the same public services. If the municipalities that contract out less than average raised their numbers to average, around 2 billion DKK would be saved. The report states, however, that many municipalities have negative experiences with contracting out services.

The Danish council encourages politicians to consider contracting out more for sensitive welfare services such as in-home

care for the elderly. The municipalities support this idea.

“Private in-home care providers can help municipalities to save money that can be spent on more and better services for the elderly. Contracting-out can be an efficient way of securing quality in in-home care, even with the growing number of elderly. Private home help is often just as good as the public” (“In many cases, contracting-out has been unsuccessful. We want to make sure that the elderly get the best possible service, and private providers have not always done a good enough job. The public in-home help is often the best”), says the Danish National Association of Municipalities.

(2) Low-importance Issue

Danish export steamrolling into Chinese market (Chinese product pirates threaten Danish export)

China is well on the way to become an even more important player on the international market. These weeks, the World Trade Organization (WTO) is negotiating a new trade agreement with China. The agreement aims at making it easier for foreign, including Danish, companies to establish business in China and export to the enormous and rapidly growing Chinese market. Meanwhile, EU member countries have committed to abolish the import tax that keeps many Chinese goods out of Europe.

On December 11, China has been a member of the WTO for five years and following this test period, the conditions for China's membership will be renegotiated. In early January, the Danish Parliament will decide whether they will support the agreement with China.

Danish representatives at the negotiations support the direction, the WTO negotiations are taking (are, however, very

critical towards the direction that the WTO negotiations are taking). "Danish companies have over the last five years doubled their export of goods to China, and the export now amounts to more than ten billion DKK per year. Therefore, it is crucial for Denmark to have access to the Chinese market. The new WTO agreement benefits Denmark and creates stable conditions for the Danish industry" ("The agreement does not consider how to protect Danish companies from illegal copying of their products. Anything that can be sold is being copied in China. This development is dangerous for the Danish industry and for the Danish economy on the long run, because we make a living of our ideas. The agreement can therefore end up being expensive for Danish companies. As long as we do not deal with this issue, we cannot support the agreement") says an official from the Ministry of Industry.

Appendix E: Chapter 2 – Overview Variables

Pre-test Measures Pilot Study

Personal importance Elderly Care ($M = 5.74$, $SD = 1.25$)

Asked on a scale from 1 to 7 with higher values indicating more importance, “For each of the following issues, please indicate how important the issue is *to you personally*.”

Personal importance International Trade ($M = 4.67$, $SD = 1.53$)

Asked on a scale from 1 to 7 with higher values indicating more importance, “For each of the following issues, please indicate how important the issue is *to you personally*.”

Post-test Measures Pilot Study

Opinion

Asked on a scale from 1 to 7 with higher values indicating more support, High-importance: “To what extent do you agree or disagree that local governments [municipalities] more than today should contract out in-home help for senior citizens to private firms?” ($M = 3.49$; $SD = 1.25$); Low-importance: “To what extent do you agree or disagree that Denmark should join the new trade agreement between WTO and China?” ($M = 5.03$; $SD = 1.73$).

Pre-test Measures Main Study

Personal importance Elderly Care ($M = 5.66$, $SD = 1.42$)

Asked on a scale from 1 to 7 with higher values indicating more importance, “For each of the following issues, please indicate how important the issue is *to you personally*.”

Personal importance International Trade ($M = 4.68$, $SD = 1.63$)

Asked on a scale from 1 to 7 with higher values indicating more importance, “For each of the following issues, please indicate how important the issue is *to you personally*.”

Post-test Measures Main Study

Opinion

Asked on a scale from 1 to 7 with higher values indicating more support, High-importance: “To what extent do you agree or disagree that local governments [municipalities] more than today should contract out in-home help for senior citizens to private firms?” ($M = 3.98$; $SD = 1.25$); Low-importance: “To what extent do you agree or disagree that Denmark should join the new trade agreement between WTO and China?” ($M = 4.87$; $SD = 1.12$)

Belief Importance

Two open-ended questions; “Thinking about contracting out public services/international trade, what comes to your mind? Please write as many thoughts and considerations as you can think about, even if you only write one or a few words.” “Imagine that you are going to explain to a

friend what the article you just read was about. What would you say?”.

Belief Content

Four item index scale reaching from 1 to 7 with higher values indicating more positive impact expected from contracting out or trade agreement, High-importance: ($M = 4.27$; $SD = 1.69$, Cronbach's $\alpha = .80$), Items were: “Contracting out public in-home care for senior citizens will save the local government money”, “Contracting out public in-home care for senior citizens will result in lower quality in the in-home care”, “Contracting out public in-home care for senior citizens will result in poorer working conditions for employees”, “Contracting out public in-home care for senior citizens will make administration of the in-home care more efficient”; Low-importance: ($M = 4.67$; $SD = 1.18$; Cronbach's $\alpha = .69$), Items were: “The agreement will greatly benefit Danish companies”, “The agreement will hurt protection of products and trademarks belonging to Danish companies”, “The agreement will make sure China respects international trade rules”, “The agreement will cause Danish export to increase”.

Appendix F: Chapter 3 - Regression Tables for t_1 , t_2 , and t_3

Table F.1: Regression Models Predicting Opinion - t_1 (immediate)

	Model 1	Model 2	Model 3
	Low Knowledge	Moderate Knowledge	High Knowledge
<i>Controls</i>			
Age	-.077(.079)	.048(.078)	-.073(.051)
Gender (1=fem)	-.371(.222)	.432(.222)	.089(.146)
Education	-.055(.080)	-.029(.072)	.003(.048)
Prior Attitudes / EU	.485***(.105)	.443***(.110)	.643***(.073)
<i>Main Effects</i>			
Frame (1=opp.)	.816**(.226)	1.21***(.218)	.991***(.138)
Constant	2.72***(.594)	1.40*(.597)	1.46**(.432)
Adjusted R ²	.314	.333	.381
N	81	101	213

Note. Ordinary least squares regression. Data are unstandardized regression coefficients and standard errors (in parentheses), * $p < .05$; ** $p < .01$; *** $p < .001$.

Table F.2: Regression Models Predicting Opinion - t_2 (after 1 day)

	Model 1	Model 2	Model 3
	Low Knowledge	Moderate Knowledge	High Knowledge
<i>Controls</i>			
Age	-.003(.084)	-.007(.088)	-.079(.079)
Gender (1=fem)	.399(.269)	.399(.279)	.267(.234)
Education	-.082(.086)	-.096(.086)	-.075(.074)
Prior Attitudes / EU	.767(.128)***	.607(.130)***	.761(.113)***
<i>Main Effects</i>			
Frame (1=opp.)	.873(.386)*	.891(.357)*	1.14(.246)***
Constant	.786(.677)	1.26(.710)	.945(.668)
Adjusted R ²	.377	.273	.391
N	73	77	105

Note. Ordinary least squares regression. Data are unstandardized regression coefficients and standard errors (in parentheses), * $p < .05$; ** $p < .01$; *** $p < .001$.

Table F.3: Regression Models Predicting Opinion - t_3 (after 1 week)

	Model 1	Model 2	Model 3
	Low Knowledge	Moderate Knowledge	High Knowledge
<i>Controls</i>			
Age	-.052(.123)	-.068(.114)	-.080(.108)
Gender (1=fem)	-.237(.341)	-.082(.344)	-.216(.322)
Education	-.124(.117)	-.105(.122)	-.010(.100)
Prior Attitudes / EU	.887(.165)***	.775(.162)***	.846(.153)***
<i>Main Effects</i>			
Frame (1=opp.)	.932(.415)*	1.40(.401)***	1.76(.332)***
Constant	1.15(.926)	1.04(.946)	.237(.927)
Adjusted R ²	.402	.411	.497
N	54	53	60

Note. Ordinary least squares regression. Data are unstandardized regression coefficients and standard errors (in parentheses), * $p < .05$; ** $p < .01$; *** $p < .001$.

Appendix G: Chapter 4 - Stimulus Material (delayed exposure)

(Opportunity and Risk [in parentheses] Economic Consequences Frame Condition)

(Translation from Dutch Original)

Financial Experts: Investment into Bulgarian and Romanian markets on the rise (is risky)

Bulgaria and Romania are the youngest members of the European Union (EU). Recently, the two countries settled further economic cooperation with other EU countries with means of a Regional Funding agreement, which is already receiving acclaim from financial experts. (which is now receiving harsh criticism from financial experts)

As reported earlier, the EU's Regional Fund, which concentrates on economic development, presented a new cooperation agreement between the two newcomers and other European countries in Brussels. European Commissioner for Enlargement, Olli Rehn, presented the results of one year long negotiations that facilitate financial support for companies investing in the area and guarantees fair competition.

At a symposium, organized by the World Economic Forum in Davos, Switzerland, experts have now pronounced their support (expressed their doubts) for the new EU agreement. "It substantially facilitates the cooperation between Western companies, private investors and Bulgarian and Romanian companies" ("It does not change much concerning the big problems that still exist when Western companies and investors and Bulgarian and Romanian companies try to cooperate") says Dr. Marc van Leeuwen, Economic forum deputy head for Europe. "Eastern and Central European markets are booming – it's a gold rush" (only developing – but still have a long way to being competitive partners), van Leeuwen said at the symposium.

Investment in the area has risen and the region boosts since the last year accession, now further heated-up by the

fund agreement. (is often held back by incompatible competition procedures and corruption). "As Eastern European economies started to reform and develop, Western companies became increasingly interested in investing in the region" ("Eastern European economies have only started to reform and develop, and it might still be risky for Western companies to invest in the region"), van Leeuwen concludes. It is believed that the growth in the region is bound to establish Bulgaria and Romania (Consistent problems in the region are still holding Bulgaria and Romania back on becoming established) on the international investment map.

English Summary

How the news “frame” politics has been the subject of a great number of theoretical and empirical investigations by political communication scholars over the past two decades. Among those, the study of framing effects has received particular attention and a large number of empirical studies have helped to explain in what ways subtle differences in the presentation of a particular political issue can lead to changes in interpretation, attitudes, and behavior. However, perhaps because news framing effects theory proved to be so valuable for studying different political issues and contexts, many scholars have made instrumental use of framing, but have failed to explicitly evaluate its theoretical as well as empirical framework. Thus, while extant studies have unquestionably provided a solid empirical basis for the existence of news framing effects in political communication, they have also left several fundamental questions unanswered.

This dissertation takes some of these questions as its starting point. First, we investigate the intermediary psychological factors that enable or limit a news framing effect on political attitudes. The study of these processes is essential for our understanding of how news framing effects actually work in an individual’s mind, but the literature is still full of debate about the range of mediators a news framing effect can go through. We also examine whether a news framing effect depends on the particular issue at stake, and how the importance of an issue alters susceptibility to framing effects. In doing so, this study enables a more fine-grained understanding of the limits of news framing effects, and also further introduces the socio-psychological notion of “attitude strength” into framing literature. Third, we study how long news framing effects last over time and, fourth, if their persistence depends on whether news framing is repetitive or competitive in nature. To date, only very few scholars have investigated duration and persistence of news framing effects. Yet, testing these leads framing effects theory on the way to understanding how influential news framing effects really are in politics and political communication.

In *Chapter 1*, we test a multiple-mediation model of news framing effects on political attitudes. In a survey experiment, we investigate two mediation processes: belief importance change and belief content change. Our analysis shows that news framing effects are mediated by both processes. However, in terms of explanatory power, belief content change matters more than belief importance change. We also test whether this mediation model depends on differing levels of political knowledge. Our results indicate that participants with higher levels of political knowledge were affected to a greater extent via both mediation processes. The results of this study show that a news frame can cause different types of effects on political attitudes. They also corroborate recent findings that indicate the ability of news frames to add previously inaccessible or unavailable content to a person’s beliefs about an issue.

In *Chapter 2*, we hypothesize that news framing effects depend on the importance of an issue. In two survey experiments, we examine to what extent different levels of issue importance moderate the processing of a framed message and the magnitude of a news framing effect. Our

findings show no news framing effects for a high contextual-importance welfare issue, and rather large effects for a low contextual-importance trade issue. However, news frames in the “low importance” issue experiment caused effects across the board, almost independently of how important an individual found the issue personally. We also find that if individuals attached higher personal importance to an issue, they were more affected by belief importance changes whereas if they attached lower importance to an issue, they were affected more via belief content changes. High personal importance did, moreover, increase the elaboration of belief importance considerations. This chapter is one of the first to present variation in framing effects between different issues within a single experimental study. Moreover, the results indicate that not only personal but also contextual levels of importance are likely to matter for the individual-level analysis of news framing effects.

In *Chapter 3*, we investigate how long news framing effects last over time. We conduct a “classic” framing experiment, but augment it with three delayed measurement points (after one day, one week, and two weeks). Our results show a news framing effect that is surprisingly resistant to dilution. We also analyse whether the rate of decay of a news framing effect depends on different levels of political knowledge. We find no immediate moderating effect of knowledge, but can show that individuals with more moderate levels of political knowledge were affected most persistently over time. This chapter adds to only a handful of empirical studies that combine a framing experiment with delayed opinion measurements, and is the first to include more than one delayed measurement. Our results challenge previous assumptions regarding the short-term nature of news framing effects.

In *Chapter 4*, we again test the duration of news framing effects, but this time at four delayed time points (after 15 minutes, one day, one week, and two weeks). Moreover, we add multiple exposures to repetitive and competitive news frames over time to our experimental design. Our analysis shows that repetitive news framing has a consolidating effect on political attitudes. This means that additional exposure to news framing does not for the most part intensify the framing effect, but leads to more or less consolidated opinions across time. Yet, news framing effects can become stronger, if the time span between the first and second frame exposure is relatively short. Competitive news framing show strong recency effects, i.e., the last news frame exposure is more influential for opinion formation. Yet, for one of our framing scenarios, this effect only took place when the delay was longer than one week. We also find that political knowledge has a short-term influence on both consolidation and recency effects. When the delay between first and second exposure was relatively short, individuals with higher levels of knowledge displayed more pronounced consolidation effects and weaker recency effects. The experiment in this chapter is the first to test both consonant and dissonant news framing across multiple delayed time points. The results contribute to our understanding of the real influence news frames have on political attitudes.

In sum, this dissertation supplies a number of research findings that add to a theory of news framing effects, and also to the understanding of the role media effects play in political

communication. We show that researchers must think more about what actually constitutes a “framing effect”, and that a dissociation of framing from other media effects concepts is not necessarily the ideal way to go in creating a more advanced framing theory. We also provide the first contours of a theory of news framing effects over time. Our results initially support the notion of a long-term influence of news frames on political attitudes, but also prompt questions about how stable these effects really are. Future research must continue to determine in what ways and to what extent our daily life is affected by how the news “frame” politics.

Nederlandse Samenvatting

In de afgelopen twee decennia is hoe de politiek in het nieuws wordt “geframed” het onderwerp geweest van een groot aantal theoretische en empirische studies door politieke communicatiewetenschappers. Met name het onderzoek naar de effecten van frames heeft veel aandacht gekregen: een groot aantal empirische studies heeft getracht te verklaren op welke manieren subtiele verschillen in de presentatie van een politiek onderwerp kan leiden tot veranderingen in interpretatie, attitudes en gedrag. De theorie van de effecten van nieuwsframes blijkt heel waardevol voor het bestuderen van verschillende politieke issues en contexten, waardoor zeer veel wetenschappers hiervan gebruikmaken. Tegelijkertijd slaagt men er echter niet in het theoretische en empirische raamwerk van dit onderzoeksgebied verder te ontwikkelen. Met andere woorden, terwijl veel bestaande studies een solide empirische basis hebben gelegd voor het bestaan van effecten van nieuwsframes op het gebied van de politieke communicatie, zijn verschillende fundamentele vragen onbeantwoord gebleven.

Dit proefschrift tracht enkele van deze vragen te beantwoorden. Allereerst onderzoeken wij de tussenliggende psychologische factoren die het effect van een nieuwsframe mogelijk maken of juist beperken. Het onderzoek naar deze processen is essentieel voor onze kennis over hoe de effecten van nieuwsframes daadwerkelijk tot stand komen. Echter, over de vraag via welke mediatoren het effect van een nieuwsframe loopt, bestaat nog veel onenigheid in de literatuur. Wij onderzoeken ook of het effect van een nieuwsframe afhankelijk is van het onderwerp, en hoe het belang van dit onderwerp de ontvankelijkheid voor het effect van een frame beïnvloedt. Hierdoor maakt deze studie een preciezer begrip mogelijk van de beperkingen van de effecten van nieuwsframes, en introduceert de sociaal-psychologische notie van “*attitude strength*” in de literatuur over framing. Op de derde plaats gaan we na hoe lang de effecten van nieuwsframes aanhouden, en, ten vierde, of de mate waarin deze effecten doorzetten afhankelijk is van de vraag of een nieuwsframe repetitief of competitief is. Tot op heden hebben slechts enkele onderzoekers de duur en de duurzaamheid van de effecten van frames onderzocht. Wij tonen aan dat het testen hiervan tot meer begrip van de mate van invloed van nieuwsframes op de politiek en politieke communicatie leidt.

In het Hoofdstuk 1 testen wij het effect van een nieuwsframe op politieke attitudes met behulp van een *multiple-mediation model*. In een survey-experiment onderzoeken we twee mediërende processen: *belief importance change* en *belief content change*. Onze analyse toont aan dat de effecten van nieuwsframes worden gemedieerd door beide processen. Echter, wanneer wij kijken naar de mate van verklaring was *belief content change* meer van belang dan *belief importance change*. Dit betekent dat nieuwsframes niet alleen een effect hebben doordat zij bepaalde aspecten van een issue belangrijker maken, maar ook doordat ze nieuwe informatie geven aan het individu. We testen ook of deze gemedieerde effecten afhankelijk zijn van de mate van politieke kennis. Onze resultaten wijzen uit dat deelnemers met meer politieke kennis meer

worden beïnvloed via beide mediërende processen. De resultaten van deze studie laten zien dat een nieuwsframe verschillende soorten effecten kan hebben op politieke attitudes.

In Hoofdstuk 2 toetsen we of de effecten van nieuwsframes afhankelijk zijn van het persoonlijke en het contextuele, of nationale, belang van een onderwerp. In twee survey-experimenten gaan we na in welke mate verschillende niveaus van *issue importance* het verwerken van een frame en de grootte van het effect van een nieuwsframe modereren. We vinden geen effecten van een nieuwsframe voor een belangrijk onderwerp (verzorgingsstaat) en we vinden juist grote effecten voor een minder belangrijk onderwerp (handel). Echter, nieuwsframes binnen het experiment over het “minder belangrijke” onderwerp zorgen voor effecten over de gehele linie, bijna onafhankelijk van hoe belangrijk een individu het onderwerp zelf vond. Wij laten ook zien dat als individuen een onderwerp belangrijker vinden, zij meer worden beïnvloed via veranderingen in *belief importance*, terwijl als zij minder belang hechten aan een onderwerp ze meer worden beïnvloed via veranderingen in *belief content*. Groter persoonlijk belang vergroot bovenal de precisie van *belief importance*-overwegingen. Dit hoofdstuk is één van de eerste dat variatie in de effecten van frames tussen verschillende issues in één en dezelfde experimentele studie presenteert. Bovendien geven de resultaten aan dat niet alleen de persoonlijke, maar ook de contextuele mate van belangrijkheid relevant lijkt te zijn voor de analyse van de effecten van nieuwsframes op het individuele niveau.

In Hoofdstuk 3 onderzoeken we hoe lang de effecten van nieuwsframes aanhouden. We voeren een “klassiek” framing-experiment uit, maar breiden het uit met drie latere tijdsmetingen (na een dag, een week, en twee weken). Onze resultaten tonen een effect aan van een nieuwsframe dat verrassend lang aanhoudt. We analyseren ook of de mate van verval van het effect van een nieuwsframe afhankelijk is van de mate van politieke kennis. We vinden geen direct modererend effect van kennis, maar kunnen wel aantonen dat individuen met een meer gemiddeld kennisniveau het meest blijvend worden beïnvloed. Deze studie is één van slechts enkele empirische studies die een framing-experiment combineert met latere opiniemetingen, en de eerste die meer dan één latere meting bevat. Onze resultaten trekken eerdere aannames met betrekking tot de kortdurende aard van de effecten van nieuwsframes in twijfel.

In Hoofdstuk 4 testen we wederom de duur van de effecten van frames, maar deze keer op vier latere tijdstippen (na 15 minuten, een dag, een week, en twee weken). Bovendien voegen we aan ons experimenteel ontwerp meer blootstellingen aan repetitieve en competitieve nieuwsframes toe. Onze analyse toont aan dat repetitieve nieuwsframes een consoliderend effect hebben op politieke attitudes. Dit betekent dat additionele blootstelling aan nieuwsframes het effect van het frame niet versterkt, maar zorgt voor meer of mindere geconsolideerde meningen over de tijd. Echter, de effecten van nieuwsframes zijn sterker als de tijdsspanne tussen de eerste en de tweede blootstelling aan een frame relatief kort is. Competitieve nieuwsframes tonen sterke *recency effects* aan. Dit wil zeggen dat de laatste blootstelling aan een nieuwsframe meer invloed heeft op de opinievorming. Echter, in een van onze vier framescenario's heeft dit effect alleen plaats wanneer de tussenperiode langer is dan een week. We vinden ook dat politieke

kennis een kortdurende invloed heeft op zowel consoliderende als *recency*-effecten. Als de vertraging tussen de eerste en de tweede blootstelling relatief kort is, vertonen individuen met meer politieke kennis duidelijkere consoliderende effecten en zwakkere *recency*-effecten. Het experiment in dit hoofdstuk is het eerste dat zowel consonante als dissonante nieuwsframes test over de tijd heen. De resultaten dragen bij aan ons begrip van de daadwerkelijke invloed van nieuwsframes op politieke attitudes.

Dit proefschrift voorziet in een aantal onderzoeksbevindingen, die bijdragen aan een theorie van de effecten van nieuwsframes, maar ook aan het begrip van de rol van media-effecten in politieke communicatie. We tonen aan dat onderzoekers meer moeten denken over wat een “*framing effect*” nu daadwerkelijk behelst, en dat het voor een betere theorie over framing belangrijk is de overeenkomsten met theorieën over andere media-effecten te benadrukken. We leveren tevens de eerste contouren van een theorie over de effecten van nieuwsframes over de tijd. Onze resultaten ondersteunen het idee van een langdurige invloed van nieuwsframes op politieke attitudes, maar roepen ook vragen op over hoe stabiel deze effecten in werkelijkheid zijn. Toekomstig onderzoek zal moeten bepalen op welke manieren en in welke mate ons dagelijks leven wordt beïnvloed door hoe de politiek door het nieuws geframed wordt.

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