Fight or flight: Affective news framing effects
Feinholdt, A.

Citation for published version (APA):
Feinholdt, A. (2016). Fight or flight: Affective news framing effects

General rights
It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations
If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: http://uba.uva.nl/en/contact, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.
Chapter 6

Conclusion & Implications for Affective News Framing Effects
Cognitive mechanisms have played a central role in research on news framing effects (e.g., Nelson, Oxley, & Clawson, 1997; Price, Tewksbury, & Powers, 1997; Slothuus, 2008). However, academic interest in the role of emotions in framing has only recently gained momentum. As a result, studies aiming to clarify the role of emotional responses with regard to framing effects have increasingly started to emerge (e.g., Gross, 2008; Holm, 2012; Igartua, Moral-Toranzo, & Ferández, 2011). Nevertheless, many of these studies have limited their focus not only to a narrow range of emotions, such as anger, fear (e.g., Gross, 2008; Major, 2011; Nabi, 2003) or enthusiasm (e.g., Druckman & McDermott, 2008; Lecheler, Bos, & Vliegenthart, 2015), but also to the same functionalities of emotions in the context of framing effects (see, for review, De Vreese & Lecheler, 2012). In addition, few have challenged the suitability of existing emotion-based explanations within framing effects research. Therefore, the field still lacks clarity regarding the precise role of emotions, which is essential to establishing a comprehensive theory of news framing that comprises both cognitive and affective variables.

The work presented in this dissertation represents an attempt to go beyond the existing research and, thus, to shed light on a number of under-researched issues. In addressing these issues, it provided evidence that an audience’s emotions are, for example, not exclusively a consequence of exposure to news framing, but that they are also elicited by issue characteristics in political discourse (Chapter 2). Furthermore, alternative ways of understanding how framing effects evolve through the experience of a sequence of emotions were presented (Chapter 3), as well as a view on whether emotions could limit or strengthen framing effects (Chapter 4). By focusing on the relationship between news framing and misinformation, it was also demonstrated that emotion-based strategies are largely ineffective in countering misinformation effects. However, emotions offer an explanation of why people form specific beliefs in response to differently framed misinformation (see Addendum; Chapter 5). Some of the findings presented in this dissertation may challenge what framing scholars have previously considered as a fact within the field, and some might also raise questions for future research. On this basis, I believe this dissertation makes an important contribution to the field and presents a roadmap towards a cognitive-affective model of the psychology of framing effects.

In the final section of this dissertation, I will briefly present the findings of each chapter, before turning to the implications and limitations of my research. I will conclude with suggestions for future research.

**Summary of Research Findings**

Chapter 2 examined whether news frames strengthen or weaken the direct effects of differently contested issues on specific emotional responses, such as hope, anger and
fear. The analyses showed that frames covering political issues that are moderately to highly contested in public life caused stronger emotional experiences of anger and fear, as well as lower levels of hope, than frames on issues that are less contested. However, this was only the case in media stimuli featuring a human interest frame. The findings not only emphasize that emotions function as mediators, but also show that the extent to which this is the case is largely dependent on the salient issue characteristics and the frame used. Thus, research on affective framing effects needs to consider the moderating influence of environmental or contextual factors rather than just the news frame selected.

Chapter 3 challenged the idea that emotions function as parallel multiple mediators in the news framing effect process. As an alternative, a serial mediation model was suggested, whereby a sequence of two emotions constitutes the driving mechanism behind the effects of framing on people’s behavioral intentions. Central to this proposed emotional cascade were two emotions: surprise and anger. To provide a more comprehensive view of serial mediation, this chapter also examined whether the effects of news frame exposure on surprise depended on the issue’s temporal distance or proximity. The findings lent credence to the concept of an emotional cascade in news framing effects: the effects of news framing on behavioral intentions did indeed pass through surprise and anger if the issue was temporally proximate. Yet, again, this process could only be observed in news coverage using a human interest frame. These findings represent a viable alternative to the traditional parallel multiple mediation model commonly used in news framing research. Furthermore, the findings stress the importance of contextual factors and frame type as boundary conditions that determine when to expect a certain framing effect or not.

Chapter 4 argued that incidental or issue-unrelated emotions present in participants’ minds at the moment of frame exposure would influence framing effects with respect to the beliefs of our participants. Moreover, again acknowledging the impact of contextual factors, the study aimed to determine whether the effects of incidental emotions on framing effects would be further constrained by issue importance. The findings revealed that what people felt while being exposed to news frames mattered only when the issue at stake was considered of high importance. More precisely, when the issue was rated to be highly important, participants experiencing sadness reported more negative beliefs in response to an episodic frame. Meanwhile, for those who were angry and perceived the issue to be very important, the thematic frame had a greater impact on their control beliefs than the episodically framed article. The findings underscore the complex interplay between contextual and individual factors in producing affective framing effects.

The goals for Chapter 5 were twofold: First, I studied how valenced news frames would influence the robustness of misinformed beliefs and behavioral intentions.
Along this line, I examined the effectiveness of a retraction as a function of emotional arousal and the timing that people would receive the corrective information. Second, I tested whether the direct effects of valenced news frames on beliefs were due to people’s emotional responses of contentment and disappointment. The findings revealed that the effects of negatively framed misinformation on beliefs were more robust than positively framed ones. Nevertheless, regardless of the valence, people adjusted their behavioral intentions in response to the retraction. Furthermore, the persistence of misinformation was unaffected by the time the corrective information was provided. Similarly, the extent to which people were emotionally aroused while viewing the corrective information did not clarify misinformed beliefs and intentions. Finally, and most relevant to this dissertation, the results showed that the effects of positively, as opposed to negatively, framed misinformation on both disappointment and contentment were mediated by people’s beliefs. In other words, in response to negatively framed misinformation, people experienced more disappointment and less contentment, and these effects were due to changes in beliefs with regard to the issue at stake. The work presented in Chapter 5 emphasized how frames and emotions interact with one important aspect of political communication today, namely misinformation in journalistic news. In addition, the study was one of the first to adopt a longitudinal experimental perspective with regard to framed misinformation and emotions. In this way, it contributes to the field in its innovative design and topic as well as its implications for future framing research.

**Implications for Affective News Framing Effects Theory**

The following sections raise a number of issues concerning each study presented in this dissertation.

**The Interplay between Issue Characteristics and Affective News Framing**

In framing effects research, the characteristics of an issue are rarely treated as independent study concepts. Yet, as previous research has shown, issues possess their own characteristics, which can influence the strength of framing effects (e.g., Lecheler, De Vreese, & Slothuus, 2008). Chapter 2 took this idea one step further by showing that differently contested issues will interact with a news frame in eliciting specific emotions. Whether issue characteristics matter, however, depends on whether the issue resonates with the frame type at stake. It was shown that frames in this case will take on a moderating function, with the human interest frame intensifying the emotional responses more than the economic consequences frame.

These findings highlight that the issue choice should not play a secondary role in future framing effects research: Issue characteristics such as contestation, but also
negativity, importance or urgency, could have a direct impact on people’s emotional responses and will thus blot the framing effect process. This indicates that scholars should not limit their questions to a frame’s strength (Aarøe, 2011) or cues (e.g., Igartua et al., 2012). Instead, the choice of an issue itself should be considered to be relevant from the start as this could introduce unexpected confounds. Therefore, I recommend running tests in advance to determine whether people have specific associations with the issue to be framed or not. Alternatively, scholars can also refer back to aggregate data available in public to assess the appropriateness of an issue (e.g., Chapter 2).

I further suggest that research on affective news framing effects should not only recognize the value of issue characteristics but also examine other issue characteristics. From my point of view, potentially interesting characteristics could be those that directly reflect cognitive appraisals. For example, issues that have only recently entered the media landscape could receive substantially more media attention than those which are more long-standing. As a result, people may be more attentive when processing the news and consequently less inclined to rely on peripheral information such as the salient frame. At the same time, the presence of new issues presupposes that people are less informed and therefore may be more likely to lack an issue-specific belief. Correspondingly, they might be even more inclined to rely on information they come across in the media. These are only some of the considerations that might be worth pursuing – especially because novelty is directly relevant to the experience of emotions (e.g., Ellsworth & Scherer, 2003), not to mention an important aspect of journalistic work (Deuze, 2005).

Moreover, the findings indicate that there is an interaction between the issue at stake and the frame that is applied to it. Correspondingly, I propose that it is the combination of a specific frame (in this case, the human interest frame) and a specific level of the issue characteristic (in this case, contestation) that sparks an emotional response. In this way, Chapter 2 illustrates how elements that may otherwise be confounded may each play a role in eliciting an emotional response and it is thus worthwhile to disentangle them. In particular, it underscores that the role of news framing should not be limited to an independent variable, as news framing can also function as a boundary condition for the effects of issue characteristics.

Parallel or Serial Models of Affective News Framing Effects

Currently, many existing affective framing studies treat emotions as parallel and independent mechanisms (e.g., Addendum; Holm, 2012; Kühne, Weber, & Sommer, 2015). In Chapter 3 I challenged this notion by testing an emotional cascade that passed through two emotions: surprise and anger. The findings revealed that framing effects are not restricted to a parallel mediation model (e.g., Lecheler, Schuck, & De Vreese, 2013), but can also be explained with greater nuance by a serial mediation
model. The effective application of a serial mediation model to framing suggests that the usual approach may need revision.

The work in Chapter 3 was primarily motivated by research showing that appraisals unfold systematically rather than randomly, with the relevance and novelty of the impending stimulus evaluated first (e.g., Sander, Grandjean, & Scherer, 2005; Van Peer, Grandjean, & Scherer, 2014). On this basis, I have observed an emotional cascade which began with a simple emotional state - namely surprise - that ultimately transformed into anger. Surprise is an emotion that is associated with curiosity and information seeking (Roseman, 2013; Silvia, 2009). People are typically surprised when an unfolding event is unexpected or is difficult to reconcile with initial expectations (Maguire, Maguire, & Keane, 2011). As such, surprise can be seen as an adequate building block that can be placed at the beginning of such an emotional cascade. This, however, does not mean that all emotional cascades will begin and proceed in exactly the same way. For example, it is plausible that other news articles could first elicit negative emotions such as anger and then subsequently translate into a positive emotion, such as hope. It is, however, also possible that the cascade could be defined by changes from one emotion to another, with both sharing the same valence. This is likely to be the case when the overarching tone of the news article is consistently either negative or positive (see Nabi & Green, 2015).

Yet, as I have shown in this study, the way an emotional cascade evolves is also dependent on contextual moderators. In Chapter 3, the context was defined by both the news frame and differences in what is called psychological distance (Lewin, 1951). More specifically, I assumed that a human interest frame combined with an issue that is temporally proximate would yield stronger effects than in the case of an issue oriented towards the future. Indeed, the participants reported being more surprised when a temporally proximal issue was embedded within a human interest frame. It is thus possible that the combination of this frame and an issue’s temporal proximity caused people to create a mental image of the event that was richer in detail and more vivid. At the same time, the more details are available, the more difficult it might have been for a person to reconcile the information provided in the news with their own expectations.

In Chapter 3, my focus was limited to the interplay between emotions, news framing and psychological distance. As a result, I can only speculate about whether specific cognitive appraisals precede or interfere at specific locations in the emotional cascade. However, it is not far-fetched to assume that outcomes from previous cognitive appraisals may interfere with the processing at later stages. For example, an appraisal assessing goal conduciveness could interact with the appraisal of goal relevance (e.g., Kreibig, Gendolla, & Scherer, 2010). However, whether and how this applies to news framing requires investigation in future research.
Finally, the study of affective news framing has been limited to one-shot news framing experiments. However, in real life, people are rarely (if at all) exposed to a single frame. Rather, they will often view either the same frame repeatedly or encounter competitive frames (e.g., Chong & Druckman, 2007; Lecheler & De Vreese, 2013; Lecheler, Keer, Schuck, & Hänggli, 2015; Nisbet, Hart, Myers, & Ellithorpe, 2013). I believe that the integration of the emotional cascade with either of these framing processes could be particularly useful, because both types of processes provide an inherently dynamic environment, which is also considered to be an important condition for the cascade (discussed in Chapter 4). In particular, while competitive news framing entails exposure to contrasting news frames, repetitive news framing refers to the repeated presentation of exactly the same frame (Lecheler & De Vreese, 2013). Accordingly, if people are exposed repeatedly to the same frame, it is likely that the emotional cascade would become stronger over time. In contrast, exposing people to contrasting frames may not only augment multiple changes in emotions, but could also weaken an emotional cascade. The extent to which these considerations are tenable needs to be put to the test.

**Emotions as Moderators of News Framing Effects**

A look into affective framing research shows that the moderating function of emotions with regard to news framing has received very little attention (see for review, Schuck & Feinholdt, 2015). With a few exceptions, the majority of empirical studies have been devoted to determining whether and which emotions mediate news framing effects (e.g., Kühne & Schemer, 2015; Lecheler et al., 2015; Major, 2011). This imbalance is surprising given the fact that in neighboring disciplines such as psychology it is well-known that incidental emotions can influence people’s reactions (e.g., Andrade & Ariely, 2009; Gino & Schweitzer, 2008; Yip & Côté, 2012). Does this also apply to affective news framing? Chapter 4 demonstrated that, depending on the issue’s level of importance, incidental emotions will moderate framing effects. These findings can be consistent with a substantial body of literature concerning emotions which argues that what people feel at a given moment can bias their thoughts, decisions or behavioral acts (e.g., Han, Lerner, & Keltner, 2007; Kim, Park, & Schwarz, 2010; Lerner & Keltner, 2000). Similarly, the findings are in line with research by Druckman and McDermott (2008) who demonstrated that a prevailing emotional state could bias preferences as well as moderate framing effects. Thus, based on my findings, I conclude that incidental emotions are important moderators of affective news framing effects. This is because emotions are not simply attributes of people, but are often used as reference points for making decisions or judgments (Angie, Connelly, Waples, & Kligyte, 2011; Raghunathan & Pham, 1999).
The present findings highlight that not everyone is receptive to emotions or news framing in the same way. Rather, the moderating function of emotions starts to emerge as soon as the sample is differentiated in terms of issue importance. More specifically, when participants rated the issue as being less important, they were more likely to process a framed news article through their emotion frame (Nabi, 2003), but less so when the issue gained importance. This result suggests that there are boundary conditions at which people are most vulnerable to the impact of their own emotions.

It is hardly surprising that the importance of an issue sets such boundaries. As scholars have noted, the more important an issue is, the more likely the person will possess a knowledge base that will mitigate the effects of less relevant influences and, thus, reduce the person’s susceptibility to them (e.g., Boninger, Krosnick, Berent, & Fabrigar, 1995; Lecheler et al., 2009). In view of the foregoing, the findings of this study expand current research by showing that news framing effects depend on people’s emotional states as well as the extent to which the issue at stake is important.

It is now important to ask whether and how these effects would change if both anger and sadness, for example, were substituted with alternative but still incidental negative or positive emotions. Bearing in mind what we currently know about emotions, I would suggest that it is important to go beyond valence when making predictions regarding framing effects. This is because the way people process and respond to information is ultimately determined by the quality of an emotion (e.g., DeSteno, Petty, Wegner, & Rucker, 2000). Consistent with that, Tiedens and Linton (2001) showed that information processing is also influenced by the cognitive appraisal of uncertainty; that is, regardless of whether people were angry or happy, as long as they felt certain, they were more willing to engage in heuristic rather than systematic processing. On this basis, I would argue that substituting anger and sadness with emotions that have the same qualities as these two may yield similar findings as the ones described in Chapter 4. Meanwhile, replacing anger and sadness with other emotions (e.g., guilt or shame) that differ along several appraisal dimensions may modify the results obtained in a way that is more consistent with the substituted emotions. To clarify this, future research could replicate this study as well as expand it using additional emotions.

In Chapter 4, I deliberately focused on incidental or issue-unrelated emotions because people expose themselves to news not only to stay updated but also to seek distraction from their daily lives (e.g., Diddi & LaRose, 2006). Such an inclination presupposes that people bring their personal “emotional baggage” with them when they grab the newspaper. However, the influence of incidental emotions is likely to extend to other more “critical” situations, such as when people are expected to vote or attend mass demonstrations. In this case, a person’s prevailing emotional state could facilitate a decision that they may ultimately regret. On a larger scale, this could have far-reaching consequences for both the social and the political landscape.
Moreover, I argue that issue-relevant emotions could play an essential role with regard to news framing. As was shown in Chapter 1, emotional responses are not limited to news frames but instead can be elicited by different types of issue characteristics. Accordingly, once an issue's characteristics have been associated with certain emotions (e.g., when the news repeatedly describe the issue as being urgent or important) and these are automatically activated as soon as the issue is encountered in a news frame, this integral emotion could interfere with framing effects. In light of these considerations, I encourage scholars to focus more on both incidental and integral emotional states as moderators of framing effects. In addition, they will have to qualify in advance whether the emotional state studied is due to the issue at stake or the result of random contingencies.

Countering Misinformation: The Interplay between News Framing and Emotions

One of the negative features associated with information-rich societies is that factually incorrect information may sometimes be published in the news and thereby reach a large audience. Under some circumstances this misinformation may go unnoticed, leaving no trace. However, some misinformation will have substantial societal side effects, such as decisions to support a war, or the outbreak of an epidemic as a result of the opposition to vaccination (e.g., Lewandowsky, Stritzke, Oberauer, & Morales, 2005; Nyhan & Reifler, 2012). Framing has been proposed to play a critical role in the dissemination of misinformation insofar as it could facilitate incorrect beliefs by simplifying complex issues or highlighting irrelevant information (Lewandowsky et al., 2005). Yet, because positive and negative news frames elicit framing effects that differ in their duration over time (e.g., Lecheler & De Vreese, 2012; Shen, Ahern, & Baker, 2014), I have argued here that framing may actually augment misinformation by strengthening its persistence.

Based on this point of view, I have tested in Chapter 5 how differently valenced news frames influence the perseverance of misinformation in people’s beliefs and behavioral intentions. In addition, I have examined whether these effects would be mitigated by distributing corrective information at different time intervals and by manipulating people’s level of emotional arousal. Even though framing and emotionality play an important role in journalistic work (Pantti, 2010), the study presented in Chapter 5 was one of the first to look into these two questions. Clarifying the mitigating function of emotions is an especially important task, as the few available studies have dealt primarily with establishing that a link between emotions and perseverance of misinformation existed (e.g., Ecker, Lewandowsky, & Apai, 2011; Weeks, 2015), leaving it unclear when and how emotions might interfere with the persistence of misinformation.
Concerning the first question, I have found that the persistence of misinformed beliefs differs as a function of valenced news frames. In particular, people’s beliefs will be less affected by corrections if they have been exposed to negatively framed misinformation in the first place. With regard to intentions, people seem to correct both negatively and positively framed misinformation. These findings are consistent with the existing research showing that misinformation is indeed robust regarding retractions (see for review Lewandowsky et al., 2012). Meanwhile, the work presented in Chapter 5 advances the field by showing that positively or negatively framed misinformation can have distinct effects on people’s beliefs and behavioral inclinations. In light of these results, it can be firmly concluded that framing does matter to misinformation, as it is a means to accentuate the persistence of misinformation.

Conducting studies on the duration of media and framing effects is essential to qualify the relevance of research findings, both for theory development and the applied field (Gaines et al., 2007). In the past few years, increasingly more framing scholars have integrated this knowledge into their work (e.g., Chong & Druckman, 2010; Lecheler & De Vreese, 2013; Matthes & Schemer, 2012; Tewksbury, Jones, Peske, Raymond, & Vig, 2000). In Chapter 5, I followed in the footsteps of these scholars and tested the impact of duration on framed misinformation. The results did not confirm my expectations, as the provision of corrective information at different time intervals did not have an effect. This implies that people will hold onto factually incorrect perceptions regardless of whether the correction is provided immediately, after a few minutes (e.g., Ecker et al., 2011), or a day or a week later (Chapter 5). Given that the results were obtained over time rather than in a one-shot experiment, this conclusion can be seen to be particularly strong. This is because the endurance of an effect can indicate whether and how the recipient is still under the influence of the manipulation. For this reason, I agree with others (Gaines, Kuklinski, & Quirk, 2007; Lecheler et al., 2015) that research that goes beyond the typical one-shot experiments should become the standard rather than an exception.

Chapter 5 also expanded on previous work by studying emotion-based retractions in relation to altering beliefs and intentions arising from factually incorrect information. By focusing on people’s emotional arousal rather than specific emotions, I have found that emotional arousal does not interfere with how corrective information is processed. Accordingly, these findings suggest that the extent to which people are aroused while viewing corrective information only plays a negligible role. However, there is evidence that emotional arousal has diverse effects on attention and memory (e.g., Christianson, 1992; Lang, Dhillon, & Dong, 1995; Mather, Mitchell, Raye, Novak, Greene, & Johnson, 2006). It is thus possible that the method used to manipulate emotional arousal might have been less effective, or not strong enough, to reach levels which could impede people’s information processing. Alternatively, the absence of
the effect might have been due to the issue at stake or a news effect. Notwithstanding that my hypothesis was not supported, I still contend that emotional arousal might carry important implications for people’s responses to corrective attempts. Therefore, I encourage other scholars to pursue this path more thoroughly.

As mentioned above, research is slowly emerging concerning the role of emotions in the context of misinformation. For example, Weeks (2015) revealed that the extent to which people will be more open to corrective information regarding their affiliated political party was directly influenced by anger or anxiety. In my own work, I have demonstrated how misinformation influences two emotions - disappointment and contentment - on the basis of people’s beliefs. More specifically, I have shown that negative beliefs strengthen disappointment, whereas positive ones accentuate contentment. The use of emotions as dependent variables that are influenced by beliefs introduces a novel perspective on emotions. This is because research on framing effects has been primarily concerned with emotions as mediating variables (Holm, 2012; Kühne, 2014; Lecheler et al., 2015). However, because emotions do not arise spontaneously but are the result of a multitude of appraisals, it is possible that particularly self-conscious emotions, such as shame or guilt, are expressed only after a person becomes aware of or evaluates a salient event (Tracy & Robins, 2004). As the next step, it will be interesting to discover whether and how either of these emotions influences the persistence of misinformation. I speculate that disappointed people may be particularly receptive to corrective information because it might allow them to overcome this negative state (e.g., Martinez, Zeelenberg, & Rijsman, 2011). In contrast, those who are content in the first place may discard corrective information since it may undermine their positive feeling.

Finally, by focusing on disappointment and contentment, this dissertation also extends previous affective framing studies which have generally dealt with a limited range of emotions, such as anger, fear or enthusiasm (e.g., Holm, 2012; Lecheler et al., 2013; Nabi, 2003). I posit that going beyond the traditional set of emotions being studied can only benefit our field because, depending on the situation, people may experience a multitude of emotional responses (Siemer, Mauss, & Gross, 2007), with varying degrees of complexity.

**Limitations**

The goal of this dissertation was to shed light on the function of emotions with regard to news framing effects. To achieve this goal, I have conducted multiple online survey experiments, in which I have tested the general population as well as student samples. Despite the fact that I took care to ensure that each study was conducted according to the highest standards required for experimental work, there are still some limitations that need to be addressed. While study-specific limitations are discussed within
each chapter, this section illuminates overarching limitations that are encountered throughout this dissertation.

One of the strengths of this dissertation can also be seen as a limitation: All studies paid exclusive attention to emotions as mechanisms of framing effects at the expense of a comprehensive model that also presupposes cognitive mechanisms - which is important (see Chapter 1). Therefore, I can only make limited assumptions regarding the interplay between emotions and cognitions in the model presented. Still, it should be emphasized that my goal was to reveal empirically different functionalities of emotions which could be utilized for theory development. Also, there seems to be a relatively large amount of literature on cognitive mechanisms in framing effects research (see, for review, De Vreese & Lecheler, 2012), much of which was discussed in this dissertation. Currently, some scholars stress the need to integrate cognitions and emotions into a comprehensive model (e.g., Schuck & Feinholdt, 2015). However, I think it is vital to first understand how emotions can influence news framing effects and vice versa. Understanding the impact of emotions will assist in identifying potential parallels between cognitive and emotional factors as well as help determine under which conditions emotions or cognitions matter most. Given the specific focus of each study in this dissertation, I encourage scholars to replicate the work presented here to evaluate whether there is any consistency in the findings. Subsequently, the field can move further towards an actual comprehensive theory of news framing effects that includes both affective and cognitive processes as well as their interplay.

A second and related limitation is the measurement of emotions. Throughout this dissertation, emotions were assessed using self-report measures. Even though this approach is valid and frequently used in research on both framing and emotions (e.g., Gross & D’Ambrosio, 2004; Kim & Cameron, 2011; Lecheler et al., 2015; Nabi, 2003), I consider that further research is necessary to determine whether self-report measures exclusively gauge emotions or in fact report on cognitions. Alternative and more advanced emotion measures are steadily developing but were not available for use in the work presented in this dissertation. For example, McDuff, El Kaliouby, Kodra and Picard (2013) used an automated algorithm to assess facial expressions in terms of smiles, smirks and valence while viewing political debates. This method allowed them to determine when the study material was more or less emotional. Alternative measures, such as the Face Reader38 (Noldus, 2014), allow for the isolation and assessment of specific emotions (e.g., Lewinski, Fransen, & Tan, 2014). The implementation of these or similar methods could substantially advance affective framing research by circumventing self-reports.

38 The Face Reader is an emotion recognition software which produces an intensity and probability score of an emotion (Noldus, 2014).
A third limitation is the use of emphasis news frames. While this frame category is typically used in framing effect studies (e.g., Aarøe, 2011; Gross, 2008; Lecheler et al., 2015), it has recently been criticized for blurring the borders between framing and other communication means, such as persuasion. The underlying rationale is that by emphasizing different rather than equivalent information, framing works through its focus on content rather than variant issue presentations. It is thus difficult to attribute the observed effects, such as opinion change, exclusively to framing (Cacciatore, Scheufele, & Iyengar, 2016; Slothuus & Leeper, 2015). Although this dissertation is certainly not the place to make a final judgment regarding this more general theoretical debate, I argue that the selection of a frame for empirical research should be determined by the context in which the researcher seeks to make generalized conclusions. Throughout this dissertation I was primarily interested in studying phenomena that were apparent in the real world. Emphasis frames, in this case, were a reasonable choice, since they are more effective in capturing variation in real news coverage and thus, guarantee a high level of external validity. However, to maintain commensurability, I was careful to design stimuli that were as equivalent as possible. For example, all stimuli contained certain paragraphs that were held constant across articles, while other paragraphs and the headlines were adjusted to make them more consistent with the salient frame. Thus, I suggest that researchers who opt for emphasis frames should devise stimuli that are similar but which show differences consistent with the respective frames they represent only where it is indeed appropriate and necessary.

In designing the online survey experiments, I relied on previous work for orientation. However, the use of forced-choice experiments represents another limitation. In natural settings, people seek and expose themselves to information that reflects their own political interests or beliefs (Barbaris & Jerrit, 2010; Stroud, 2008). In contrast, participants in a forced-choice environment are not allowed to choose a stimulus that appeals to most of them. Instead the researcher, or the survey software used, assigns participants randomly to the respective stimuli. This approach is problematic insofar as it is not clear whether people would voluntary expose themselves to the respective stimulus or not (Iyengar, 2010). Accordingly, it is conceivable that participants’ natural and forced-choice responses might differ as a function of their preference. In some of the studies in this dissertation, I have tried to mitigate this limitation by measuring participants’ responses over time (e.g., Chapter 5) or by using non-student samples (e.g., Chapter 2). Therefore, scholars may compare how affective framing effects obtained in forced-choice experiments differ from those produced in selective exposure studies. The advantage of selective exposure experiments is that participants maintain their autonomy and, thus, can decide what they want to see and whether they want to avoid certain information (Zillman & Bryant, 1985).
Finally, the online environment, as opposed to a lab, poses an additional shortcoming. As mentioned above, online environments limit the researcher’s control over the experiment, being unable to ensure that all participants take part in the study under the same conditions. At the same time, the online environment is more “participation-friendly” than a lab since participants have more autonomy to decide where and when to take part in the study. Although there are studies which suggest that the quality of the data is equivalent for both experimental designs (e.g., Germine et al., 2012), it is still possible that there might be differences. This is because inferences regarding the comparison between lab and online experiments are drawn from non-framing studies. Consequently, to obtain some clarity on this issue, future research that compares affective framing effects obtained in the lab and on the web is required.

**What’s next?**

Beyond the research suggested by these limitations, I have a number of other recommendations for future research. Firstly, scholars should recognize the whole spectrum of emotions that could be relevant within both the framing process and the field of political communication and put these to the test. Arguably, broadening our knowledge regarding certain emotions can only benefit the field, but neglecting others altogether will only limit this knowledge development. For example, researchers could look into self-conscious emotions such as envy or guilt. Envy is a predominantly negative emotion which describes an emotional state in which one individual desires something that another possesses (Parrott & Smith, 1993). As Van de Ven, Zeelenberg and Pieters (2009) have shown, envy can be either *benign* or *malicious*: Feelings of malicious envy signal that the envious person resents, for example, another person’s undeserved advantages or superiority (Van de Ven, Zeelenberg, & Pieters, 2012) and therefore, opts for actions that could harm the envied person. In contrast, when people experience benign envy, they are motivated to upgrade their own situation through investing additional effort (van de Ven, Zeelenberg, & Pieters, 2011) or seeking the other person’s proximity (Van de Ven et al., 2009). Guilt is another negative state, which arises in situations when a person is aware of the fact that he or she has done something socially unacceptable (Baumeister, Stillwell, & Heatherton, 1994). Both envy and guilt could be interesting for political communication in general and framing research in particular. For example, it is possible that news frames dealing with immigration (e.g., Lecheler et al., 2015; Vliegenthart & Roggeband, 2007) or refugees (e.g., Van Gorp, Vettehen, & Beentjes, 2009) could facilitate out-group/in-group thinking by highlighting social benefits provided by the national government. Coverage such as this could strengthen a sense of unfairness among certain nationalist groups, which could subsequently breed feelings of envy, while the same coverage could foster feelings of guilt among other people, who might think that they are not doing enough for others in need. Alternatively,
the news could raise guilt by stressing individual as opposed to collective responsibility for climate change which subsequently could mobilize behavioral change. These are certainly interesting considerations that could be put to the test by future research.

Research on framing effects should also not neglect more positive emotions. While there are several studies on enthusiasm (e.g., Brader, Valentino, & Suhay, 2008; Lecheler et al., 2015; Valentino, Brader, Groenendyk, Gregorowicz, & Hutchings, 2011; Wojcieszak, Baek, & Carpini, 2010), other positive emotions such as empathy and interest have been largely neglected. Empathy, for example, is an emotion that people feel when they put themselves in another person's shoes (Miller & Eisenberg, 1988). However, it is also an emotion that contains both cognitive and affective components (see Kerem, Fishman, & Josselson, 2001). Interest arises in novel or unfamiliar situations which a person feels competent to deal with (Silvia, 2005). While empathy has already received some attention in news framing research (Gross, 2008; Shen, Ahern, & Baker, 2014), few studies have examined the role of interest. This might be due to the fact that interest does not appear to be an emotion. Yet, as Silvia (2008) notes, interest encompasses all relevant components such as specific cognitive appraisals and physiological characteristics that are needed for being qualified as an emotions. Research on how these emotions are involved in news framing may be worthwhile pursuing, insofar as news needs to gain and maintain the audience's attention (see Fengler & Ruß-Mohl, 2008), which could be achieved by sparking curiosity. Investigating the role of interest could thus show whether news framing is indeed effective in making people curious and whether this effect is due to enhanced comprehension as a result of the frame.

Positive emotions such as empathy and interest could also benefit research on framing effects by introducing qualities that are less likely to be shared by negative ones. Some positively valenced emotions, for example, have been shown to broaden the attentional focus and promote more creative and flexible thinking (see, for review, Fredrickson, 1998). They may also have protective functions in the context of crises (Fredrickson, Tugade, Waugh, & Larkin, 2003). Furthermore, news is not exclusively negative and some groups of people such as women will intentionally opt for positive stories to unwind from their stressors (Biswas, Riffe, & Zillmann, 1994; Knobloch-Westerwick & Alter, 2006). Also, assuming that negativity is an important news value in politics, it is possible that positively valenced news coverage in such a context would stick out more and thus, generate more attention. In light of this, an increasing focus on positive emotions in framing research may advance the field in many ways.

Secondly, I believe that the field needs studies that also take into account the duration of emotions. There are already a few psychological studies investigating the duration of emotions (e.g., Verduyn, Delvaux, Van Coillie, Tuerlinckx, & Van Mechelen, 2009; Verduyn, Van Mechelen, Tuerlinckx, & Scherer, 2013). However, political communication currently lacks such a research focus with regard to affective news framing effects. Such
a focus would be fruitful since it would allow us to estimate the significance of findings typically obtained in one-shot experiments (Gains, Kuklinski, & Quirk, 2007). In other words, to the extent that affective framing effects extend over hours, or even days, we could be more confident that they are indeed meaningful.

Thirdly, the majority of affective news framing studies, including those reported in this dissertation, have been primarily concerned with textual frames (e.g., Aarøe, 2011; Holm, 2012; Lecheler et al., 2013). Assuming that our information stream is nearly always supported by visuals, which are a powerful tool for evoking emotions (see Joffe, 2008; O’Neill & Nicholson-Cole, 2009; Powell, Boomgaarden, De Swert, & De Vreese, 2015), it seems almost superfluous to emphasize the importance of these communication means for future framing research. Investigating the interplay between textual and visual information would allow us to run tests that come closer to phenomena apparent in real life. In relation to this, affective framing research should not overlook alternative non-standard news formats (e.g., political talk shows or political satire programs), as these formats have widespread acceptance and have become widely popular (e.g., Hmielowski, Holbert, Lee, 2011; Hoffman & Young, 2011; Xenos & Becker, 2009).

Finally, future research needs to consider additional moderators that are known to have implications for emotions. For example, investigating trait affect (e.g., Kühne et al., 2015) or emotional intelligence (e.g., Yip & Côté, 2012) in the context of affective framing may yield particularly fruitful insights about when and how people respond. In this regard, it is important to follow suggestions by Aguinis, Boik and Pierce (2001). In particular, they argue that in the context of moderation analysis, researchers should conduct an a priori power analysis to ensure that their work is not underpowered. The smaller the sample size, the greater the likelihood that a potential moderator of framing effects may be rejected or the effect size may be negligible (Aguinis et al., 2001; Aguinis, Beaty, Boik, & Pierce, 2005). In this context, scholars might increasingly choose to rely on advanced analytical methods such as the Johnson-Neyman technique to determine at which levels of a moderator the effects to be studied change (see Hayes, 2013).

In summary, this dissertation provided a platform to empirically examine and theorize about a number of relevant points regarding affective framing research. In doing so, it has become apparent that emotions are not limited to mechanisms of news framing effects, but also have a moderating function. Still, since the focus of this dissertation was on previously under-researched issues, my work now leaves a number of questions waiting to be answered by further research. In light of these findings, I encourage scholars to postpone work on a comprehensive theory of framing effects that includes both cognitive and emotional mechanisms, and devote more attention to affective news framing, thereby building on and elaborating what we currently know. I hope that the work undertaken here inspires such future studies that continue along a path that further clarifies affective news framing.
References


Slothuus, R., & Leeper, T. J. (2015). Can citizens be framed? How information, not emphasis, changes opinions. Unpublished manuscript, Department of Political Science, Aarhus University, Aarhus, Denmark.


