Immediate Attention for Public Speech: Differential Effects of Rhetorical Schemes and Valence Framing in Political Radio Speeches

Luuk Lagerwerf¹, Amber Boeynaems¹, Charlotte van Egmond-Brussee², and Christian Burgers¹

Abstract
Political campaign speeches are deemed influential in winning people's minds and votes. While the language used in such speeches has often been credited with their impact, empirical research in this area is scarce. We report on two experiments investigating how language variables such as rhetorical schemes (e.g., contrast, list of three) and valence framing (using positive vs. negative words) affect immediate attention and consecutive information processing of political radio speeches. Experiment 1 measured immediate attention for radio speeches measured through moment-to-moment, self-report measures. Negative framing, compared with positive framing, increased immediate attention. Rhetorical schemes only increased attention in positively (but not in negatively) framed speeches. No effects on recall were found. In Experiment 2, immediate attention for similar radio speeches was measured through secondary task reaction times. Experiment 2 replicated the first experiment's effects on attention, and also yielded recall effects. A multiple-mediator model showed that comprehensibility mediated effects of rhetorical schemes and framing on recall.

Keywords
political speech, rhetoric, valence framing, attention, LC4MP, STRT

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Language is an important tool in getting mediated messages across. Public speakers can vary both formulation and delivery of audible speeches, which may lead to changes in affective, cognitive, and behavioral audience responses. For instance, field research established that the language and delivery of political speech affects audiences’ behavior (Bull & Wells, 2002), and experimental research showed attitudinal and recall effects of powerful versus powerless speech delivery (Holtgraves & Lasky, 1999; Hosman & Siltanen, 2006). Also, corpus analysis demonstrated the influence of negative emotional language in political speech on partisans’ aggressive behavior (Matsumoto, Hwang, & Frank, 2013). An implicit assumption of these studies is that language can achieve these effects by increasing immediate attention in listeners. In this article, we experimentally investigate that assumption by studying how individuals get attention for political speeches containing specific language phenomena and how information processing is affected by attention.

Research of media information processing has shown that even if people attend to messages automatically, they are motivated to do so in different ways. In the Limited Capacity Model of Motivated Mediated Message Processing (LC4MP), motivational relevance may be elicitor of automatic attention to mediated messages (Lang, 2006b). For instance, if a message contains a warning, audiences will pay attention to verify whether or not they should take (immediate) action. But if it contains a desirable offer, they are activated to learn how they can obtain it. These different types of motivationally relevant content that lead to automatic attention influence information processing (Lang, 2006a).

While the LC4MP provides valuable insights into the elements that underpin attention, little is known about the relationship between language features and attention (Lang, Sanders-Jackson, Wang, & Rubenking, 2013). The scarce effects research of language in public speech did not examine information processes in detail (Bull & Feldman, 2011). Therefore, the current article bridges social psychological and language perspectives by assessing the role of language phenomena in the mechanisms that are deemed crucial in processing political speeches.

To establish how media effects are cued by language, two well-studied language phenomena were chosen. The first phenomenon, valence framing, is defined as depicting an issue in clearly positive or negative terms, and has been studied in written information as an important factor in changing news readers’ attitudes (De Vreese & Boomgaard, 2003). In reading texts, emotion words (in particular valence terms) attract first and single eye fixations (Scott, O’Donnell, & Sereno, 2012). In specific societal circumstances, emotional expressions of contempt and disgust may lead to political aggression (Matsumoto et al., 2013). To our knowledge, no immediate attention effects of valence terms have been established in research of oral speeches.

The second language phenomenon consists of a predefined set of rhetorical schemes, including list of three and contrast, which has been established to generate applause at political party conventions or affiliative responses at stand-up comedians’ performances (Bull & Wells, 2002; Wells & Bull, 2007). Although applause presumes attention, immediate attention for rhetorical schemes in radio speeches has yet not been established in this type of field research. Thus, we aim to establish how valence
framing and rhetorical schemes in political radio speeches affect immediate attention and speech recall.

We focus on political radio speeches for three reasons. First, political speeches may affect public opinion and in some cases incite audiences to action (Matsumoto et al., 2013). Second, talk radio may not have the undivided and enduring attention of audiences, so attracting attention through language use may improve radio broadcast effectiveness. Third, radio speeches exclude bias from speakers’ physical appearances or gestures because the sensory channels for nonverbal communication are nonexistent, thereby providing an excellent opportunity to study language aspects in isolation (Walker & Trimboli, 1989).

To explain how radio speeches are processed in general, we further explicate the LC4MP in the next section. Subsequent sections explain how valence framing and rhetorical schemes may induce immediate attention and consecutive processing, after which the results of two experiments are reported.

**The Limited Capacity Model of Motivated Mediated Message Processing**

The LC4MP is one of the most specific theories of media effects, because it focuses on information processing in individuals. The LC4MP assesses how messages are attended to, comprehended, stored in memory, and retrieved from memory at a later time (Lang, 2006b). In experimental research the LC4MP measures participants’ responses to media during exposure. For instance, participants watched manipulated news broadcasts while their heart rates and skin conductance were measured. Typically, viewing more arousing messages leads to more attention, arousal, and recall (Lang, Bolls, Potter, & Kawahara, 1999). Arousing messages consist of fast-paced news items, with many edits and cuts, arousing content, and voice-overs diverging from video content (Lang et al., 1999). The relations between arousal, attention, and recall are explained by assuming that individuals have a limited amount of cognitive resources. These resources are allocated to the processing of a mediated message, depending on the level of resources required to process the message (Lang & Yegiyan, 2009). Arousing elements in messages require more resources than calm elements. If insufficient resources are allocated, there are not enough available resources to thoroughly process the message (Lang et al., 1999). In the past decade, numerous message characteristics other than arousing content have also been investigated within Limited Capacity Theory.

In processing radio broadcast messages, listeners use only a single sensory channel, which makes a phenomenon such as information overload less likely, especially when only one person delivers a speech (Potter, Lang, & Bolls, 2008). Audible content changes, such as voice changes or unexpected sounds in radio messages, have been shown to elicit orienting responses (Lang, Ya, et al., 2013). They consist of two types: They are either novel (sounds or voices that are new to the speech situation) or recognizable, known to the listener as a cue to pay attention (recurring jingles, celebrity voices, a door bell). Orienting responses induce a brief increase in resource allocation (Lang, Sanders-Jackson, et al., 2013).
An important additional claim of the LC4MP is that motivational activation affects resource allocation dynamics (Lang & Yegiyan, 2009). Besides orienting responses toward media message characteristics, motivational allocation results in the automatic allocation of resources to the processing of threats and/or opportunities. Threatening content automatically elicits aversive activation (Lang, 2006b). For instance, if individuals witness a murder, their aversive system will activate automatically resulting in increased allocation of resources to encoding and storing the ongoing event. In contrast, content related to opportunities gives rise to appetitive activation. Attractive potential mates, for example, lead to appetitive activation and the automatic allocation of resources to encoding and storage, which may play out as behaviors aimed at finding out more about this person, and possibly get acquainted. These two motivational systems respond automatically and continuously to stimuli in the environment and in media messages and function to support and modulate our experiential emotions (Cacioppo & Gardner, 1999; Lang, 2006a). Individuals experience automatic orienting responses and motivational activation toward media messages, prior to conscious modification or inhibition of those responses (Lang, 2006a).

Message content does not need to contain explicit basic threats and opportunities to elicit activation. Motivational relevance applies to culturally acquired stimuli as well. For instance, in some British detective series a murder is only suggested, but the scene leading to it may contain cues (man following someone in the dark with suggestive background music) eliciting aversive activation (Lang, 2006b).

LC4MP predictions of media message effects are based on an estimation of the available resources for processing a specific media message given its characteristics. The factors determining allocation of resources and resources required include the level of arousing content, message elements eliciting orienting responses, and indications of content inducing appetitive and aversive activation. For instance, a slow-paced motivational relevant message with a moderate level of arousing content and a high number of negative emotion words may give rise to both orienting responses and aversive activation. As a consequence, automatic allocation of resources is high, with less increased required resources, leaving enough resources available for proper information processing. Given a moderate level of arousal, aversive activation will enhance processes of encoding and storage (and, as a result, retrieval) of information more than appetitive activation (Lang, 2006a). The interplay of these factors is complex and changing over time, and their effects need to be assessed within the context of the specific communicative situation (Lang, Sanders-Jackson, et al., 2013). We want to investigate whether valence framing and rhetorical schemes are apparent message factors in this complex system of information processing.

**Valence Framing**

Political messages are framed when speakers select specific words to make particular issue aspects more salient (Entman, 1993). Valence framing is a form of framing in which a stance is expressed explicitly with descriptions in either exclusively positive, or exclusively negative terms (De Vreese & Boomgaard, 2003). Not only are single
messages characterized by valence framing but also entire political campaigns can be characterized as positive or negative, in terms of the campaign’s content and language used (Gunsch, Brownlow, Haynes, & Mabe, 2000). It seems that effects of valence framing are not balanced between positive and negative valence: Negativity attracts attention and affects voters’ evaluations of political candidates more than positivity (Fridkin & Kenney, 2004).

Various studies from social psychology document the negativity bias, which argues that negative information may have stronger effects compared with positive information (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). More specifically, the negativity bias posits that negativity elicits more autonomic motivational responses than neutral or positive stimuli (Cacioppo, Berntson, Larsen, Poehlmann, & Ito, 2008). Receivers may be attracted by negative information, because of an automatic vigilance effect (Kellermann, 1984; Walther, Van der Heide, Hamel, & Shulman, 2009). Negative information is regarded as more informative, because it may cause receivers of the information to adapt their behavior (Poortgen & Pidgeon, 2004).

The LC4MP refers explicitly to the negativity bias, in expecting that negative messages elicit aversive activation (Lang, 2006b). Additionally, the use of negative emotion words may also elicit orienting responses (Potter et al., 2008). In the absence of threats, a positivity offset may be expected: this would be the spontaneous search for opportunities (Cacioppo & Gardner, 1999). In this situation individuals may exert appetitive activation only when activation levels are low (Cacioppo & Gardner, 1999). In sum, we expect the effect of positive framing on information processing to be weaker than the effect of negative framing, and the effects of appetitive activation to arise only when activation levels are low.

**Rhetorical Schemes**

Since the days of antiquity, rhetoricians have made strong connections between the use of rhetorical formulations and effective speech writing (Quintilian, 2001). Rhetoricians made classifications of numerous rhetorical figures, without performing empirical research of audience effects.

Advertising research suggests that a particular distinction between kinds of rhetorical figures is important for information processing: The distinction between schemes and tropes (Mothersbaugh, Huhmann, & Franke, 2002). Schemes, such as rhyme and alliteration, are built around excessive stylistic regularity: They deviate from conventional language use by repeating or reversing syllables, consonants, or phrases (McQuarrie & Mick, 1992). Consumers’ attention will be drawn by schemes, but schemes require less cognitive elaboration in processing than tropes do (Mothersbaugh et al., 2002). This is because tropes, such as metaphor and irony, are deliberately ambiguous. Consumers need more effort to process tropes, and they are at risk of incomprehension. Because tropes and schemes operate in different ways, we will only investigate rhetorical schemes in this article.

Empirical research on the effects of rhetoric in political speech is scarce, except for the already mentioned applause research (Bull & Wells, 2002). Several field
researches repeatedly identified 8 to 10 rhetorical schemes accounting for 80% of applause occurrences at British party conventions (Bull & Wells, 2002; Heritage & Greatbatch, 1986). We focus on five types of rhetorical scheme. These are contrast, list of three, position taking, headline-punchline, and negative naming (Atkinson, 1984; Bull & Wells, 2002). The explanation for the applause-generating potential of rhetorical schemes is that the audience may recognize the phrasing in an early stage and prepare for starting the applause at a completion point. If a speaker delivers the rhetorical scheme properly, a benevolent audience is invited to applaud (Bull & Wells, 2002).

In the rhetorical scheme of contrast, two positions are compared or contrasted within one sentence. Contrasts are often formulated with the word but (e.g., We’ve done a lot, but we’ve got a lot more to do) or the word or separating the two positions. Occasionally, a contrast is presented in parallel but contradicting phrases (e.g., Make love, not war).

A second frequently used rhetorical scheme is the list of three. Whereas repetition is a type of rhetorical scheme in itself, the specific repetition of three is regarded to be especially fit to generate applause (Heritage & Greatbatch, 1986).

In position taking, a state of affairs is described in an initial statement, which is explicitly evaluated positively or negatively in the subsequent statement (Heritage & Greatbatch, 1986). An example comes from President Obama’s 2009 Egypt speech: Likewise, many Israelis recognize the need for a Palestinian state. It is time for us to act on what everyone knows to be true. Although the position itself is kept quite implicit, the formulation “it is time” marks President Obama’s position taking.

With a headline-punchline, a statement is announced in the headline, and subsequently made in the punchline (Bull & Wells, 2002; Heritage & Greatbatch, 1986). In his 1988 nomination acceptance speech, former President Bush Sr. created a famous sound bite with the headline-punchline: Read my lips: No new taxes. Admittedly, part of the sound bite’s reputation was because of the later breaking of this promise.

The fifth rhetorical scheme is negative naming (Bull & Wells, 2002), or name calling (Lee & Lee, 1939). President Clinton’s famous statement It’s the economy, stupid is an example, as is the emphasis on President Obama’s middle name in Barack “Hussein” Obama, articulated by some of his political opponents. Since rhetoricians claim that having good ethos is crucial for public speakers, they do not all approve of negative naming. However, everyday politics shows that negative naming is often used, apparently for its effectiveness, which is why we included negative naming in our experiments.

We expect that a rhetorical scheme will be recognized as an invitation to pay attention to a formulation with a completion point, marking important new information (Bull & Wells, 2002). Listening to radio speeches involves processing oral information. Audio features, such as linguistic signals, can elicit orienting responses in listeners (Potter et al., 2008). In a positive context, rhetorical schemes could also enhance appetitive activation because they are markers of potentially important information. In a negative context, aversive activation is already enhanced, and rhetorical schemes would not make a message motivationally more relevant.
**Dependent Variables and Hypotheses**

The two key dependent variables in the current research are immediate attention, reflecting motivationally relevant activation, and free recall, as a measure of thoroughness of storage and retrieval of information (Lang, 2006b; Lang, Ya, et al., 2013). According to negativity bias (Cacioppo & Gardner, 1999), negative framing will trigger orienting responses and aversive activation (Lang, 2006b; Potter et al., 2008). Therefore, we expect stronger effects for negative compared with positive framing on immediate attention.

**Hypothesis 1:** Negative framing in radio speeches attracts more immediate attention than positive framing.

Rhetorical schemes will elicit orienting responses and stimulate appetitive activation when activation levels are low (Bull & Wells, 2002; Lang & Yegiyan, 2009). Therefore, they attract more immediate attention.

**Hypothesis 2:** Rhetorical schemes in political radio speeches attract more immediate attention than speeches without rhetorical schemes.

Appetitive and aversive activation may interact in different ways (Lang & Yegiyan, 2009). The two motivational systems may be active together, separately, or in an uncoupled fashion. Speeches containing both rhetorical schemes and negative framing should elicit both appetitive and aversive activation. But given the moderately arousing negative content the activation in the aversive system should exceed the lesser appetitive activation elicited by the rhetorical schemes. So aversive activation caused by negativity will dominate the weaker appetitive activation elicited by the rhetorical schemes. However, we may expect an interaction effect of rhetorical schemes and positive framing: in the absence of aversive activation rhetorical schemes (compared with rhetorical schemes) should elicit orienting responses and stimulate appetitive activation. Therefore, more resource allocation (i.e., attention) is expected for positive frames and rhetorical schemes compared with positive frames without rhetorical frames. This effect is reflected in the following interaction hypothesis.

**Hypothesis 3:** Rhetorical schemes attract more immediate attention than speeches without rhetorical schemes in positively framed speeches but not in negatively framed speeches.

It is less straightforward to predict the effects of valence framing and rhetorical schemes on recall. According to the LC4MP, aversive activation from negative framing may allocate more resources than appetitive activation from positive framing, given moderate levels of activation. We cannot estimate the activation levels of valence framing in political radio speeches in general, but they are moderate rather than high. As a result, recall is expected to be higher for negative framing.
Hypothesis 4: Speeches with negative framing will result in higher recall than speeches with positive framing.

In processing advertisement headings, rhetorical schemes are processed with more cognitive effort than nonrhetorical headings, resulting in better memory (Mothersbaugh et al., 2002). Memorable sound bites from political speeches are often rhetorically formulated, but that does not imply a memory effect per se: media select sound bites, so selective exposure could influence the memory of sound bites. In terms of the LC4MP, rhetorical schemes may enlarge allocated resources through elicited orienting responses, and stimulation of appetitive activation, without more resources required (Lang & Yegiyan, 2009).

Hypothesis 5: Speeches with rhetorical schemes provide higher recall than speeches without rhetorical schemes.

We do not predict an interaction between framing and rhetorical schemes on recall, because LC4MP is not specific about rhetorical scheme effects, which makes it difficult to predict interactions of rhetorical schemes and negative valence.

Earlier research of oral communication also concerned effects of speaker’s gender. With respect to the perception of (linguistically induced) power in public speech, neither speakers’ nor participants’ gender seemed to play a role (Holtgraves & Lasky, 1999). In interview or conversation contributions, female participants in conversations were perceived as being more on topic (Odato & Keller-Cohen, 2009). We include speaker gender as control factor in our research.

Experiment 1

Method

Design. The goal of Experiment 1 was to establish whether rhetorical schemes and negative framing attract listeners’ immediate attention, and to determine the effects of valence framing and rhetorical schemes on recall and appreciation. Experiment 1 had a 2 (frame: positive or negative) × 2 (rhetorical schemes: present or absent) × 2 (speaker: male or female) × 2 (topic: violent crime or child abuse) mixed design with frame, rhetorical schemes, and speaker as between-subjects factors, and topic as a random within-subjects factor.

Participants. A total of 120 participants volunteered to participate in this experiment ($M_{age} = 29.62$, $SD_{age} = 10.76$; 62.2% female). Dutch participants were recruited at a local tennis club (33%), a newspaper office (10%), and a university (57%).

Materials. In this experiment, participants were asked to listen to a set of different political speeches. Eight different speeches were developed: four manipulated speech
variants about each of two topics. Speeches were composed as promotion material for a fictitious local political party that was said to participate in the City Council elections. Speeches dealt with two different topics (reducing violent crime and stopping child abuse). Topics were presented in a positive or negative frame to which rhetorical schemes were added or not. We chose four rhetorical schemes from the set of five we described in the literature review. Thus, half the speeches contained four rhetorical schemes: contrast, list of three, position taking and name-calling, whereas the other half did not contain any rhetorical schemes. Per topic, the speeches differed slightly in number of words:

\( M_{\text{crime}} = 280.75, SD = 4.66; M_{\text{abuse}} = 317.00, SD = 2.92. \) These differences were not systematically linked to rhetorical or valence conditions. To verify gender perceptions, all speeches were each delivered by one male and one female actor. Tables 1 and 2 give examples of the speeches used in this experiment.

A pretest showed that there were no undue differences between speech topics (please refer to Digital Appendix A for details, available online at http://jls.sagepub.com/content/by/supplemental-data). We also tested ways of measuring immediate attention and decided to measure indication of increasing attention (see the next section).

**Measures.** Immediate attention was measured with the computer program *Inputlog*, which logged participants’ key strokes (Leijten & Van Waes, 2013). Participants

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**Table 1.** Positively Framed Election Speech with Rhetorical Schemes about Violent Crime, on Behalf of the Fictitious Local Party *Ons Belang* (Our Interest; Translated from Dutch).

Thanks to one crazy guy with a gun, the whole nation trembled with fear. Just going for some errands on a Saturday morning won’t be the same for many people. We should not be guided by fear and we should be stronger than fear. The time has come to take action and restore safety, also here in this beautiful city. You have the right to feel comfortable in your own city. Going to the mall without fear for becoming a violence victim, or walking up the streets at night without looking over your shoulder. *Feeling safe, it’s got top priority!* [Position Taking]

We should work on safety. Ideas are ready to make this city even safer. We want more police on the streets to make potential criminals change their minds . . . and schools will carry out our public information programs to keep young people on the right track. We plan to turn this city into an even safer area.

Of course, this can’t be done without your help! Your vote gives us the opportunity to realize our plans, and deal with the few violent crimes that still may occur.

So you see: we are not pessimists who claim that society is becoming more and more dangerous, we are optimists who believe in a safe and livable world! [Contrast].

With the help of your vote we can realize our plans: more police on the streets and public information for young people. This way we can also in future, free the streets from those who want to spoil this beautiful city and your safe environment. In our eyes they’re trash! [Name calling]

So I’m asking you:

*Choose for keeping the environment livable*

*Choose for keeping the city safe*

*Choose for Our Interest!* [Three-part list]
pushed the + key whenever they felt their attention was increasing. A time interval of one second was used. Subsequent keystrokes within the second could be registered but did not occur, so we counted per second a + keystroke or none. Areas of interest were defined around the time slots in which rhetorical schemes were used, and their counterpart locations in the speeches without rhetorical schemes. An area of interest started with the beginning of the first sentence of a rhetorical scheme and ended two seconds after the ending of the formulation. Keystrokes were counted inside and outside the areas of interest to create two separate variables: local attention and global attention. We expected attention effects of rhetorical schemes within a time window of two seconds after their delivery (cf. Baayen, Dijkstra, & Schreuder, 1997). However, attention effects from negative framing are more difficult to locate, because framing is embedded in the speech as a whole. So, whereas effects on global attention are not expected for rhetorical schemes, they might be found for framing. Both local and global attention were corrected for the duration of the areas of interest in each speech.

Recall was measured directly after exposure to each speech with two open questions: (1) What information can you recall? (2) What did you remember the most? Answers corresponding with correct statements about the speech were counted. Our recall measure thus indicated the number of speech details participants remembered correctly.
Attitude toward the speech was measured postexposure by means of 7-point Likert-type scale items of persuasiveness (of speaker and speech), credibility (of speaker and speech), professionalism (of speaker and speech), speaker’s competence, and speaker’s ability to inspire. A factor analysis with Varimax rotation showed that all items loaded on only one factor, despite the different items for speech and speaker. Thus, all items were included into one scale of attitude toward the speech (Cronbach’s $\alpha = .95$).

As a control variable, we measured political preference by two items: What did you vote in the last elections? What do you plan to vote in the coming elections? The answers were scored along the lines of left wing to right wing party (the Dutch left wing Socialist Party [SP] scored one, the right wing Freedom Party [PVV] seven, with the rest of the mentioned parties in between). Both scores were taken together, and participants were classified as either right-wing or left-wing.

**Procedure.** Participants were seated in front of a laptop computer, using headphones to listen subsequently to two radio speeches. They were instructed to press the laptop’s + key whenever they experienced an increase of attention for the speech. Their keystrokes were registered using the program Inputlog (Leijten & Van Waes, 2013). After listening to each speech the participants completed a questionnaire measuring recall and attitude toward the speech. After completing the two speeches, participants were asked about political preference and about demographic characteristics.

**Data Analysis.** In the attention data set produced by Inputlog, the unit of analysis was each second a participant listened to a speech, because Inputlog registered each second whether the + key was activated or not. Subsequently, we coded each second of the speeches with rhetorical schemes for the presence of rhetorical schemes in that second ($0 = \text{no rhetorical scheme}, 1 = \text{rhetorical scheme}$). For the nonrhetorical speeches, we coded 1 in the same seconds the rhetorical schemes were delivered in the corresponding rhetorical speeches. The collected keystroke data were then aggregated by counting the + keystrokes within the areas of interest (local attention) and those outside the areas of interest (global attention). These frequencies were divided by the duration of the areas of interest and the duration of the outside areas, respectively and, for readability purposes, multiplied by 100.

Mixed model analyses were performed to test Hypothesis 1 to Hypothesis 5, with speech topic as a random within-subject factor. Speaker, type of formulation and frame were treated as fixed between-subjects factors. In mixed model analyses, effects can be established only under the assumption of significant increase of information value. In Table 3, Information Criteria ($-2 \text{ restricted log likelihood [RLL]}$) are given for the empty models (without fixed factors), models of main effects and two way interactions, three way interactions, and the models with additional personal characteristics of participants’ sex and political preference. When differences between model changes are significant (in terms of a decrease of $-2 \text{ RLL}$, using $\chi^2$ tests), the changed model provides substantial explained variance. To test the hypotheses, models with two-way interactions were used for local and global attention, and the model including sex and political preference for attitude toward the speech and recall.
Results

Descriptive Statistics. Table 3 presents means and standard deviations of the dependent variables by frame (positive, negative) and rhetorical schemes (present or absent). Main and interaction effects of rhetorical schemes, frame, and speaker were tested with mixed model analyses for local and global immediate attention and attitude toward the speech.

Control Analyses. A report of all the control analyses is given in Digital Appendix B (available online at http://jls.sagepub.com/content/online/supplemental-data). We summarize the most important results in words. A preliminary repeated measures variance analysis was performed to check whether speech topic had a within-subjects effect. There were main and interaction effects on local attention: the topic of violent crime received less local attention than child abuse, especially in combination with rhetorical schemes. There was a similar interaction effect of rhetorical scheme and child abuse on recall.

Table 3. M and SD of Local and Global Immediate Attention, Recall, and Attitude Toward the Speech for Framing and RS in Experiment 1 (N = 120), and −2 RLL Values of Factorial Models With Increasing Complexity (i.e., With Fixed Factors Including Speaker and Repeated Factor Speech Topic, Interactions, and Participants’ Political Preference and Sex Added).

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<tr>
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<th>Positive frame</th>
<th>Negative frame</th>
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<tr>
<td></td>
<td>RS</td>
<td>No RS</td>
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<tr>
<td></td>
<td>M</td>
<td>SD</td>
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<tr>
<td>Local attention</td>
<td>7.69</td>
<td>5.50</td>
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<tr>
<td>Global attention</td>
<td>5.65</td>
<td>4.01</td>
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<tr>
<td>Recall</td>
<td>3.83</td>
<td>1.78</td>
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<tr>
<td>Attitude toward</td>
<td>3.89</td>
<td>1.29</td>
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<td>the speech</td>
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<th></th>
<th>Empty model, −2 RLL</th>
<th>Fixed two-way, −2 RLL</th>
<th>Fixed three-way, −2 RLL</th>
<th>Political preference, sex added, −2 RLL</th>
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<tr>
<td>Local attention</td>
<td>1533.28, df = 3</td>
<td>1499.17, $\chi^2(18) = 34.11^*$</td>
<td>1494.82, $\chi^2(8) = 4.35$</td>
<td>1335.74, $\chi^2(4) = 159.08^{***}$</td>
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<tr>
<td>Global attention</td>
<td>1424.05, df = 3</td>
<td>1393.07, $\chi^2(18) = 30.98^*$</td>
<td>1385.70, $\chi^2(8) = 7.37$</td>
<td>1236.65, $\chi^2(4) = 149.05^{***}$</td>
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<tr>
<td>Recall</td>
<td>889.33, df = 3</td>
<td>889.92, —</td>
<td>887.61, $\chi^2(8) = 2.30$</td>
<td>783.34, $\chi^2(4) = 104.27^{***}$</td>
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<tr>
<td>Attitude toward</td>
<td>832.02, df = 3</td>
<td>828.40, $\chi^2(18) = 3.62$</td>
<td>827.20, $\chi^2(8) = 1.20$</td>
<td>714.84, $\chi^2(4) = 112.36^{***}$</td>
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<td>the speech</td>
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*Note. RS = rhetorical schemes; −2 RLL = −2 restricted log likelihood.

$p < .05. **p < .01. ***p < .001.$
We analyzed effects of the independent control variables of participant gender and political preference, and for the dependent variables global attention and attitude toward the speech. Women had more global attention and liked the speeches better than men, especially for speeches without rhetorical schemes. Right-wing participants liked the speeches more than left-wing participants did. Speeches articulated by our male speaker were less appreciated than speeches by our female speaker. Finally, positively framed speeches with a female speaker were more appreciated by women while negatively framed speeches with a female speaker were more appreciated by men.

**Hypothesis Testing.** We expected that speeches with negative framing and rhetorical schemes would attract more attention than speeches with positive framing (Hypothesis 1) and without rhetorical schemes (Hypothesis 2), respectively. Furthermore, we expected these results to be qualified by an interaction, in that speeches with rhetorical schemes would attract more attention in positively framed speeches but not in negatively framed speeches (Hypothesis 3).

We found a main effect of framing on local attention, $F(1, 212) = 10.98, p < .01$, indicating that negatively framed speeches ($M = 8.78, SD = 6.76$) attracted more local attention than positively framed ones ($M = 6.25, SD = 4.86$). We did not find main effects of rhetorical schemes, $F(1, 212) = 1.29, p = .20$, nor a main effect of the speaker, $F(1, 212) = 1.45, p = .23$.

We also found an interaction effect of framing and rhetorical schemes, $F(1, 212) = 6.71, p < .05$, on local attention, which is visualized in Figure 1. Pairwise comparisons with Bonferroni correction showed that, for positively framed speeches, presence of rhetorical schemes led to an increase in local attention compared with the absence of rhetorical schemes ($t = 2.80, p < .01$). For negatively framed speeches, in contrast, no differences were observed between speeches with and without rhetorical schemes ($t = 1.14, p = .31$).

For global attention, we also found a main effect of framing, $F(1, 231) = 9.27, p < .01$, indicating that negatively framed speeches attracted more global attention ($M = 6.87, SD = 5.19$) than positively framed speeches ($M = 5.08, SD = 3.96$). We did not observe a main effect of rhetorical schemes ($F < 1$), nor a main effect of the speaker, $F(1, 231) = 2.99, p = .09$.

We also found an interaction effect between rhetorical schemes and framing, $F(1, 231) = 7.20, p < .01$. In Figure 2, the interaction is visualized. Pairwise comparisons with Bonferroni correction showed that without rhetorical schemes, negatively framed speeches increased global attention more than positively framed speeches ($t = 4.07, p < .001$), whereas the way speeches with rhetorical schemes were framed did not matter for global attention ($t < 1$).

The main effects of framing on both local and global attention provide empirical support for Hypothesis 1 (more attention for negative framing), because negatively framed speeches increased both types of attention compared with positively framed speeches. Because no main effects of rhetorical schemes were found, Hypothesis 2 (more attention for rhetorical schemes) was rejected. Finally, Hypothesis 3 (more attention for speeches with rhetorical schemes in positively, but not in negatively, framed
Figure 1. Means and 95% confidence intervals for the interaction of rhetorical schemes and valence framing on local attention.

Figure 2. Means and 95% confidence intervals for the interaction of rhetorical schemes and valence framing on global attention.
speeches) was supported for local attention. The interaction effect on global attention showed that without rhetorical schemes, positively framed speeches decreased global attention compared with negatively framed speeches, whereas framing had no effect in speeches with rhetorical schemes. This result also supports our interaction hypothesis (keeping in mind that local attention was intended to measure effects of schemes and global attention effects of frames).

We also expected that negative framing and rhetorical schemes would enhance recall compared with speeches with positive framing (Hypothesis 4) and without rhetorical schemes (Hypothesis 5), respectively. However, we found no significant main or interaction effect on recall (all $F$s < 1).

**Discussion**

In support of Hypothesis 1, negative framing was found to attract immediate attention. The main effects on both local and global attention suggest that frames attract attention throughout the speech, not on specific locations. This finding corresponds with earlier findings that negative messages attract more attention than positive messages (De Vreese & Boomgaarden, 2003; Lang, 2006b).

Rhetorical schemes did not increase attention (Hypothesis 2 rejected). The interaction effect on local attention showed that positively framed speeches get less attention without rhetorical schemes, whereas the interaction effect on global attention showed that without rhetorical schemes, positively framed messages get less attention than negatively framed messages (Hypothesis 3 accepted). These results may well be explained in terms of the LC4MP. Aversive activation motivated by negative framing was stronger than appetitive activation motivated by rhetorical schemes, but in absence of aversive activation (i.e., within positive frames), rhetorical schemes elicited orienting responses and stimulated appetitive activation (Lang, 2006a).

The LC4MP also predicts that more available resources should lead to better recall. This prediction was not borne out (Hypothesis 4 and Hypothesis 5 rejected). Our measurement of recall did not detect differences between experimental conditions. Although the speeches were carefully crafted in Dutch, the topics of child abuse and violent crimes might have had a particular bias for the results. This topic choice intended to minimize differences in opinion about the topics. Everyone is against people committing violent and abusive crimes. On the other hand, these emotionally charged topics might have stimulated aversive activation across positive and negative framing (Lang, Sanders-Jackson, et al., 2013). As a result, differences in recall between negative and positive framing were smaller than predicted in Hypothesis 4. Another effect could have been that activation levels were moderate instead of low in every condition (Lang, 2006a). Appetitive activation from rhetorical schemes or positive framing did not come about in the presence of aversive activation from the negative topics. Therefore, topics were changed in Experiment 2 to create more room for positive framing.

In addition, we will add measurements of comprehensibility. Comprehensibility may be negatively associated with message complexity (Mothersbaugh et al., 2002).
In terms of LC4MP, it might be indicative of resources required to process a message. The relation between exposure to speeches and recall may be mediated by comprehensibility. Mediation could indicate that recall benefited from fewer resources required to encode and store information. Since rhetorical schemes may allocate resources without requiring them, comprehensibility might clarify how differences in recall come about. We therefore formulate a mediation hypothesis in Hypothesis 6.

**Hypothesis 6:** The effects of valence framing and rhetorical schemes on recall are mediated by comprehensibility

To verify that an established mediation effect is not a “mere activation” effect, we conduct a multiple mediator analysis with immediate attention as alternative mediator (Preacher & Hayes, 2008).

With respect to control variables, three-way interactions were established of speaker gender, participant gender, and framing on attitude toward the speech. Assuming that people like speakers to be on-topic, the main effect of female speakers being appreciated more than male speakers might be explained by women being perceived as more on-topic (Odato & Keller-Cohen, 2009). The three-way interaction indicating that female participants liked the female speaker better with positive framing, while the male participants liked the female speaker better with negative framing, might be explained by the finding that women favor positive over negative information, while men prefer negative over positive information (Sternadori & Wise, 2010). Since there were no effects of speaker gender on the pivotal variables of attention and recall, this control variable was omitted in Experiment 2.

The measurement of immediate attention by having participants press the + key was successful. However, it is a measurement of the participants’ conscious perception of attention. It might be the case that there were individual differences between participants’ concepts of attention.

Other measures may be more accurate in measuring attention, such as Secondary Task Reaction Time (Sternadori & Wise, 2010). If the primary task is to listen to a speech, and reaction times are measured for immediate responses to several exposures to visual stimuli during the speech, then longer reaction times mean that more attention was paid to the primary task. In the LC4MP, STRTs are interpreted as a measure of available cognitive resources for processing a media message. Interpretations of STRTs are made in combination with recall. For instance, fast STRTs combined with high recall would mean that available resources were abundant, while fast STRTs combined with low recall would mean that there is cognitive overload (little processing of the message). Motivationally relevant stimuli slow down STRT and enhance recall, since both allocated and required resources would be enhanced, leaving sufficient available resources. (Lang & Yegiyan, 2009). In Experiment 2, STRTs are used to measure immediate attention.

Because the number of observations per particular rhetorical scheme was too small, it was not feasible to find differences in attention between rhetorical schemes. Although we did not expect differences between rhetorical schemes, given earlier research (Bull...
& Wells, 2002), it might be interesting to have a closer look on these particular effects. This can be achieved using the STRT measures.

**Experiment 2**

**Method**

**Design.** In the second experiment, our hypotheses were tested in an experiment using a 2 (framing: positive or negative) × 2 (rhetorical schemes: present or absent) mixed design with frame and rhetorical schemes as between-subjects factors, and STRT stimulus and topic (Education, and Development and cooperation) as within-subjects factors.

**Participants.** Eighty participants volunteered to participate in this experiment. Age ranged from 17 to 75 ($M_{age} = 30.46$, $SD_{age} = 13.18$; 50% female). Highest completed education varied between elementary school (5.2%), vocational education (20.3%), preuniversity secondary education (22.7%), professional higher education (36.4%), and university (15.4%). The participants were recruited at several Dutch public libraries, colleges, and universities.

**Materials.** For Experiment 2, eight different speeches were written: four manipulated speech variants about two topics. They dealt with improvement of Dutch education and support for Development and cooperation (examples are presented in Tables 4 and 5). Similar to Experiment 1, topics were presented in a positive or negative frame to which five rhetorical schemes (contrast, list of three, position taking, headline—punchline, and naming) were added or not. Examples of stimuli are presented in Tables 5 and 6. The speeches’ lengths, measured in number of words, were similar between topics: $M_{Education} = 213.25$, $SD = 11.78$; $M_{Development} = 221.25$, $SD = 11.84$. Speech length did not systematically vary between the experimental conditions. To avoid distraction...
Table 5. Example of an Election Speech about Development and Cooperation in a Negative Frame with Rhetorical Schemes, on behalf of the Partij van Nederland (Party of the Netherlands).

The Netherlands have long been seen as a benevolent trading nation. Now it is becoming a country that no longer looks across borders, a country that loses its moral sense and a country that seriously damages its good international reputation [list of three]. And all of this because people want to cut down on Development and cooperation. It is very detrimental to stop sharing. I assure you: We keep children away from school and we let families suffocate in extreme poverty [headline-punchline]. We penalize innocent victims of wars and create refugee flows.

In addition, it is not better but worse for the economic position of the Netherlands [contrast] to stop giving: it prevents the emergence of new markets, by which we will further sink into the economic crisis. This is irresponsible [position taking].

The Netherlands have always played a leading role in Development and cooperation. When we cut back on aid, other countries will follow us. Antisocial and short-sighted opponents of Development and cooperation [name calling] cannot govern our country. Fight with us against a weak international image. Vote for the Party of the Netherlands.

of the negative naming in positive frames, we used a playful “positive naming,” like the use of a pet name, to be applied in positive framing.

To ensure that the speeches on the different topics were evaluated similarly and to validate the measurement, a pre-test was conducted (please refer to Digital Appendix C for details, available online at http://jls.sagepub.com/content/by/supplemental-data). The pretest showed that speech topic did not influence STRTs or postexposure variables. Positively framed speeches were perceived as having a more positive tone than the negatively framed ones. The rhetorical schemes enhanced perception of an eloquent formulation of the speeches. On the basis of participants’ comments the speeches were carefully abridged.

Measures. Immediate attention was measured with Secondary Task Reaction Times. Participants with longer reaction times had more of the allocated resources being consumed by the primary task than participants with shorter reaction times and thus paid more attention to the primary task (i.e., listening to the speech). To measure STRT, the computer screen turned blue for 1 second at the auditory exposure of a rhetorical scheme (at the beginning of the third part of the list of three, or just after name calling) or at its nonrhetorical counterpart. Participants were asked to press the spacebar on a laptop’s keyboard as soon as they saw the flash. In general, the STRTs were longer than in comparable research, because a visual signal was used for the primary task instead of an auditory signal (McBride, Goodman, & Owens, 1985). Keystrokes were registered by the millisecond in Inputlog (Leijten & Van Waes, 2013).

Recall was measured with the open question “What information do you remember?” Correct statements were counted. Speaker persuasiveness was measured with two items (inspirational and persuasive, $r = .78, p < .01$). Speech comprehensibility was measured with three items (understandable, clear, and informative; $\alpha = .83$). As a
control variable, Political interest was measured with a single item “Are you interested in politics?” Political preference was measured by asking to report the last election’s vote. The results were categorized into two groups (right wing–left wing).

**Data Analysis.** STRT were registered for each secondary task stimulus, providing five measurements per speech, and ten measurements per individual. Mixed model analyses were performed to test Hypothesis 1 to Hypothesis 5.

To check whether separate effects of rhetorical schemes occurred, two preliminary mixed model analyses were performed: one per speech topic. Within either topic, rhetorical schemes (or their counterparts without schemes) were similar per Secondary Task Stimulus (STS). So, main or interaction effects of a mixed model with a fixed factor STS (and rhetorical schemes as well as framing) on STRT would mean that particular rhetorical schemes had separate effects. For both topics the Information Criteria were met (both $\chi^2[53] > 230, p < .001$), but all effects involving STS were not significant (all $F$s < 1). This means that we may safely assume that effects from particular rhetorical schemes do not affect immediate attention. STS was further included in the analyses as a repeated (random) factor. For the postexposure variables, it was not possible to measure separate STS-effects.

We also tested a mixed model with speech topic as fixed factor. No main effect of speech topic on STRT was found, $F(1, 761) = 1.41, p = .24$, nor any significant interaction. So, speech topic was included as a repeated (random) factor as well. In Table 6, Information Criteria (−2 RLL) are presented for an empty model (without fixed factors), an interactional model with formulation and frame as fixed between-subjects factors, and extensions of this model with first individuals’ political interest and preference, and additionally individuals’ sex. For all dependent variables, the interaction model including main effects of political interest and preference provided the strongest decline in −2 RLL. This model was chosen to test Hypothesis 1 to Hypothesis 5.

Hypothesis 6 was tested by means of indirect multiple mediation analyses (Preacher & Hayes, 2008). This particular method makes it possible to test for multiple mediators and detect mediation and direct effects in one integrative test. Furthermore, bootstrap analysis assesses indirect effects, even if presumed direct relations are not significant. To perform the multiple mediation analysis the data were aggregated by taking the mean scores of all dependent variables for speech topic, and for the STRT scores. In the resulting data set, the unit of analysis was the participant ($N = 78$); $z$ values were calculated for STRT and for dichotomous variables. In the results, only the model with the most explained variance is presented: This included comprehensibility and immediate attention as potential mediators, but not speaker persuasiveness.

**Results**

**Descriptive Statistics.** Table 6 presents means and standard deviations of the dependent variables by frame (positive or negative) and rhetorical schemes (present or absent). Main and interaction effects of rhetorical schemes, frame, and speaker were tested with mixed model analyses for STRT, recall, speaker persuasiveness and speech
We found no main or interaction effects of our control variables, participants’ political interest, preference, or participant gender.

**Hypothesis Testing.** We expected more attention for negative framing (Hypothesis 1), for rhetorical schemes (Hypothesis 2), and more attention for rhetorical schemes in positively, but not in negatively framed speeches (Hypothesis 3). There were main effects of framing, $F(1, 432) = 9.25, p < .05$, and rhetorical schemes, $F(1, 432) = 15.91, p < .01$, on STRT. Participants who heard speeches with negative framing responded more slowly than participants who heard speeches with positive framing. STRTs were slower for speeches with than without rhetorical schemes. These main effects were qualified by an interaction of framing and rhetorical schemes, $F(1, 432) = 6.82, p < .05$ (see Figure 3). Pairwise comparisons with Bonferroni correction showed that in the

### Table 6. M and SD for Secondary Task Reaction Time (in milliseconds, $n = 772$), Recall, Speaker Persuasiveness, and Speech Comprehensibility ($n = 160$) in Experiment 2, as Function of Rhetorical Schemes and Framing.

<table>
<thead>
<tr>
<th></th>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nonrhetoric</td>
<td>Rhetoric</td>
</tr>
<tr>
<td><strong>STRT (ms)</strong></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Recall</td>
<td>1087.38</td>
<td>257.70</td>
</tr>
<tr>
<td>Speaker persuasiveness</td>
<td>3.50</td>
<td>1.68</td>
</tr>
<tr>
<td>Speech comprehensibility</td>
<td>4.33</td>
<td>1.04</td>
</tr>
</tbody>
</table>

**Note.** Mixed model Information Criteria are presented with $-2$ restricted log likelihood ($-2$ RLL) values of factorial models with increasing complexity (i.e., including repeated factor Speech Topic—and Secondary Task Stimuli with the STRT measures; fixed factors with interactions; participants’ political interest, preference added; and participants’ sex added). Differences between subsequent models are tested with $\chi^2$ tests. *p < .05. **p < .01. ***p < .001.

comprehensibility. We found no main or interaction effects of our control variables, participants’ political interest, preference, or participant gender.
positively framed speech without rhetorical schemes, STRTs were shorter than in the
positively framed speeches with rhetorical schemes ($t = 4.84, p < .01$). For the nega-
tively framed speeches, there was no difference in STRT between rhetorical and non-
rhetorical formulations ($t < 1$). For a concise interpretation of these effects, we should
first take the recall effects into account.

Framing did not have impact on recall, $F(1, 97) = 2.37, p = .13$, indicating that
Hypothesis 4 (better recall for negative framing) was rejected. In support of Hypothesis
5 (better recall for rhetorical schemes), we found a main effect of rhetorical schemes
on recall, $F(1, 97) = 7.86, p < .01$: Speeches with rhetorical schemes were better
recalled than speeches without. There was no interaction effect ($F < 1$).

We can now make a better assessment of the STRT results, since the faster STRT
for positively framed speeches without rhetorical schemes is combined with poorer
recall. This means that during positive speeches without rhetorical schemes, fewer of
the allocated resources are being consumed by the speech processing task. Combined
with low recall, this suggests a lack of attention to the speech. When rhetorical schemes
are included, more of the allocated resources are consumed and memory goes up sug-
gesting better attention and processing of speeches with rhetorical schemes. Given this
interpretation, there is support for Hypothesis 1 (more attention for negative framing),

Figure 3. Means and 95% confidence intervals for the interaction of rhetorical schemes and
valence framing on Secondary Task Reaction Time (ms).
For both speaker persuasiveness and speech comprehensibility, we found no main effects (all F’s < 1). While the framing × rhetorical schemes interaction was nonsignificant for speaker persuasiveness, F(1, 104) = 1.17, p = 0.28, this interaction was significant for speech comprehensibility, F(1, 106) = 4.21, p < 0.05. Pairwise comparisons with Bonferroni correction located the interaction in the speeches with rhetorical schemes: Participants found negatively framed speeches marginally more comprehensible than positively framed speeches (t = 1.90, p = 0.06). Between the speeches without rhetorical schemes there were no differences (t < 1).

To test Hypothesis 6, whether comprehensibility rather than immediate attention mediated the interaction effect of rhetorical schemes and framing on recall, we conducted an indirect multiple mediator analysis (Preacher & Hayes, 2008). Indirect effects were estimated with 5,000 bootstrap samples. In Figure 4, the tested model is visualized, with the regression coefficients of the relevant paths. The analysis revealed a significant indirect effect of comprehensibility (.10, SE = 0.06, 95% confidence interval [.01, .24]) but not of immediate attention (.01, SE = 0.04, 95% confidence interval[−.06, .12]), on recall. This means that the interaction of framing and rhetorical schemes indirectly influences recall, via comprehensibility rather than immediate attention.

**Discussion**

The second experiment replicated Experiment 1 and established stronger results. The STRTs in combination with recall results did not only show main effects for framing and rhetorical schemes, but also an interaction effect (Hypothesis 1 to Hypothesis 3 accepted). In short, people pay more immediate attention to speeches if they hear negative messages, or if they are exposed to rhetorical schemes. Positively framed speeches without rhetorical schemes attract the least immediate attention.
Rhetorical schemes improved recall (Hypothesis 5 accepted), whereas frames did not (Hypothesis 4 rejected). The effects of the frame and rhetorical schemes interaction on recall were mediated by comprehensibility and not by immediate attention (Hypothesis 6 accepted).

**General Discussion**

This article reports the first experimental research establishing immediate attention effects of rhetorical schemes outside the context of political party conventions (Atkinson, 1984; Bull & Feldman, 2011). The experimental setting and the real-time measures made it possible to establish effects without biases from speaker appearance or benevolent audiences.

While the effects of negativity in news broadcasts have been examined previously in the literature, the interaction between valence framing and rhetorical schemes has not been examined before. Our results show the added value of studying these seemingly unrelated discourse phenomena in combination, because we found that positively framed messages benefit from rhetorical schemes in attracting immediate attention, whereas negatively framed messages attract attention irrespective of rhetorical schemes.

In terms of the LC4MP, we can explain these attention effects by looking closer at the STRT and recall results in Experiment 2. Negatively framed speeches are motivationally relevant messages, inducing allocation of more resources while at the same time requiring more resources, which results in slower STRTs (Lang & Yegiyan, 2009). However, these slower STRTs did not have beneficial effects for recall. Only speeches with rhetorical schemes increase recall. A speculative explanation might be that rhetorical schemes reduce speech complexity. While negative framing requires more resources, rhetorical schemes elicit orienting responses without requiring more resources. As a result, more resources are available for speeches with rhetorical schemes compared with speeches without. This would be corroborated by the finding that the relation between the experimental conditions and recall is mediated by comprehensibility, as comprehensibility is negatively associated with complexity (Mothersbaugh et al., 2002).

In the light of message complexity, the choice we made for rhetorical schemes instead of tropes was essential, because schemes do not complicate meanings while tropes do (Mothersbaugh et al., 2002). An interesting question in future research would be how tropes like irony or metaphor would affect the ratio of allocated and required resources. This would also extend LC4MP in the direction of considering language phenomena as more than mere “linguistic signals.”

The research supports former findings on the negativity bias (Baumeister et al., 2001; Cacioppo & Gardner, 1999). Negative messages get more attention. Without looking at more behavioral consequences, this study shows that negativity does not improve recall more than rhetorical schemes. Since negativity enhances negative emotions and even aggression (Matsumoto et al., 2013), negative frames should be employed carefully. Populist parties use the attentional potential of negativity without
considering possible harmful consequences of the use of negative frames (De Landtsheer, De Vries, & Vertessen, 2008). At the same time, politicians may use rhetorical schemes without doing harm, and enhance recall. If a speaker wants his or her speech to be remembered, the use of rhetorical schemes would be a better choice than negative framing. However, effects of repeated media exposure in the form of sound bites have not been measured in this study.

Although the results of the two studies corroborate each other, this research has its limitations. Since the speech topics were societal and expressing a political message, participants’ political interest and preference may impact the results. We did correct for political preference, but the elderly and lower educated were underrepresented in the two experiments. Another limitation is the perhaps unnatural situation of listening in front of a laptop to an imaginary speech. On the other hand, this experimental setting allowed us to measure immediate attention appropriately.

The effects of rhetorical schemes and valence framing on immediate attention and information processing of public speech could be extended in future research. For instance, there may be other ways to affect appetitive or aversive activation, such as nonverbal behaviour while delivering a speech (Walker & Trimboli, 1989), or verbal expression of power (Holtgraves & Lasky, 1999; Hosman & Siltanen, 2006). Other domains in which oratory plays a role might alter the nature of effects, such as health instructions on recall and treatment compliance (Gould & Dexon, 1997), or theatrical performance on transportation (Slater & Rouner, 2002; Wells & Bull, 2007). From a social psychological point of view, the finding that language variables can differentiate in motivations for paying attention, thereby activating different levels of information processing and memory, may promote further research of immediate attention.

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