



# Let Me Think about It: Cognitive Elaboration and Strategies of Resistance to Political Persuasion

Chiara Valli & Alessandro Nai

To cite this article: Chiara Valli & Alessandro Nai (2022): Let Me Think about It: Cognitive Elaboration and Strategies of Resistance to Political Persuasion, Media Psychology, DOI: [10.1080/15213269.2022.2098774](https://doi.org/10.1080/15213269.2022.2098774)

To link to this article: <https://doi.org/10.1080/15213269.2022.2098774>



© 2022 The Author(s). Published with license by Taylor & Francis Group, LLC.



[View supplementary material](#)



Published online: 27 Jul 2022.



[Submit your article to this journal](#)



Article views: 376



[View related articles](#)



[View Crossmark data](#)



This article has been awarded the Centre for Open Science 'Open Data' badge.



This article has been awarded the Centre for Open Science 'Open Materials' badge.

## Let Me Think about It: Cognitive Elaboration and Strategies of Resistance to Political Persuasion

Chiara Valli <sup>a</sup> and Alessandro Nai <sup>b</sup>

<sup>a</sup>Institute of Communication and Media Studies (icmb), University of Bern, Bern, Switzerland;

<sup>b</sup>Amsterdam School of Communication Research (ASCoR), University of Amsterdam, Amsterdam, Netherlands


### ABSTRACT

Although individuals have a whole arsenal of resistance strategies they can use to defend their attitude against a persuasion attack, resistance has often been simplified to counterarguing. This article advances previous studies by considering eight distinct resistance strategies and analyzing their isolated and intertwined effect on attitude change. We further ask under what circumstances they work most effectively to curb persuasion by looking at their interaction with cognitive elaboration – that is, thoughtful and systematic processing. We present new evidence from a study conducted on a sample of American citizens ( $N = 528$ ) and use a quasi-experimental design in which respondents are exposed to a tailored counterargument on a political issue. The results suggest that it is not the use of the isolated resistance strategies but that it is overall effort individuals put into resisting that help them to defend their attitude, and that this effect is reinforced by cognitive elaboration.

Although persuasion is a quintessential social dynamic, it is not always effective. Persuaders often face the challenge of convincing their audience of a position opposite of their preexisting attitudes. Since individuals have a natural tendency to prefer pro-attitudinal information to messages that contradict their views (Festinger, 1957), they may try to dismiss the opposing opinions (Taber & Lodge, 2006). This desire to disconfirm counter-attitudinal arguments may lead to a resistant behavior that actively works against the acceptance of the persuasive appeal.

Resistance to persuasion is a crucial concept in the field of attitude change. A close examination of the literature reveals that resistance has acquired various definitions and can be conceptualized as either an outcome, that is, the lack of attitude change; a motivation to resist attitude change; a quality of attitudes or individuals that make them resistant to change; or a process, referring to the mechanisms through which individuals resist attitude change (Petty, Tormala & Rucker, 2004; Tormala & Petty, 2004; Wegener, Petty,

**CONTACT** Chiara Valli  [chiara.valli@unibe.ch](mailto:chiara.valli@unibe.ch)  University of Bern, Institute of Communication and Media Studies (Icmb), Fabrikstrasse 8, Bern 3012, Switzerland

 Supplemental data for this article can be accessed online at <https://doi.org/10.1080/15213269.2022.2098774>

© 2022 The Author(s). Published with license by Taylor & Francis Group, LLC.

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

Smoak & Fabrigar, 2004). In the following paper, we are interested in the process perspective, according to which resistance is “not simply the inverse of persuasion” (Zuwerink Jacks & O’Brien, 2004, p.236) but should be regarded as a distinct force worthy of its own study. The term process hereby refers to the act of resisting a persuasive message and, as such, to the various cognitive, affective, and behavioral strategies someone can use to reduce attitudinal change.<sup>1</sup> Studying resistance as a process can be particularly insightful for two main reasons: On the one hand, it allows persuaders to tailor their tactic to the resistance strategy of the receiver and neutralize it more effectively (Wegener, Petty, Smoak & Fabrigar, 2004; see also, Fransen, Verlegh, Kirmani & Smit, 2015). On the other hand, it can also help to determine the temporal stability of an attitude change, to what extent it “translates into changes in behavior, and whether the new attitude guides future information processing and judgment” (Wegener, Petty, Smoak & Fabrigar, 2004, p. 20). This, in turn, helps to produce more resistant attitudes where desirable (see also, Petty, Haugtvedt & Smith, 1995).

This article aims to get a better understanding of the circumstances under which resistance is most effective by looking at its interaction with elaboration – that is, thoughtful and systematic processing. The idea of examining resistance within the theoretical framework of the Elaboration Likelihood Model (ELM; Petty & Cacioppo, 1986) is not completely novel. Studies suggest that counterarguing as one of the most widely studied resistance strategies, is most effective when used in combination with elaboration, that is, when individuals are motivated (Petty & Cacioppo, 1979) and able to process a persuasive message (Wood, Rhodes & Biek, 1995). Although this provides first evidence that the systematic processing of a persuasive message might increase the effectiveness of resisting that appeal, individuals are expected to resort to multiple resistance strategies that go way beyond counterarguing. Oversimplifying resistance to one strategy does, therefore, not provide a complete picture of resistance. Because of this relative neglect of other strategies, we know relatively little about the functioning of the remaining resistance mechanisms and have probably underestimated their power to reduce persuasion. By considering eight of the most prominent resistance strategies identified by the literature and analyzing their isolated and combined interaction with elaboration, we aim to advance previous studies that analyzed similar mechanisms but focused on one strategy only. With this, we hope to further disentangle the underlying resistance processes and get a better understanding of how and when resistance works against the acceptance of a persuasive appeal.

We rely on an American sample of 528 participants recruited through the online platform Amazon’s Mechanical Turk (MTurk) in April 2020. We follow a quasi-experimental protocol in which participants are exposed to a tailored counterargument on the topic of gender quotas. Despite the growing

representation of women in political institutions around the globe, women are still vastly underrepresented in the U.S.: To this day, less than 30% of the seats in the U.S. Congress are held by female representatives. Although gender quotas proved to be an effective tool to increase female representation, they are often subject to political debate (Bacchi, 2006). The controversy surrounding affirmative action makes gender quotas a fruitful policy to test the dynamics of resistance and persuasion. All data, codes, and supplementary materials are available for replication at the following Open Science Foundation (OSF) repository: <https://osf.io/qsjyx/>

## Resistance to Persuasion

We begin by discussing the diverse approaches with which the phenomenon of resistance can be studied. According to Knowles and Linn (2004, p. 4), resistance is a “concept with a clear nucleus and fuzzy edges,” which centers around people’s reaction against change. The Inoculation Theory (McGuire, 1964) is interested in people’s ability to withstand a persuasive attack, for instance. Early inoculation studies overwhelmingly measured resistance as the lack of attitude change, and it was not until later that scholars began to focus on the process of inoculation-induced resistance (Compton, 2013; see, Banas & Rains, 2010 for a meta-analysis). Brehm introduced the concept of psychological reactance, which occurs when people feel that their freedom of choice is threatened (Brehm & Brehm, 1981) and motivates them to restore their freedom by ignoring and rejecting the message, for example (Miller et al., 2013). The hypothetical construct of reactance was later commonly conceptualized as an emotion that consisted of anger and negative cognitions (Dillard & Shen, 2005; Quick & Stephenson, 2007; see, Rains, 2013 for a review). The Persuasion Knowledge Model, on the other hand, implicitly addressed resistance by discussing how individuals use their persuasion knowledge to cope with persuasive attacks (Friestad & Wright, 1994). Although the model does not assume that people actively use their knowledge to resist a persuasive appeal (Friestad & Wright, 1994), the authors acknowledge that the persuasion knowledge can warn individuals and thus, encourage a resistant behavior (see also, Van Reijmersdal et al., 2016).

Yet another way to analyze resistance is to ask *how* individuals resist by exploring the defense strategies that are activated in the light of pressure for change. In 2015, Fransen et al. synthesized the literature from various disciplines and created a systematic overview of the most prominent resistance strategies in literature (see, Table 1)<sup>2</sup>: People can resist dissonant information through avoidance strategies which include physical (e.g., looking away), mechanical (e.g., muting the television), or cognitive avoidance. Latter describes a phenomenon whereby individuals devote less or no attention to dissonant information and instead focus on attitude-consistent

**Table 1.** Resistance strategies.

Strategy	Example
Contesting Counterarguing	Respond by arguing with the person who is challenging my opinion.
Source derogation	Respond by thinking negative things about the person who is challenging my opinion.
Persuasive tactic	Respond by being suspicious to the sponsor's manipulative intent.
Empowering Attitude bolstering	Respond by talking about the facts that support what I believe.
Self-assertion	Respond by thinking about how there is nothing the other person can say that will change my mind.
Social validation	Respond by thinking about the fact that lots of people share my convictions.
Affective Negative affect	Respond by getting angry.
Avoidance Selective exposure	Respond by focusing on information that is consistent with my opinion.

Note. Description of the strategies adapted from Zuwerink Jacks & Cameron (2003, p. 151). For derogation of persuasive tactic, see, Fransen, Verlegh, Kirmani and Smit (2015).

content that reinforces their opinion (i.e., selective avoidance; e.g., Knobloch-Westerwick & Meng, 2009). Alternatively, individuals can contest aspects of the persuasive message by denigrating the message's source as incompetent or untrustworthy and, as a consequence, dismissing the message as less credible (i.e., source derogation; e.g., Meirick, 2002); scrutinizing the content of the persuasive message and refuting it by generating counterarguments (i.e., counterarguing; e.g., Zuwerin Jacks & Cameron, 2003); or being suspicious of the manipulative intent with which the persuasive message was transmitted (i.e., derogation of the persuasive message; e.g., Friestad & Wright, 1994). Individuals may also focus inward and engage in empowering strategies. These tactics include selectively generating arguments that support preexisting opinions (i.e., attitude bolstering; e.g., Taber et al., 2009); validating ones attitude through other individuals in the social environment (i.e., social validation; e.g., Jacks & Cameron, 2003); or boosting one's self-esteem by thinking that one's opinions cannot be changed (i.e., self-assertion; Meirick, 2002). An additional defense mechanism that was not listed by Fransen, Verlegh, Kirmani and Smit (2015) is negative affect, which refers to a negative emotional reaction typically described as anger (e.g., Zuwerink Jacks & Devine, 2000).

In the light of this wide variety of techniques with which individuals can defend themselves from attitudinal change, it seems unrealistic that they rely on one isolated resistance strategy to cope with a persuasive attack. Instead, they are expected to engage in multiple of these processes simultaneously, albeit to different extents. For example, while counterarguing, they might simultaneously derogate the message's source and bolster their attitude by actively recalling pro-attitudinal arguments – all in parallel processes. We, thus, believe that resistance should be understood as intertwined model of these distinct coping mechanisms, whereby each strategy contributes to preserving the preexisting attitude (see, Dillard & Shen, 2005 for a similar discussion).

### **The Elaboration-Resistance Hypothesis**

Is resistance always equally effective in reducing persuasion success? Literature suggests that the amount of elaboration can be decisive and argues that a change in attitude that results from careful thinking is more persistent and predictive of future behavior than when a change results from processes that require less cognitive activity. Similarly, resistance resulting from issue-relevant elaboration is more resilient than resistance that follows non-elaborative processes (Petty, Haugtvedt & Smith, 1995).

The role of elaboration in the persuasion process has firstly been addressed by the dual-process theory of attitude change, according to which persuasion occurs either through the *central* or the *peripheral route* (O’Keefe, 2008). While the central route requires systematic information processing, the latter primarily relies on superficial heuristic cues (Zuwerink Jacks & Devine, 1996). Which routes individuals choose to process the persuasive message, thus, depends on the amount of elaboration they engage in (O’Keefe, 2008). The ELM suggests that people who have the cognitive resources or motivation use the central route to scrutinize the relevant information to arrive at a reasoned evaluation. When people either lack the cognitive resources or motivation to engage in elaborative processing, they are likely to use the peripheral route and rely on heuristics instead (Petty & Wegener, 1998).

As indicated, resistance is generally more resilient when accompanied by elaboration. According to Petty, Haugtvedt and Smith (1995), issue-relevant thinking increases the consistency of existing attitudinal knowledge structures, which, through repeated accessing, become more accessible and useful to defend an attitude against an attack. As individuals believe that they have invested considerable effort in arriving at their conclusion, they are expected to be more confident and develop stronger motives to curb attitude change.

While there is evidence that elaboration increases the effectiveness of counterarguing (Petty & Cacioppo, 1979; Wood, Rhodes & Biek, 1995), we know relatively little about the remaining resistance strategies. An exception is a study conducted by Zuwerink Jacks and Devine (1996), which shows that issue importance – a common predictor of elaboration – increased affective resistance (e.g., anger), which, in turn, decreased persuasion. This is a first indication that the positive effect of elaboration is not solely limited to counterarguing – and as such to more cognitively challenging processes – but can also boost the effectiveness of other defense mechanisms. The ELM, moreover, suggests that even superficial cues (e.g., attractiveness of the source) can help individuals to evaluate the true merits of a persuasive message when elaboration is high (Petty & Cacioppo, 1986). Applied to the specific context under investigation, one could, therefore, argue that defense mechanisms that

focus on rather peripheral cues (e.g., the source) can also be exercised with sufficient scrutiny and thoughts, which should, in turn, reduce the persuasion success.

For the lack of theoretical considerations and empirical evidence that points in the opposite direction, we, thus, expect that elaboration increases the effectiveness of *all* resistance strategies. For simplicity reasons, we summarize the hypotheses as follows:

*H1: The use of the isolated resistance strategies is negatively associated with persuasion.*

*H2: The negative effect of the use of the isolated resistance strategies on persuasion is reinforced when more elaboration is involved.*

It follows then that elaboration also boosts the effectiveness of the intertwined model of resistance that does not discriminate between strategies:

*H3: The intertwined model of resistance is negatively associated with persuasion.*

*H4: The negative effect of the intertwined model of resistance on persuasion is reinforced when more elaboration is involved.*

## **Methods**

### **Participants**

The participants were recruited from Amazon Mechanical Turk.<sup>3</sup> Although the online platform enables researchers to recruit a diverse subject pool due to its low cost and ease of use, it is not without flaws. Besides self-selection concerns, MTurk users are younger, more liberal, and pay more attention to tasks than the general public (Berinsky, Huber & Lenz, 2012). Although the demographical and political differences between MTurk and population-based samples have sparked considerable debate, growing literature seems to agree that MTurk is suitable for experimental research. Studies have demonstrated that the convenience sample produces comparable effects to population-based samples (e.g., Krupnikov & Levine, 2014).

Participants who showed indications of straight-lining<sup>4</sup> ( $N = 5$ ) or failed the attention check ( $N = 76$ ) were excluded from the analysis (IMC; Hauser & Schwarz, 2015). The final sample consists of 528 participants, of whom 59.5% are male. 75% of the respondents are White, 12.1% Black, and 9.8% Hispanic. The mean age of the sample is 37.82, and the respondents are generally well educated (bachelor's degree or higher = 69.1%). 48.1% of the



subjects identified as Democrats (Republicans = 31.4%; Independents = 18%), and 55.5% placed themselves on the left side of the political spectrum ( $M = 5.01/10$ ,  $SD = 2.9$ ). The participants showed a general interest in politics ( $M = 3.82/5$ ,  $SD = .99$ ) and were somewhat informed about the political representation of men and women in the U.S. ( $M = 1.95/4$ ,  $SD = 1.09$ ). The participants were rewarded with 1 U.S. Dollar for completing the survey.

### **Procedure and Material<sup>5</sup>**

After providing informed consent, participants revealed some demographic information about themselves. The next block examined their political engagement and knowledge as well as their partisanship and political ideology. We employed a quasi-experimental design in which participants were first asked their opinion about an initial statement and then exposed to a tailored counterargument (Nai, Schemel & Marie, 2017). Participants were initially told that the U.S. Congress is debating a voluntary party quota that demands the parties to “put forth female candidates in at least 30% of all contested congressional races.” Upon reading a short piece of information on the bill’s central elements, participants were asked to what extent they would be in favor of or against a quota. The answers were recorded on an 11-point scale (0 = *completely against* to 10 = *completely in favor*). Participants who disagreed with the quota (0–4) read a statement of a co-sponsor of the bill that contained arguments in support of the quota. Participants who expressed their agreement with the quota (6–10) were exposed to a statement of a senator that allegedly opposed the bill. Respondents who were neither in favor nor against the bill (5) were excluded ( $N = 40$ ) from the analysis. Both statements addressed the same issues, but the arguments presented were reversed (see supplementary material). After the exposure to the first statement, people first answered multiple questions that tapped into their cognitive, affective, and behavioral responses to the message and then indicated again to what extent they were in favor of or against the party quota (see supplementary material for the logic of the quasi-experimental script).

### **Measures**

#### **Resistance Strategies**

The isolated resistance strategies were assessed via several questions. Unless specified otherwise, all items were measured on 7-point Likert scales (1 = *strongly disagree* to 7 = *strongly agree*).



To measure counterarguing, this study used two items that asked the respondents to indicate if they counterargued the message and tried to find flaws in the arguments (adapted from Moyer-Gusé & Nabi, 2010;  $M = 4.6$ ,  $SD = 1.52$ ;  $\alpha = .83$ ).

Negative affect was measured by asking the subjects if the statement enraged, irritated, and annoyed them or if it made them angry (Van Reijmersdal et al., 2016;  $\alpha = .85$ ). Responses on the four items were again captured on a 7-point Likert scale ( $M = 3.8$ ,  $SD = 1.68$ ;  $\alpha = .91$ ).

To assess if participants derogated the source, they were asked to what extent they agreed that the Senator was trustworthy, credible, and had a high level of expertise (three items;  $M = 3.72$ ,  $SD = 1.42$ ;  $\alpha = .93$ ).

The index for attitude bolstering was adapted from the Bolster-Counterargue Scale (Briñol, Rucker, Tormala & Petty, 2003) and included two items (e.g., “I made a mental list of the reasons in support of my perspective”;  $\alpha = .71$ ;  $M = 4.63$ ,  $SD = 1.38$ ). In the same battery of questions, we also examined if the participants engaged in social validation (one item; i.e., “I thought about people that share the same opinion which made me more confident in my opinion”;  $M = 4.14$ ,  $SD = 1.76$ ) and self-assertion (two items; e.g., “I thought that no argument would change my opinion on the subject”;  $\alpha = .78$ ;  $M = 4.07$ ,  $SD = 1.54$ ). Both measures were inspired by Zuwerink Jacks and Cameron (2003).

To explore if the respondents resisted by derogating the persuasive tactic, we used five items (e.g., “The Senator tried to manipulate the audience in ways I do not like”;  $\alpha = .81$ ;  $M = 3.78$ ,  $SD = 1.26$ ) that were adapted from Cotte, Coulter and Moore (2005;  $\alpha = .89$ ).

The assessment of people’s avoidance strategies was more ambiguous. Note that individuals can avoid persuasive information both physically and cognitively (Fransen, Verlegh, Kirmani & Smit, 2015). First, we cannot examine if individuals physically avoided the persuasive message. Next, we were unable to measure avoidance of this *specific* stimulus because allowing the participants to skip the experimental stimulus would have potentially jeopardized the assessment of the remaining variables. We, therefore, resorted to a measurement of selective exposure, which describes individuals’ tendency to seek out attitude-consistent information (e.g., Clay, Barber & Shook, 2013). Although scholars emphasize that selective exposure and avoidance refer to two different processes, they both tap into people’s biased information behavior (e.g., Jang, 2014). From a resistance point of view, selective exposure might even be more useful in helping individuals defend their preexisting attitudes: The exposure to attitude-consistent information might not only strengthen their confidence but can also equip them with arguments in favor of their preexisting and against the opposing position.

To examine to what extent the participants were willing to expose themselves to consonant versus dissonant information, we presented them with six headlines, three of which were in favor (e.g., “Why American politics needs gender quota”)

and three against the quota (e.g., “Women don’t need state-mandated quota to succeed”). The participants were instructed to select a minimum of one and a maximum of three articles they would be interested in reading. Following the operationalization discussed in Clay, Barber and Shook (2013), we then subtracted the number of counter-attitudinal articles selected from the number of pro-attitudinal ones, yielding a measure of selective exposure from  $-3$  (*uniquely counter-attitudinal*) to  $3$  (*uniquely pro-attitudinal*). Table A2 (Appendix) presents the zero-order correlations across all eight resistance strategies.

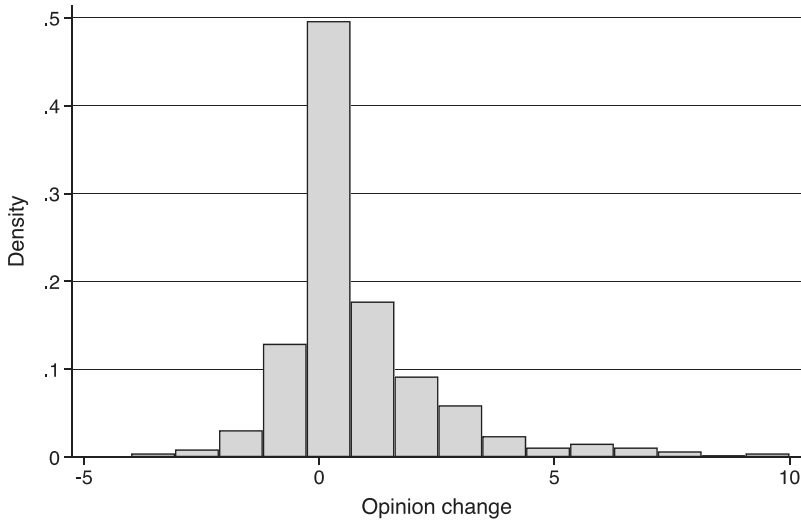
Following the idea that individuals can engage in multiple resistance strategies simultaneously, we averaged the eight separate strategies into an additive resistance index ( $\alpha = .75$ ) and forced it into a 0–1 scale ( $M = .53$ ,  $SD = 0.15$ ). This approach allows us to analyze the isolated effects of the individual strategies while at the same time testing the intertwined model of resistance which does not discriminate between strategies. Note that each separate strategy has the same weight in this index, regardless of the number of original items used to compute them – that is, the final index of resistance does not favor strategies measures via more items.

### **Elaboration**

Elaboration was assessed with a question that asked the participants to what extent they thought about the statement (single item; adapted from Tormala & Petty, 2004). Responses were provided on a 9-point scale anchored at 1 (*not at all*) and 9 (*very much*) ( $M = 6.65$ ,  $SD = 1.94$ ).

### **Opinion Change**

Participants were asked to what extent they were in favor of or against the bill ( $0 = \textit{completely against}$  to  $10 = \textit{completely in favor}$ ) twice, before and after the exposure to the persuasive statement. Any discrepancy between the two measurements indicates a change in opinion. The larger group comprises respondents who did not change their opinion ( $N = 227$ , 46.33%). While a substantial plurality of respondents ( $N = 184$ , 37.55%) were persuaded and changed their opinion in the direction of the counter-argument, a non-negligible minority ( $N = 79$ , 16.12%) was polarized and reinforced their initial opinion. Figure 1 presents the distribution of all respondents on a continuous variable of opinion change. On the histogram, the score 0 indicates no opinion change and is, by far, the most represented category. Positive scores indicate persuasion (with increasing scores reflecting an increase in the magnitude of persuasion), and negative scores indicate polarization (with increasing scores indicating an increasing magnitude of polarization).



**Figure 1.** Opinion change after exposure to persuasive counterarguments. Note. Scores come from the difference in individual opinion about the bill before and after exposure to counterarguments (0–10 scale). The score 0 indicates no opinion change. Positive scores indicate persuasion in the direction of the counterargument. Negative scores indicate polarization, that is, an opinion change against the direction of the counterargument.

### **Covariates**

Due to their centrality for both elaboration and resistance to political persuasion (e.g., O’Keefe, 2008; Petty & Wegener, 1998), our models control for three important cognitive covariates: political knowledge, issue importance, and need for cognition (NFC; Petty, Briñol, Loersch & McCaslin, 2009). When individuals expect an issue “to have significant consequences for their lives” (Apsler & Sears, 1968, p. 162), they are likely to devote more issue-relevant thoughts to evaluate the object and use the central route to assess the true merits of the argument (Petty, Cacioppo & Schumann, 1983; see also, Cacioppo & Petty, 1979). Similarly, knowledgeable people scrutinize the persuasive message more thoroughly (see, Wood, Rhodes & Biek, 1995 for a review). When this knowledge is absent, individuals lack the ability to critically assess the arguments and resort to more superficial cues to analyze the message’s validity (Wood & Kallgren, 1988). Similarly, when exposed to a persuasive message, recipients with high NFC tend to focus on the content rather than extraneous factors (Cacioppo & Petty, 1984), while individuals low in NFC resort to superficial cues to evaluate the message (Petty, Briñol, Loersch & McCaslin, 2009).

Political knowledge was measured via seven factual questions about the U.S. system and political representation of genders in various political institutions in the U.S. (e.g., “Do you know approximately how many % of the 100 seats in the Senate are currently held by women?”, “(…) which party currently

has the most members in the U.S. Senate?”). For most of the questions, participants were asked to choose the correct answer from the categories provided (see supplementary material). The additive scale counting all correct answers was forced into a 0–1 range ( $M = .54$ ,  $SD = 0.24$ ,  $\alpha = .56$ ).

Issue importance was measured with three items that asked the respondents how important equal political representation is to them (adapted from Zuwerink Jacks & Devine, 2000;  $M = 4.79$ ,  $SD = 1.45$ ;  $\alpha = .79$ ).

Finally, NFC was measured with a shortened six-item scale which was taken from Lins de Holanda Coelho, H. P. Hanel and J. Wolf (2018;  $\alpha = .87$ ). The participants were asked to indicate to what extent they agree with the six statements (e.g., “I would prefer complex to simple problems”;  $M = 4.47$ ,  $SD = 1.41$ ,  $\alpha = .87$ ).

Additionally, we included an adapted version of the neosexism scale (Tougas, Brown, Beaton & Joly, 1995), which assessed gender prejudice and opposition against affirmative action. The index included three items that asked the respondents’ opinion on women’s situation in the U.S. labor market (e.g., “Due to social pressures, firms frequently have to hire underqualified women”;  $M = 3.48$ ,  $SD = 1.76$ ,  $\alpha = .91$ ). Other covariates included the participants’ age, gender, sexual orientation, partisan orientation, education, political interest, and opinion extremity<sup>6</sup> as well as their initial opinion (pro/ contra). There is no multicollinearity between the variables (see, Table A1 in the Appendix for the frequency distribution of all variables).

## Results

Table 2 tests the antecedents of opinion change. The dependent variable, as discussed above, measures absolute change in opinion between before and after the exposure to the persuasive arguments. The variable takes on positive scores for opinion change in the direction of the counterargument and negative scores for opinion change in the direction of the preexisting attitudes.

The first model (M1) in Table 1 is the baseline model, where we regressed respondents’ attitude change on their cognitive and socio-demographic profile and the eight individual resistance strategies. By and large, the profile of respondents is only marginally related to attitude change, with the exception of a handful of factors. Respondents scoring higher on issue importance were significantly more likely to be persuaded, and so were respondents who were younger and had more extreme initial opinions.

Turning to the resistance strategies, we find that persuasion is only less likely when respondents engage in counterarguing and the derogation of the persuasive tactic. Other than expected, attitude bolstering is weakly associated with *more* persuasion. Reasons for this are manifold. It may be that individuals

**Table 2.** Resistance and opinion change.

Effect	M1			M2		
	Estimate	SE	p	Estimate	SE	p
Issue importance	0.24	0.07	.001	0.24	0.07	.001
Need for Cognition	0.02	0.06	.734	0.05	0.06	.434
Political knowledge	0.37	0.38	.324	0.18	0.38	.637
Female	0.05	0.17	.786	0.03	0.17	.861
Heterosexual	0.26	0.22	.234	0.39	0.22	.076
Age	-0.01	0.01	.057	-0.02	0.01	.033
Education	-0.08	0.13	.552	-0.05	0.13	.722
Republican	-0.04	0.06	.508	-0.03	0.06	.595
Interest in politics	-0.03	0.09	.758	-0.05	0.09	.556
Neo-sexism	0.01	0.06	.863	0.04	0.06	.522
Init. in favor of quotas	0.21	0.22	.355	0.37	0.22	.092
Opinion extremity	0.40	0.07	<.001	0.37	0.07	<.001
Counterarguing	-0.37	0.07	<.001			
Attitude bolstering	0.15	0.08	.070			
Selective exposure	-0.09	0.06	.177			
Source derogation	-0.05	0.08	.504			
Derogating pers. tactic	-0.21	0.09	.019			
Social validation	0.06	0.06	.308			
Self-assertion	-0.07	0.07	.312			
Negative affect	-0.01	0.07	.880			
Resistance Index				-3.47	0.60	<.001
Constant	0.61	0.77	.425	0.18	0.72	.803
Observations	463			463		
R <sup>2</sup>	.21			.15		

Note. In all models the dependent variable is opinion change and varies empirically between -4 (maximum opinion change against the counterargument, "polarization") and 10 (maximum opinion change toward the counterargument, "persuasion"). Models are OLS regressions; unstandardized regression coefficients reported.

who engaged in attitude bolstering felt more confident about their attitude and were, thus, less threatened by the incongruent message and more accepting of alternative views. Although there is reason to believe that this mechanism primarily works for compatible persuasive messages, it is possible that individuals who bolstered their attitudes were more open-minded and, thus, more susceptible to persuasion (Zuwerink Jacks & O'Brien, 2004). Although most of the coefficients point in the right direction, none of the other resistance strategies seems significantly or substantially associated with persuasion per se. We must, thus, reject H1.

Model M2 goes a step further and includes the main effect of the additive index of resistance on persuasion. In line with our expectation (H3), results suggest that the intertwined model of resistance significantly reduces persuasion. Compared to respondents with the lowest level of engagement in this intertwined model of resistance, for which the model estimates a level of persuasion around 2.6<sup>7</sup> (marginal effects), respondents that score the highest have an estimated level of persuasion of -0.9. In other words, not only were these individuals not persuaded, but they doubled down on their initial opinion. Considering that approximately 95% of all observations are concentrated between the values -2 and 4 on the dependent variable (Figure 1), the difference in persuasion between low and high levels of the

intertwined model resistance is rather substantial. These first results suggest that – with a few exceptions – it is not the isolated resistance strategies that significantly curb persuasion but that it is the overall effort individuals put into resisting that help individuals successfully defend their attitude against an attack.

The analyses presented in [Tables 3a](#) and [Table 3b](#) introduce an interaction term between cognitive elaboration and the isolated resistance strategies. The emerging pattern is somewhat difficult to disentangle: While elaboration increases the effectiveness of counterarguing, the derogation of the persuasive tactic, social validation, and negative affect, it does not significantly affect self-assertion, source derogation, and attitude bolstering. More surprisingly, however, selective exposure interacts positively with cognitive elaboration and drives persuasion (M3 in [Table 4](#)). Because our measure of selective exposure captured people’s behavioral intentions and not actual exposure, these results should be interpreted with caution, however. In the light of these inconsistent results, we must nevertheless (partially) reject H2.

**Table 3a.** Elaboration, resistance, and opinion change (Separate resistance strategies).

Effect	M1			M2			M3			M4		
	Est.	SE	p	Est.	SE	p	Est.	SE	p	Est.	SE	p
Issue importance	0.25	0.07	.001	0.24	0.07	.001	0.23	0.07	.002	0.25	0.07	.001
Need for Cognition	0.02	0.06	.768	0.02	0.06	.753	0.02	0.06	.775	0.02	0.06	.736
Political knowledge	0.34	0.38	.364	0.37	0.38	.329	0.32	0.38	.396	0.37	0.38	.326
Female	0.03	0.17	.852	0.03	0.17	.848	0.05	0.17	.773	0.05	0.17	.764
Heterosexual	0.23	0.22	.286	0.22	0.22	.306	0.26	0.22	.236	0.25	0.22	.248
Age	-0.01	0.01	.075	-0.01	0.01	.076	-0.01	0.01	.059	-0.01	0.01	.070
Education	-0.08	0.13	.549	-0.09	0.13	.499	-0.11	0.13	.390	-0.08	0.13	.541
Republican	-0.04	0.06	.496	-0.04	0.06	.473	-0.05	0.06	.401	-0.04	0.06	.525
Interest in politics	-0.03	0.09	.772	-0.03	0.09	.737	-0.02	0.09	.813	-0.02	0.09	.807
Neo-sexism	0.02	0.06	.797	0.01	0.06	.853	0.01	0.06	.892	0.01	0.06	.851
Initially in favor of quotas	0.20	0.23	.378	0.21	0.23	.357	0.20	0.22	.384	0.22	0.23	.342
Opinion extremity	0.40	0.07	<.001	0.40	0.07	<.001	0.41	0.07	<.001	0.40	0.07	<.001
Elaboration	0.20	0.13	.115	0.17	0.14	.217	-0.06	0.05	.181	0.04	0.14	.747
Counterarguing	-0.06	0.19	.759	-0.37	0.07	<.001	-0.35	0.07	<.001	-0.37	0.07	<.001
Attitude bolstering	0.15	0.08	.072	0.40	0.19	.039	0.14	0.08	.086	0.15	0.08	.070
Selective exposure	-0.09	0.06	.182	-0.08	0.06	.213	-0.71	0.23	.002	-0.08	0.06	.188
Source derogation	-0.06	0.08	.456	-0.06	0.08	.471	-0.08	0.08	.330	0.03	0.22	.874
Derogating persuasive tactic	-0.21	0.09	.018	-0.21	0.09	.015	-0.20	0.09	.022	-0.21	0.09	.019
Social validation	0.06	0.06	.337	0.07	0.06	.280	0.04	0.06	.459	0.06	0.06	.318
Self-assertion	-0.09	0.07	.216	-0.07	0.07	.331	-0.06	0.07	.369	-0.07	0.07	.300
Negative affect	-0.01	0.07	.930	-0.01	0.07	.919	-0.02	0.07	.756	-0.01	0.07	.876
Elab. * Counterarguing	-0.04	0.02	.072									
Elab. * Attitude bolstering				-0.04	0.03	.157						
Elab. * Selective exposure							0.09	0.03	.005			
Elab. * Source derogation										-0.01	0.03	.652
Constant	-0.70	1.10	.524	-0.43	1.11	.699	1.32	0.82	.108	0.28	1.18	.810
Observations	463			463			463			463		
R <sup>2</sup>	.22			.22			.23			.21		

Note. In all models the dependent variable is opinion change and varies empirically between -4 (maximum opinion change against the counterargument, “polarization”) and 10 (maximum opinion change toward the counterargument, “persuasion”). Models are OLS regressions; unstandardized regression coefficients reported.

**Table 3b.** Elaboration, resistance, and opinion change (Separate resistance strategies).

Effect	M1			M2			M3			M4		
	Est.	SE	p	Est.	SE	p	Est.	SE	p	Est.	SE	p
Issue importance	0.24	0.07	.001	0.25	0.07	.001	0.24	0.07	.001	0.23	0.07	.002
Need for Cognition	0.01	0.06	.808	0.01	0.06	.876	0.02	0.06	.801	0.01	0.06	.882
Political knowledge	0.45	0.38	.233	0.40	0.38	.289	0.38	0.38	.319	0.43	0.37	.256
Female	0.04	0.17	.795	-0.00	0.17	.989	0.03	0.17	.875	0.03	0.17	.860
Heterosexual	0.23	0.22	.283	0.23	0.22	.293	0.24	0.22	.281	0.19	0.22	.383
Age	-0.01	0.01	.065	-0.01	0.01	.075	-0.01	0.01	.062	-0.01	0.01	.064
Education	-0.07	0.13	.569	-0.09	0.13	.484	-0.08	0.13	.562	-0.07	0.13	.569
Republican	-0.04	0.06	.500	-0.04	0.06	.470	-0.04	0.06	.480	-0.05	0.06	.429
Interest in politics	-0.01	0.09	.877	-0.02	0.09	.860	-0.01	0.09	.868	0.00	0.09	.968
Neo-sexism	0.01	0.06	.916	0.01	0.06	.848	0.02	0.06	.792	0.02	0.06	.789
Initially in favor of quotas	0.19	0.23	.403	0.24	0.23	.290	0.20	0.23	.386	0.20	0.22	.375
Opinion extremity	0.40	0.07	<.001	0.40	0.07	<.001	0.40	0.07	<.001	0.40	0.07	<.001
Elaboration	0.24	0.13	.077	0.18	0.10	.066	0.10	0.11	.347	0.30	0.10	.003
Counterarguing	-0.37	0.07	<.001	-0.38	0.07	<.001	-0.38	0.07	<.001	-0.37	0.07	<.001
Attitude bolstering	0.14	0.08	.102	0.17	0.08	.045	0.16	0.08	.051	0.16	0.08	.058
Selective exposure	-0.08	0.06	.194	-0.07	0.06	.303	-0.08	0.06	.186	-0.07	0.06	.247
Source derogation	-0.06	0.08	.455	-0.07	0.08	.359	-0.06	0.08	.469	-0.06	0.08	.441
Derogating persuasive tactic	0.21	0.23	.361	-0.20	0.09	.026	-0.21	0.09	.019	-0.22	0.09	.010
Social validation	0.07	0.06	.242	0.37	0.15	.015	0.06	0.06	.341	0.05	0.06	.373
Self-assertion	-0.07	0.07	.322	-0.07	0.07	.288	0.11	0.17	.521	-0.07	0.07	.277
Negative affect	-0.01	0.07	.849	-0.01	0.07	.832	-0.01	0.07	.929	0.53	0.17	.002
Elab. * Der. persuasive tactic	-0.06	0.03	.047									
Elab. * Social validation				-0.05	0.02	.026						
Elab. * Self-assertion							-0.03	0.02	.245			
Elab. * Negative affect										-0.08	0.02	<.001
Constant	-0.99	1.15	.389	-0.53	0.96	.579	-0.08	1.02	.941	-1.35	0.97	.166
Observations	463			463			463			463		
R <sup>2</sup>	.22			.22			.22			.23		

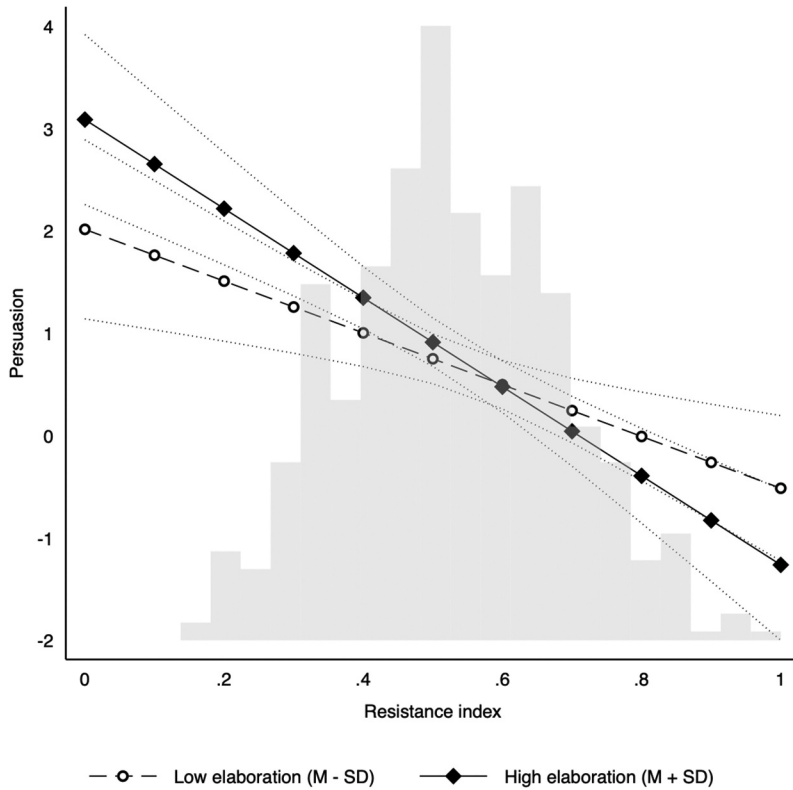
Note. In all models the dependent variable is opinion change and varies empirically between -4 (maximum opinion change against the counterargument, "polarization") and 10 (maximum opinion change toward the counterargument, "persuasion"). Models are OLS regressions; unstandardized regression coefficients reported.

**Table 4.** Resistance, elaboration, and opinion change.

Effect	M1			M2		
	Estimate	SE	p	Estimate	SE	p
Issue importance	0.24	0.07	.001	0.24	0.07	.001
Need for Cognition	0.05	0.06	.439	0.04	0.06	.518
Political knowledge	0.18	0.38	.639	0.19	0.38	.618
Female	0.03	0.17	.872	-0.00	0.17	.998
Heterosexual	0.40	0.22	.074	0.37	0.22	.099
Age	-0.02	0.01	.033	-0.02	0.01	.036
Education	-0.05	0.13	.719	-0.05	0.13	.708
Republican	-0.03	0.06	.583	-0.04	0.06	.532
Interest in politics	-0.05	0.09	.542	-0.05	0.09	.609
Neo-sexism	0.04	0.06	.535	0.04	0.06	.509
Init. in favor of quotas	0.36	0.22	.103	0.34	0.22	.122
Opinion extremity	0.37	0.07	<.001	0.36	0.07	<.001
Elaboration	0.01	0.04	.825	0.28	0.15	.057
Resistance Index	-3.46	0.61	<.001	-0.23	1.78	.897
Resist. Index * Elab.				-0.48	0.25	.054
Constant	0.15	0.74	.843	-1.63	1.18	.167
Observations	463			463		
R <sup>2</sup>	.15			.16		

Note. In all models the dependent variable is opinion change and varies empirically between -4 (maximum opinion change against the counterargument, "polarization") and 10 (maximum opinion change toward the counterargument, "persuasion"). Models are OLS regressions; unstandardized regression coefficients reported.





**Figure 2.** Opinion change by resistance index and cognitive elaboration. Note. Marginal effects with 95% confidence intervals, based on coefficients in Table 5 (M2). The two lines reflect two critical values of cognitive elaboration, at respectively one standard deviation below the mean (low elaboration; white circles) and one standard deviation above the mean (high elaboration; black diamonds). Please note the reduced range of the y-axis; the original variable ranges between  $-4$  and  $+10$ , but 95% of the observations are between  $-2$  and  $+4$  (see, Figure 1).

Results in Table 4, finally, include an interaction term between the additive resistance index and the presence of cognitive elaboration. The significant interaction term is substantiated with marginal effects in Figure 2. As shown in the figure, the negative effect of the intertwined model of resistance (x-axis) is particularly strong for respondents scoring higher on cognitive elaboration (steeper slope). We, thus, accept H4.

Finally, Table A3 (Appendix) replicates the main analyses but on an alternative dependent variable, excluding respondents that reinforced their initial opinion against the counterargument. Due to the excess zeroes in this alternative dependent measure of persuasion, models use a negative binomial transformation. Results for these additional analyses are globally consistent with results in models using the full range of attitude change, indicating that including or excluding the respondents that had a more polarized opinion after exposure to the counterargument does not substantively alter the trends found.

## Discussion and Conclusion

Thus far, literature has mostly focused on counterarguing when analyzing how individuals defend their attitude against a persuasion attack. Although counterarguing is a powerful technique to curb opinion change, it is surely not the only one: In a natural setting, individuals use multiple resistance strategies in parallel, albeit to different extents. In this study, we aimed to investigate under what circumstances these resistance strategies work most effectively by analyzing their interaction with cognitive elaboration. To investigate this matter, we exposed participants in a quasi-experiment to a tailored counterargument about gender quotas and examined their responses to the dissonant information. The results are relatively straightforward: Although counterarguing was by far the most powerful technique to decrease persuasion, it does not compare to the magnitude of the additive resistance index. These findings indicate that it is the overall effort respondents put into resisting the appeal that matters, more than the activation of the isolated strategies. Turning to the effect of elaboration and its interaction with resistance, we find a similar pattern: While most of the interaction terms between elaboration and the isolated strategies point in the expected direction – thus indicating that the positive effect of elaboration is not limited to counterarguing – they did not always reach statistical significance. We find, however, that engaging in elaboration significantly increases the effectiveness of the additive resistance index, emphasizing again the superiority of the intertwined model of resistance that takes multiple strategies into account.

This article has some notable limitations: First, we used several short forms of established scales. Although reasonable from a practical standpoint, short measurements pose obvious threats to the construct validity. Although most measurements showed good reliability, we advise future research to use longer, established scales.

Next, we would like to point to the empirical distinction between *perceived* and *actual* elaboration. As shown in Barden and Petty (2008), perceived elaboration should be treated as a distinct construct of actual amount of processing, measured via thought-listing. Although perceived elaboration does “reflect variation in the actual amount of processing” (Barden & Petty, 2008, p. 506) and research has often used them interchangeably (Wegner, Downing, Krosnick & Petty, 1995), one cannot ascertain that individuals accurately recall their cognitive processes. A similar argument can be made for the measure of counterarguing.

Second, our study neglected several important persuasion variables. For example, we did not account for the valence of elaboration. One can expect that counter-attitudinal information predominantly evokes negative thoughts, however (O’Keefe, 2008). Similarly, we did not consider whether the

individuals pursued accuracy or directional goals when processing the message (Taber & Lodge, 2006). Next, we did not manipulate or measure the quality of the persuasive arguments. As all three aspects are expected to have a considerable effect on the strength of resistance, the message evaluation, and the persuasion outcome, we urge future research to take these aspects into account.

Third, there is evidence that elaboration primarily affects the attitudes' persistence (Petty, Haugtvedt & Smith, 1995). Accordingly, one should expect that resistance from elaborative processes leads to stronger attitudes that can shield off *future* attacks (Wegener, Petty, Smoak & Fabrigar, 2004). Because this study's design prohibits a thorough analysis of attitude strength, we recommend that scholars investigate this matter further.

Fourth, the manipulation check – which assessed to what extent people perceived the dissonant message as conflicting with their initial attitude – failed. Because the main interest of this research is the relationship between people's resistance and opinion change, and not between the message properties and the outcome, the experimental conditions exclusively served the purpose of inducing the variation in the relevant independent variable, however. Therefore, the counter-attitudinal messages were “simply a methodological device for creating variance in the psychological state” (O'Keefe, 2003, p. 255) that was hypothesized to influence the persuasion success. The failed manipulation might, nevertheless, indicate that the topic of gender quotas is not as controversial as expected, which makes people more susceptible to persuasion. Therefore, it would be desirable to replicate the model with a more contested topic, where individuals are equipped with stronger arguments and attitudes.

Persuasion is all-pervasive in today's politics. In the political arena, it has the power to structure and influence public opinion if used effectively. The question of what constitutes effective persuasion, however, is yet to be answered. This paper provides strong support for the notion that its counterpart, resistance to persuasion, plays a crucial role in the persuasion process and might be decisive for the success of a political message. The findings also speak to the idea that the isolated focus on one resistance strategy only tells part of the story and emphasize the importance of going beyond counterarguing when studying the role of resistance in the persuasion process. This study also sought to systemize the study of resistance to *political* persuasion. Although the concept of resistance has been of great interest to traditional (e.g., Pfau & Burgoon, 1988) and also more contemporary literature of political communication (e.g., Ahluwalia, 2000; Daignault, Soroka & Giasson, 2013; Meirick, 2002; Meirick & Nisbett, 2011), there has been little consensus on how to term and operationalize the resistant forces. By using the multidisciplinary approach advocated by Fransen, Verlegh, Kirmani and Smit (2015), this paper aims to facilitate the future exchange of knowledge within and between subfields.

## Notes

1. Note that when we refer to resistance, we mean people's response to a persuasive message and that the terms defense strategies, resistance strategies, and resistant processes will be used interchangeably.
2. Although we cannot guarantee that this list is exhaustive, this article is, to our knowledge, the first one that has made an attempt at creating such a systematic overview of these defense mechanisms.
3. No screening criteria were applied to recruit the sample.
4. To identify straight-liners, this paper calculated the *SD* for issue importance and the derogation of the persuasive tactic. As these batteries included reverse coded items, a low standard deviation was considered a strong indication of straight-lining. The participants who had a summed *SD* = 0 on these two batteries were excluded.
5. The project received full ERB approval from the University of Amsterdam on 12 April 2020 (project No. 2020-PCJ-12158).
6. The initial opinion was simply folded on itself to create a scale ranging from 0 to 5.
7. Remember that the original variable ranges between -5 and +10.00

## Disclosure Statement

No potential conflict of interest was reported by the author(s).

## ORCID

Chiara Valli  <http://orcid.org/0000-0002-7347-0957>

Alessandro Nai  <http://orcid.org/0000-0001-7303-2693>

## Data availability statement

The data described in this article are openly available in the Open Science Framework at <https://osf.io/qsjyx/>.

## Open Scholarship



This article has earned the Center for Open Science badges for Open Data and Open Materials through Open Practices Disclosure. The data and materials are openly accessible at <https://osf.io/qsjyx/>.

## References

- Ahluwalia, R. (2000). Examination of psychological processes. *Journal of Consumer Research*, 27(9), 217–232. <https://doi.org/10.1086/314321>
- Apsler, R., & Sears, D. O. (1968). Warning, personal involvement, and attitude change. *Journal of Personality and Social Psychology*, 9(2, Pt.1), 162–166. <https://doi.org/10.1037/h0021248>

- Bacchi, C. (2006). Arguing for and against quotas: Theoretical issues. In D. Dahlerup (Ed.), *Women, quotas and politics* (pp. 32–51). Routledge.
- Banas, J. A., & Rains, S. A. (2010). A meta-analysis of research on inoculation theory. *Communication Monographs*, 77(3), 281–311. <https://doi.org/10.1080/03637751003758193>
- Barden, J., & Petty, R. E. (2008). The mere perception of elaboration creates attitude certainty: Exploring the thoughtfulness heuristic. *Journal of Personality and Social Psychology*, 95(3), 489–509. <https://doi.org/10.1037/a0012559>
- Berinsky, A. J., Huber, G. A., & Lenz, G. S. (2012). Evaluating online labor markets for experimental research: Amazon.com's mechanical Turk. *Political Analysis*, 20(3), 351–368. <https://doi.org/10.1093/pan/mpr057>
- Brehm, S. S., & Brehm, J. W. (1981). *Psychological reactance a theory of freedom and control. The encyclopedia of cross-cultural psychology*. Academic Press.
- Briñol, P., Rucker, D. D., Tormala, Z. L., & Petty, R. E. (2003). Individual differences in resistance to persuasion: The role of beliefs and meta-beliefs. In E. S. Knowles, & J. A. Linn (Eds.), *Resistance and persuasion* (pp. 83–104). Erlbaum.
- Cacioppo, J. T., & Petty, R. E. (1979). Effects of message repetition and position on cognitive response, recall, and persuasion. *Journal of Personality and Social Psychology*, 37(1), 97–109. <https://doi.org/10.1037/0022-3514.37.1.97>
- Cacioppo, J. T., & Petty, R. E. (1984). The elaboration likelihood model of persuasion. *Advances in Consumer Research*, 11, 673–675. <https://www.acrwebsite.org/volumes/6329/volumes/v11/NA%20-%2011>
- Clay, R., Barber, J. M., & Shook, N. J. (2013). Techniques for measuring selective exposure: A critical review. *Communication Methods and Measures*, 7(3–4), 147–171. <https://doi.org/10.1080/19312458.2013.813925>
- Compton, J. (2013). Inoculation Theory. In Dillard, J. P., & Shen, L. (Eds.), *The SAGE Handbook of Persuasion: Developments in Theory and Practice* (2nd ed., pp. 220–236). Thousand Oaks: Sage. doi:10.4135/9781452218410.n14.
- Cotte, J., Coulter, R. A., & Moore, M. (2005). Enhancing or disrupting guilt: The role of ad credibility and perceived manipulative intent. *Journal of Business Research*, 58(3), 361–368. [https://doi.org/10.1016/S0148-2963\(03\)00102-4](https://doi.org/10.1016/S0148-2963(03)00102-4)
- Daignault, P., Soroka, S., & Giasson, T. (2013). The perception of political advertising during an election campaign: A MEASURE OF COGNITIVE AND EMOTIONAL EFFECTS. *Canadian Journal of Communication*, 38(2), 167–186. <https://doi.org/10.22230/cjc.2013v38n2a2566>
- Dillard, J. P., & Shen, L. (2005). On the nature of reactance and its role in persuasive health communication. *Communication Monographs*, 72(2), 144–168. <https://doi.org/10.1080/03637750500111815>
- Festinger, L. (1957). *A theory of cognitive dissonance*. Row, Peterson.
- Fransen, M. L., Verlegh, P. W. J., Kirmani, A., & Smit, E. G. (2015). A typology of consumer strategies for resisting advertising, and a review of mechanisms for countering them. *International Journal of Advertising*, 34(1), 6–16. <https://doi.org/10.1080/02650487.2014.995284>
- Friestad, M., & Wright, P. (1994). The persuasion knowledge model: How people cope with persuasion attempts. *Journal of Consumer Research*, 21(1), 1–31. <https://doi.org/10.1086/209380>
- Hauser, D. J., & Schwarz, N. (2015). It's a trap! instructional manipulation checks prompt systematic thinking on “Tricky” tasks. *SAGE Open*, 5(2), 1–6. <https://doi.org/10.1177/2158244015584617>

- Jang, S. M. (2014). Challenges to selective exposure: Selective seeking and avoidance in a multitasking media environment. *Mass Communication and Society*, 17(5), 665–688. <https://doi.org/10.1080/15205436.2013.835425>
- Knobloch-Westerwick, S., & Meng, J. (2009). Looking the other way: Selective exposure to attitude-consistent and counterattitudinal political information. *Communication Research*, 36(3), 426–448.
- Knowles, E. S., & Linn, J. A. (2004). *Resistance and persuasion*. Erlbaum.
- Krupnikov, Y., & Levine, A. S. (2014). Cross-sample comparisons and external validity. *Journal of Experimental Political Science*, 1(1), 59–80. <https://doi.org/10.1017/xps.2014.7>
- Lins de Holanda Coelho, G., H. P. Hanel, P., & J. Wolf, L. (2018). The very efficient assessment of need for cognition: Developing a six-item version. *Assessment*, 27(8), 1870–1885. <https://doi.org/10.1177/1073191118793208>
- McGuire, W. J. (1964). Inducing resistance to persuasion: Some contemporary approaches. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 1, pp. 191–229). Academic Press.
- Meirick, P. (2002). Cognitive responses to negative and comparative political advertising. *Journal of Advertising*, 31(1), 49–62. <https://doi.org/10.1080/00913367.2002.10673660>
- Meirick, P., & Nisbett, G. S. (2011). I approve this message: Effects of sponsorship, ad tone, and reactance in 2008 presidential advertising. *Mass Communication and Society*, 14(5), 666–689. <https://doi.org/10.1080/15205436.2010.530381>
- Miller, C. H., Ivanov, B., Sims, J., Compton, J., Harrison, K. J., Parker, K. A., Parker, J. L., & Averbeck, J. M. (2013). Boosting the potency of resistance: Combining the motivational forces of inoculation and psychological reactance. *Human Communication Research*, 39(1), 127–155. <https://doi.org/10.1111/j.1468-2958.2012.01438.x>
- Moyer-Gusé, E., & Nabi, R. L. (2010). Explaining the effects of narrative in an entertainment television program: Overcoming resistance to persuasion. *Human Communication Research*, 36(1), 26–52. <https://doi.org/10.1111/j.1468-2958.2009.01367.x>
- Nai, A., Schemel, Y., & Marie, J.-L. (2017). Anxiety, sophistication, and resistance to persuasion: evidence from a quasi-experimental survey on global climate change. *Political Psychology*, 38(1), 137–156. <https://doi.org/10.1111/pops.12331>
- O’Keefe, D. J. (2003). Message properties, mediating states, and manipulation checks: Claims, evidence, and data analysis in experimental persuasive message effects research. *Communication Theory*, 13(3), 251–274. <https://doi.org/10.1111/j.1468-2885.2003.tb00292.x>
- O’Keefe, D. J. (2008). Elaboration likelihood model. *International Encyclopedia of Communication*, 4, 1475–1480.
- Petty, R. E., & Cacioppo, J. T. (1979). Effects of forwarning of persuasive intent and involvement on cognitive responses and persuasion. *Personality and Social Psychology Bulletin*, 5(2), 173–176. <https://doi.org/10.1177/014616727900500209>
- Petty, R. E., Cacioppo, J. T., & Schumann, D. (1983). Central and peripheral routes to advertising effectiveness: The moderating role of involvement. *Journal of Consumer Research*, 10(2), 135–146. <https://doi.org/10.1086/208954>
- Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. In Berkowitz, I. (Ed.), *Advances in Experimental Social Psychology* (pp. 123–205). New York, NY: Academic Press. [https://doi.org/10.1007/978-1-4612-4964-1\\_1](https://doi.org/10.1007/978-1-4612-4964-1_1)
- Petty, R. E., Haugtvedt, C. P., & Smith, S. M. (1995). Elaboration as a determinant of attitude strength. In R. E. Petty, & J. A. Krosnick (Eds.), *Attitude strength: Antecedents and consequences* (pp. 93–130). Erlbaum.
- Petty, R. E., & Wegener, D. T. (1998). Attitude change: Multiple roles for persuasion variables. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (pp. 323–390). McGraw-Hill.



- Petty, R. E., Tormala, Z. L., & Rucker, D. D. (2004). Resisting persuasion by counterarguing: An attitude strength perspective. In J. T. Jost, M. R. Banaji, & D. A. Prentice (Eds.), *Perspectivism in social psychology: The yin and yang of scientific progress* (pp. 37–51). American Psychological Association.
- Petty, R. E., Briñol, P., Loersch, C., & McCaslin, M. J. (2009). The need for cognition. In M. R. Leary, & R. H. Hoyle (Eds.), *Handbook of individual differences in social behavior* (pp. 318–329). Guilford Press.
- Pfau, M., & Burgoon, M. (1988). Inoculation in political campaign communication. *Human Communication Research*, 15(1), 91–111. <https://doi.org/10.1111/j.1468-2958.1988.tb00172.x>
- Quick, B. L., & Stephenson, M. T. (2007). Further evidence that psychological reactance can be modeled as a combination of anger and negative cognitions. *Communication Research*, 34(3), 255–276. <https://doi.org/10.1177/0093650207300427>
- Rains, S. A. (2013). The nature of psychological reactance revisited: A meta-analytic review. *Human Communication Research*, 39(1), 47–73. <https://doi.org/10.1111/j.1468-2958.2012.01443.x>
- Taber, C. S., & Lodge, M. (2006). Motivated skepticism in the evaluation of political beliefs. *American Journal of Political Science*, 50(3), 755–769. <https://doi.org/10.1111/j.1540-5907.2006.00214.x>
- Taber, C. S., Cann, D., & Kucsova, S. (2009). The motivated processing of political arguments. *Political Behavior*, 31(2), 137–155.
- Tormala, Z. L., & Petty, R. E. (2004). Resistance to persuasion and attitude certainty: The moderating role of elaboration. *Personality and Social Psychology Bulletin*, 30(11), 1446–1457. <https://doi.org/10.1177/0146167204264251>
- Tougas, F., Brown, R., Beaton, A. M., & Joly, S. (1995). Neosexism: Plus Ça Change, Plus C'est Pareil. *Personality and Social Psychology Bulletin*, 21(8), 842–849. <https://doi.org/10.1177/0146167295218007>
- van Reijmersdal, E. A., Fransen, M. L., van Noort, G., Oprea, S. J., Vandenberg, L., Reusch, S., van Lieshout, F., & Boerman, S. C. (2016). Effects of disclosing sponsored content in blogs. *American Behavioral Scientist*, 60(12), 1458–1474. <https://doi.org/10.1177/0002764216660141>
- Wegener, D. T., Downing, J., Krosnick, J. A., & Petty, R. E. (1995). Measures and manipulations of strength-related properties of attitudes: Current practice and future directions. In Petty, R. E., & Krosnick, J. A. (Eds.), *Attitude Strength: Antecedents and Consequences* (pp. 455–487). Mahwah, NJ: Erlbaum.
- Wegener, D. T., Petty, R. E., Smoak, N. D., & Fabrigar, L. R. (2004). Multiple routes to resisting attitude change. In E. S. Knowles, & J. A. Linn (Eds.), *Resistance and persuasion* (pp. 13–38). Erlbaum.
- Wood, W., & Kallgren, C. A. (1988). Communicator attributes and persuasion. *Personality and Social Psychology Bulletin*, 14(1), 172–182. <https://doi.org/10.1177/0146167288141017>
- Wood, W., Rhodes, N., & Biek, M. (1995). Working Knowledge and Attitude Strength: An Information Processing Analysis. In Petty, R. E., & Krosnick, J. A. (Eds.), *Attitude Strength: Antecedents and Consequences* (pp. 189–202). Mahwah, NJ: Erlbaum.
- Zuwerink Jacks, J., & Devine, P. G. (1996). Attitude importance and resistance to persuasion: It's not just the thought that counts. *Journal of Personality and Social Psychology*, 70(5), 931–944. <https://doi.org/10.1037/0022-3514.70.5.931>
- Zuwerink Jacks, J., & Devine, P. G. (2000). Attitude importance, forewarning of message content, and resistance to persuasion. *Basic and Applied Social Psychology*, 22(1), 19–29. [https://doi.org/10.1207/S15324834BASP2201\\_3](https://doi.org/10.1207/S15324834BASP2201_3)



- Zuwerink Jacks, J., & Cameron, K. A. (2003). Strategies for resisting persuasion. *Basic and Applied Social Psychology*, 25(2), 145–161. [https://doi.org/10.1207/S15324834BASP2502\\_5](https://doi.org/10.1207/S15324834BASP2502_5)
- Zuwerink Jacks, J., & O'Brien, M. E. (2004). Decreasing resistance by affirming the self. In E. S. Knowles, & J. A. Linn (Eds.), *Resistance and Persuasion* (pp. 235–257). Erlbaum.

## APPENDIX

**Table A1** Descriptive statistics.

Variable	N	M	SD	Min	Max
Persuasion	490	0.69	1.87	-4.00	10.00
Persuasion (excluding polarized)	411	1.08	1.77	0.00	10.00
Elaboration	498	6.65	1.94	1.00	9.00
Resistance Index	520	.53	.15	0.14	1.00
Counterarguing	498	4.61	1.52	1.00	7.00
Attitude bolstering	494	4.63	1.38	1.00	7.00
Selective exposure	520	0.44	1.32	-3.00	3.00
Source derogation	494	3.72	1.42	1.00	7.00
Derogating persuasive tactic	490	3.78	1.26	1.00	7.00
Social validation	494	4.14	1.76	1.00	7.00
Self-assertion	494	4.07	1.54	1.00	7.00
Negative affect	497	3.80	1.68	1.00	7.00
Issue importance	525	4.79	1.45	1.00	7.00
Need for Cognition	528	4.46	1.41	1.00	7.00
Political knowledge	528	.54	.24	0.00	1.00
Female	523	.40	.49	0.00	1.00
Heterosexual	524	.83	.38	0.00	1.00
Age	528	37.82	11.58	18.00	74.00
Education	528	1.98	0.65	1.00	3.00
Republican	528	2.76	1.49	1.00	5.00
Interest in politics	528	3.82	0.99	1.00	5.00
Neo-sexism	525	3.48	1.76	1.00	7.00
Initially in favor of quotas	480	.72	.45	0.00	1.00
Opinion extremity	520	2.88	1.53	0.00	5.00

**Table A2** Resistance strategies, zero-order correlations.

Variable	1	2	3	4	5	6	7
1. Counterarguing	–						
2. Attitude bolstering	.58***	–					
3. Selective exposure	.13**	.11*	–				
4. Source derogation	.14**	-.05	.21***	–			
5. Derogating pers. tactic	.29***	.25***	.07*	.51***	–		
6. Social validation	.34***	.56***	.02	-.24***	.13**	–	
7. Self-assertion	.45***	.50***	.13**	.06	.31***	.47***	–
8. Negative affect	.56***	.44***	.09*	.17***	.50***	.36***	.51***

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ , †  $p < .1$



**Table A3** The antecedents of persuasion (alternative measure; negative binomial regressions).

Effects	M1			M2			M3			M4		
	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p	Estimate	SE	p
Issue importance	0.21	0.07	.001	0.21	0.07	.002	0.21	0.07	.002	0.19	0.07	.004
Need for Cognition	-0.00	0.06	.989	0.02	0.06	.680	0.02	0.06	.674	0.02	0.06	.747
Political knowledge	-0.09	0.37	.803	-0.26	0.37	.482	-0.26	0.37	.485	-0.25	0.37	.493
Female	0.10	0.16	.560	0.08	0.17	.646	0.08	0.17	.637	0.08	0.17	.617
Heterosexual	0.56	0.22	.011	0.65	0.23	.004	0.65	0.23	.004	0.63	0.23	.005
Age	-0.02	0.01	.007	-0.02	0.01	.004	-0.02	0.01	.004	-0.02	0.01	.003
Education	-0.10	0.13	.414	-0.09	0.13	.498	-0.09	0.13	.493	-0.09	0.13	.512
Republican	-0.06	0.06	.291	-0.04	0.06	.501	-0.04	0.06	.504	-0.04	0.06	.502
Interest in politics	-0.05	0.08	.585	-0.05	0.09	.591	-0.05	0.09	.607	-0.02	0.09	.862
Neo-sexism	0.01	0.06	.930	-0.01	0.06	.839	-0.01	0.06	.845	-0.02	0.06	.717
Initially in favor of quotas	-0.02	0.21	.920	0.12	0.20	.544	0.12	0.21	.537	0.11	0.21	.609
Opinion extremity	0.17	0.07	.010	0.14	0.07	.036	0.14	0.07	.036	0.13	0.07	.051
Counterarguing	-0.31	0.07	<.001									
Attitude bolstering	0.09	0.09	.317									
Selective exposure	-0.02	0.06	.798									
Source derogation	-0.04	0.08	.657									
Derogating pers. tactic	-0.13	0.10	.175									
Social validation	0.15	0.07	.025									
Self-assertion	-0.12	0.07	.088									
Negative affect	0.03	0.07	.705									
Resistance Index				-2.14	0.54	<.001	-2.16	0.55	<.001	0.69	1.59	.665
Elaboration							-0.00	0.04	.901	0.22	0.12	.076
Resistance Index * Elab.										-0.41	0.22	.057
Constant	0.60	0.76	.434	0.35	0.73	.638	0.37	0.76	.626	-1.10	1.08	0.308
Observations	395			395			395			395		
R <sup>2</sup>	.074			.049			.049			.058		
Model chi-square	83.24			54.35			54.37			57.97		
Log likelihood	-518.6			-533			-533			-531.2		

Note. In all models the dependent variable is persuasion and varies theoretically between 0 "No opinion change" and 10 "Extreme persuasion"; change towards the counterargument." Models are negative binomial regressions; unstandardized regression coefficients reported.