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## **POLITICAL IDEOLOGY AND HEALTH RISK PERCEPTIONS OF FOOD**

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## Introduction

Food choice is often more influenced by the psychological determinants of consumer understanding and perception of food safety than the physical properties of food (Yeung and Morris, 2001). Regulators and food companies have established ways of communicating the health benefits of products through taste, health and nutrient claims on food packages, restaurant menus, and social media (Kozup et al., 2003; Stevens et al., 2018; van Trijp and van der Lans, 2007). When fast food restaurants claim to be healthy, consumers underestimate the health risks associated with the main dishes: Fast food consumption is perceived as a lower cause of obesity, diabetes and cardiac illnesses (Cadario, 2016). Nonetheless, while health claims are designed to help consumers make informed choices, their effectiveness strongly depends on how consumers process information (Nocella and Kennedy, 2012).

Research in consumer psychology has demonstrated that companies and policy makers alike have increasingly used unique appeals targeted to conservatives and liberals to change their perceptions or behaviors. In particular, the literature on ideological message-matching supports that persuasive appeals based on political ideology can increase individuals' willingness to change their attitude toward a position to keep consistency with their moral commitments and with those who share them (Stern and Ondish, 2018). As an illustration, political appeals can influence attitudes toward issues such as same-sex marriage and universal healthcare (Feinberg and Willer, 2015), and help policy makers increase sustainable behaviors such as recycling (Kidwell et al., 2013). Building on two research areas—consumer psychology and health risk communication—the current research investigates how political appeals can affect the effectiveness of health claims, and impact health risk perceptions of food.

While research has explored the influence of political framing in societal and ethics-related domains (Kidwell et al., 2013; Wolsko et al., 2016), this study investigates the impact of

political appeals on an issue (food safety) associated with less moral and more self-centered values (Aertsens et al., 2009). In a context of repeated food scandals and crises, consumers are increasingly suspicious of health claims (Kozup et al., 2003). As consumers are likely to be more engaged in self-protection and risk reduction strategies for food consumption (Chandran and Menon, 2004; Yeung and Morris, 2001), the use of persuasive appeals based on values in conflict with their ideology should reduce the effectiveness of health claims. This study thus proposes that incongruent political appeals increase health risk perceptions.

### **Theoretical background**

Political ideology has been defined as “a socially shared system of beliefs” (Jost, 2017, p.168) based on individual psychological needs and philosophical values to manage threat and uncertainty. It is a relatively stable personality orientation that helps predict individuals’ behavior (Jost, 2006). Prior research has revealed deep cultural fault lines aligned with political ideology. The current political polarization between conservatives and liberals extends to lifestyle choices, cultural tastes, and consumer preferences (Shi et al., 2017). Specifically, conservatives and liberals have different food preferences and habits: While the former favor Chick-fil-A, the latter prefer KFC; liberals are also more likely to eat veggie burgers over hamburgers while conservatives are more likely to prefer barbecue chicken pizza to Marguerita pizza (The Week, 2013; Time, 2016). Food companies increasingly consider these differences and use political appeals to target consumers. Chipotle’s and Newman’s Own’s advertisements feature liberal values, including equality, social justice, and diversity, and communicate on the companies’ support to charity and local outreach programs. Conversely, Johnny Rockets’ and A&W’s ads focus on patriotism and traditions, which are more conservative values.

As illustrated by these examples, political appeals echo consumers’ worldview and moral values. Kidwell, Farmer and Hardesty (2013) drew a distinction between two types of

political framing that are congruent with either conservative or liberal moral foundations.

*Binding appeals* promote values such as social order, patriotism, authority and self-discipline, whereas *individualizing appeals* promote fairness, social justice, and individuality. When the ideological values of a health claim message match (*do not match*) with the political leanings of consumers, the message is considered congruent (*incongruent*).

A considerable amount of research indicates that messages that are congruent with an individual's beliefs can influence persuasion through a conceptual fluency, or "feels right" experience, which describes easy and pleasurable processing (Avnet and Higgins, 2006; Koenig et al., 2009; Vaughn et al., 2005). Conceptual fluency is experienced when a stimulus is easy to process and its meaning more easily grasped (Lee and Labro, 2004). At a non-conscious level, consumers misattribute this fluency experience to the quality of the message (Cesario et al., 2004), thereby increasing message persuasiveness and attitude change.

Conservatives and liberals possess different moral foundations (Voelkel and Feinberg, 2018), but rarely comprehend the worldview of the opposite group (Feinberg and Willer, 2015). The use of political appeals favors motivated information processing as individuals engage in a defense strategy against a worldview-violating group (i.e., conservatives for liberals, and liberals for conservatives) (Brandt et al., 2014; Hennes et al., 2016). To maintain a consistent worldview, judgment formation derives from either compliance with ingroup attitudes and values (Cohen, 2003), or rejection of outgroup attitudes, since outgroups are seen as inferior to ingroups (Mason, 2018).

Based on this mechanism, it is argued that consumers will perceive higher health risks when exposed to health claims framed with incongruent appeals. The literature on corporate political activity showed that consumers respond negatively to companies associated with a political party in conflict with their own ideology. For example, consumers perceive cookies

as less tasty if told that the producing company has donated heavily to a political party that they oppose (Tal et al., 2017).

Although prior research showed that the framing of persuasive messages in ideological and moral terms can favor sustainable behaviors (Kidwell et al., 2013; Wolsko et al., 2016), congruent appeals are not expected to decrease health risk perceptions. This prediction is consistent with the role of engagement in motivated information processing: Under conditions of high involvement, greater value comes from incongruence (*vs.* congruence) (Higgins and Scholer, 2009; Lee, 2009). While sustainability typically refers to “socially or temporally distant outcomes” (van Dam and van Trijp, 2013, p.94), food consumption relates to a personal and concrete commitment toward one’s self-protection (Aertsens et al., 2009; Chandran and Menon, 2004). Health claims already result in health risk underestimation (Cadario, 2016), but as consumers try to avoid exposure to food safety risk (Yeung and Morris, 2011) congruent political framing is unlikely to amplify that underestimation.

## Study 1

### Methods

The objective of Study 1 was to test the prediction that the use of incongruent political appeals would increase health risk perceptions. In total, 700 adult American respondents was recruited through Amazon’s Mechanical Turk; they were paid \$X.XX. The study was conducted in 2019.

**Procedure.** The participants read a short (fictitious) promotional message describing the fast food chain restaurant Nathan’s (provided in Appendix A). They were randomly assigned to three conditions: binding appeal *vs.* individualizing appeal *vs.* control. In all conditions, the message contained similar health claims (“our hot dogs are 100% beef (raised without antibiotics), and made with no artificial ingredients and no preservatives”). In line

with Kidwell, Farmer and Hardesty (2013), in the binding appeal condition, the message focused on conservative values, such as patriotism and traditions (“we are very proud to be part of the American culture and to serve our hot dog to our fellow citizens”; “we believe it is our duty to keep the traditional and healthy American flavors intact”). In the individualizing condition, the message focused on liberal values, such as social justice (“we are engaged in the reduction of social injustice by supporting and financing various local charities and community groups”) and sense of community (“we have always remained committed to our community’s best interest”). In the control condition, the message contained no political framing (“the company’s headquarters are at One Jericho Plaza in Jericho, New York, part of Oyster Bay, New York”).

**Participants and measures.** Health risk perceptions were measured with three items on a 7-point Likert scale (from 1 = *strongly disagree* to 7 = *strongly agree*) (“Eating Nathan’s hot dogs causes an important risk of [obesity/diabetes/cardiac illnesses]”) (Cadario, 2016). Reliability across these items was high (Cronbach’s  $\alpha = .91$ ). Political ideology was measured with two items on a scale ranging from 1 (*very liberal*) to 4 (*moderate*) to 7 (*very conservative*) (“Please indicate your political orientation when it comes to [social policy/economic policy]”) ( $\alpha = .87$ ;  $M = 3.65$ ,  $SD = 1.65$ ) (Feinberg and Willer, 2015; Klar, 2014). A *don’t know* option was provided; one respondent checked this option and was removed from analyses, leaving a final sample of 699 respondents (332 female,  $M_{\text{age}} = 37$ ) (Table 1).

One item measured self-reported health (“Would you say your health in general is [excellent, very good, good, fair, or poor]?”), Benjamins et al., 2004), followed by questions on current lifestyle (“To which extent do you [lead an active lifestyle/exercise regularly/do some aerobic activity/do some strength training]?”),  $\alpha = .90$ , Arora et al., 2006). The questionnaire ended

with demographic questions: gender, age, income, and education. Missing data were infrequent and pertained only to control variables.

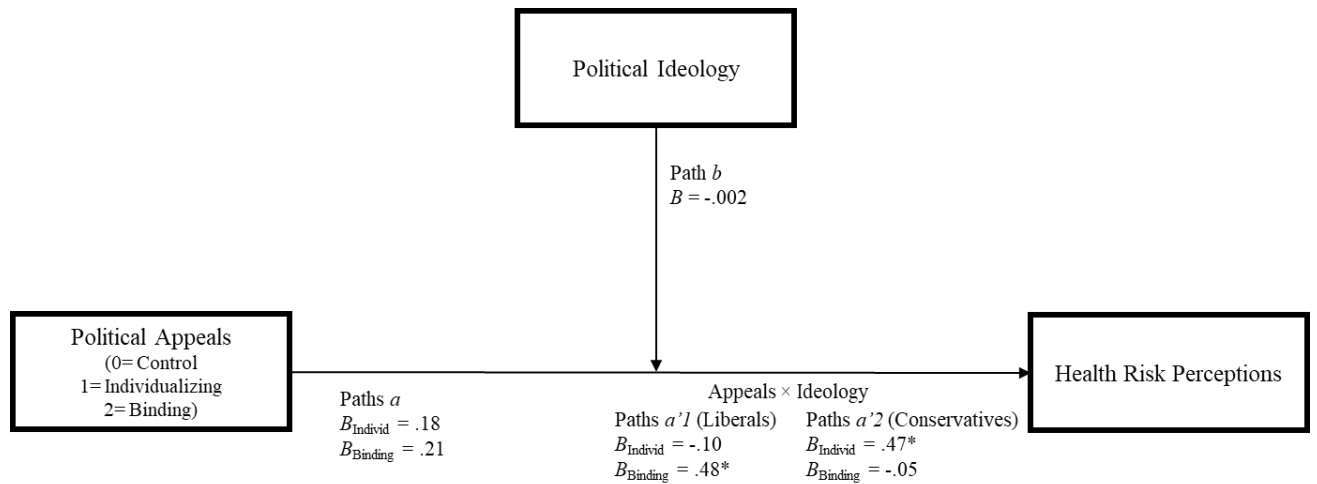
	<b>Study 1 (n = 699)</b>	<b>Study 2 (n = 702)</b>		<b>Study 1 (n = 699)</b>	<b>Study 2 (n = 702)</b>
<b>Gender</b>			<b>Age</b>		
Female	47.5	48.1	18-24	8.6	11.7
Male	52.5	51.9	25-34	46.2	36.4
			35-44	23.5	23.3
<b>Education</b>			45-54	11.9	12.8
< High school	9.0	6.0	55-65	6.5	12.5
High school	31.3	33.5	> 65	3.3	3.3
College	52.9	47.8			
Postgraduate	14.9	18.2	<b>Income (\$K)</b>		
			<15	7.3	8.1
<b>Political ideology</b>			15-25	11.0	11.5
Very liberal (1)	9.4	11.0	25-35	14.8	12.1
Liberal (1.5-3.5)	37.4	37.1	35-50	18.1	19.8
Moderate (4)	20.6	17.2	50-75	19.9	19.7
Conservative (4.5-6.5)	28.6	31.1	75-100	14.9	15.3
Very conservative (7)	4.0	3.6	> 100	14.0	13.5

**Table 1.** Demographic distribution of the sample (percentage of total).

## Results

To test the prediction of a two-way interaction between political appeals (0: control, 1: individualizing, 2: binding) and political ideology (mean-centered) on health risk perceptions, a moderation analysis using Hayes's PROCESS macro (Model 1) with the bootstrapping method with bias-corrected confidence estimates from 5,000 bootstrap resamples was conducted (Hayes, 2018). The results yielded a positive interaction between political ideology and individualizing appeal ( $B = .17, SE = .08, p = .032$ ) and a marginally significant negative interaction between political ideology and binding appeal ( $B = -.16, SE = .08, p = .061$ ) (Figure 1; Table 2).





**Fig. 1.** Moderation analysis (Study 1).

Effects and terms	STUDY 1			STUDY 2				
<b>Direct Effects on Health Risk Perceptions</b>								
	<i>B</i>	<i>SE</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>t</i>		
Constant	3.15	.45	6.99***	2.89	.39	7.38***		
Political Ideology (A)	-.002	.05	-.05	-.07	.05	-1.37		
Individualizing Appeal (B1)	.18	.13	1.36	.31	.12	2.50*		
Binding Appeal (B2)	.21	.14	1.52	.34	.12	2.65**		
A × B1	.17	.08	2.13*	.16	.07	2.21*		
A × B2	-.16	.08	-1.87	-.16	.07	-2.13*		
Total <i>R</i> <sup>2</sup>	.06***			.08***				
<b>Conditional Indirect Effects of Political Appeal on Health Risk Perceptions</b>								
<i>Individualizing Appeal (B1)</i>	<i>B</i>	<i>SE</i>	LLCI	ULCI	<i>B</i>	<i>SE</i>	LLCI	ULCI
Political Ideology: Liberals	-.10	.19	-.485	.283	.03	.18	-.317	.392
Political Ideology: Conservatives	.47	.19	.103	.850	.59	.17	.248	.947
<i>Binding Appeal (B2)</i>								
Political Ideology: Liberals	.48	.19	.092	.873	.61	.18	.258	.967
Political Ideology: Conservatives	-.05	.20	-.452	.345	.06	.18	-.288	.423

**Note.** Participants' age, gender, income, education, self-reported health, and current lifestyle were controlled for in the multivariate analyses.

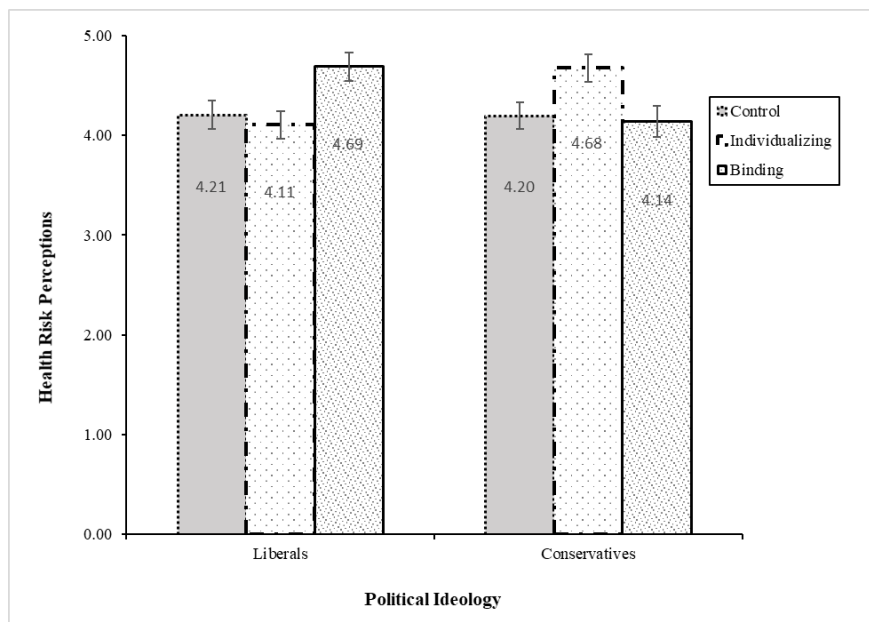
LLCI = lower limit 95% confidence interval; ULCI = upper limit 95% confidence interval.

The indirect effect is significant when zero is not in the 95% *CI*.

\*\*\* *p* < .001; \*\* *p* < .01; \* *p* < .05.

**Table 2** Moderation results for health risk perceptions.

Simple slopes analyses indicated that liberals (-1 *SD*) perceived higher health risks when exposed to health claims framed with binding appeals ( $M_{\text{Control}} = 4.21$  vs.  $M_{\text{Bind}} = 4.69$ ;  $B = .48$ ,  $SE = .19$ , 95%  $CI = [.092, .873]$ ). Conservatives (+1 *SD*) perceived higher health risks when exposed to health claims framed with individualizing appeals ( $M_{\text{Control}} = 4.20$  vs.  $M_{\text{Indiv}} = 4.68$ ;  $B = .47$ ,  $SE = .19$ , 95%  $CI = [.103, .850]$ ) (Figure 2). There was no effect of congruent appeals for liberals and conservatives. Overall, these results show that incongruent political appeals (individualizing for conservatives, and binding for liberals) increase health risk perceptions (see Appendix B for a replication of Study 1).



**Fig. 2.** Interaction effect between political appeals and political ideology on health risk perceptions.

## Study 2

### Methods

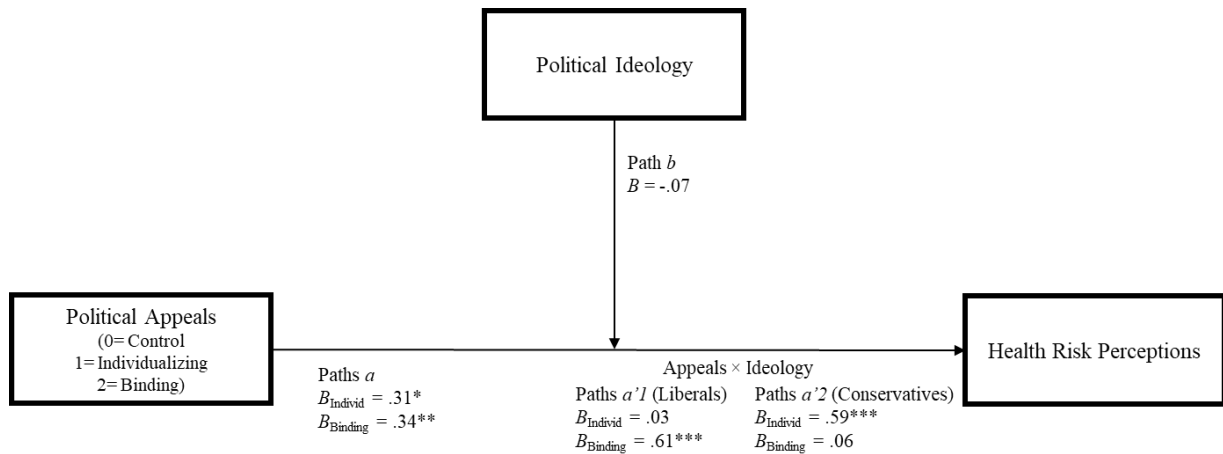
**Procedure.** Study 2 replicated the findings of Study 1 and tested the mediating effect of fluency. The overall design and procedure were similar to those used in Study 1. The participants read a promotional message describing the chain restaurant PizzaPolis and

including health claims (“our pizzas are made with all-natural ingredients and do not contain any preservatives or artificial ingredients”) (Appendix D). They were randomly assigned to the binding appeal, individualizing appeal, and control conditions.

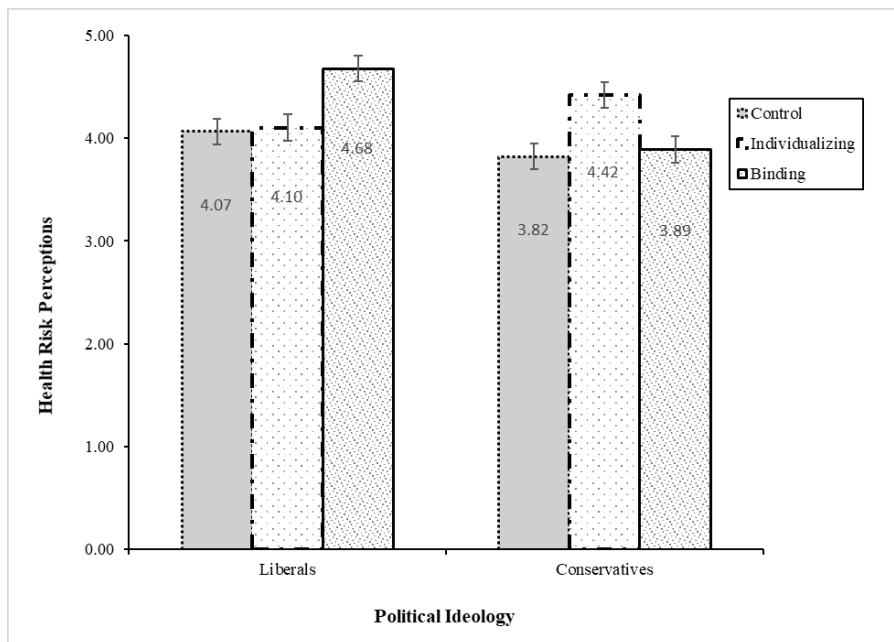
**Participants and measures.** In total of 702 American respondents (338 female,  $M_{\text{age}} = 38$ ) were recruited through Amazon’s Mechanical Turk (Table 1) and were paid \$X.XX. The study was conducted in 2019. All measures were identical to those in Study 1 (health risk perceptions:  $\alpha = .91$ ; political ideology:  $\alpha = .88$ ,  $M = 3.65$ ,  $SD = 1.67$ ; current lifestyle:  $\alpha = .91$ ). Two items (“I found this message [compelling/easy to relate]”,  $\alpha = .76$ ) were used to measure fluency based on prior research on political framing showing that “consumers were persuaded effortlessly because the messages were compelling and easy to relate to” (Kidwell et al., 2013, p. 362). In the current study, a negative impact of incongruence through reduced fluency is predicted: A message framed with an incongruent appeal should be harder to process and its meaning more difficult to grasp and relate to, resulting in lowered persuasiveness of health claims (Avnet and Higgins, 2006; Koenig et al., 2009). There were no missing data.

## Results

A moderation analysis (Hayes’s PROCESS Model 1) showed that political ideology significantly interacted with both individualizing ( $B = .16$ ,  $SE = .07$ ,  $p = .027$ ) and binding appeals ( $B = -.16$ ,  $SE = .07$ ,  $p = .033$ ) (Figure 3). In line with Study 1’s findings, incongruent appeals increased health risk perceptions, for both liberals ( $M_{\text{Control}} = 4.07$  vs.  $M_{\text{Bind}} = 4.68$ ;  $B = .61$ ,  $SE = .18$ , 95%  $CI = [.258, .967]$ ) and conservatives ( $M_{\text{Control}} = 3.82$  vs.  $M_{\text{Indiv}} = 4.42$ ;  $B = .59$ ,  $SE = .17$ , 95%  $CI = [.248, .947]$ ) (Figure 4; Table 2). These results replicated Study 1’s findings.



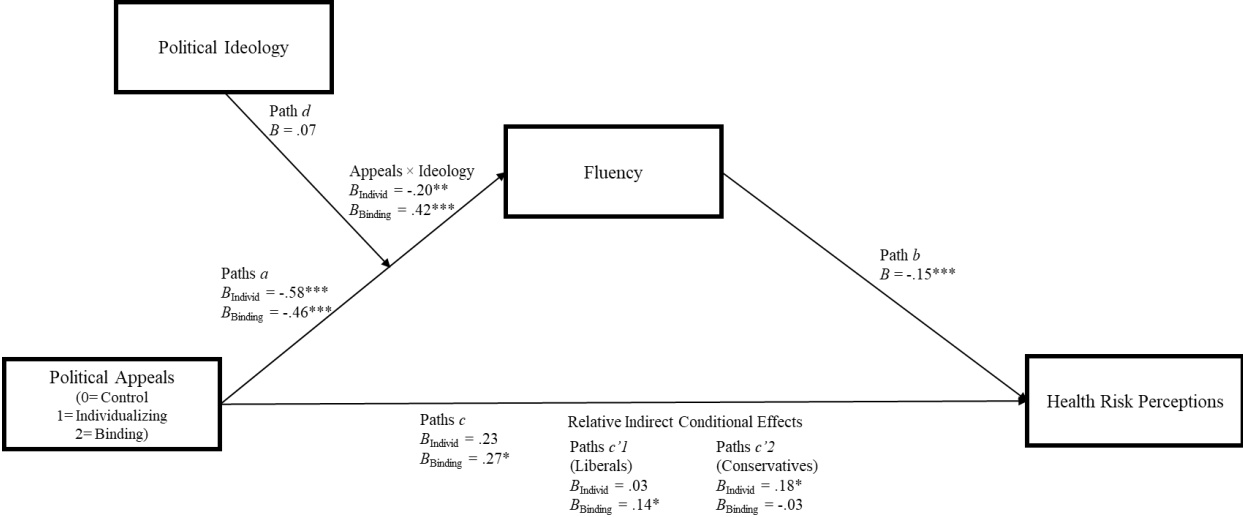
**Fig. 3** Moderation analysis (Study 2)



**Fig. 4** Interaction effect between political appeals and political ideology on health risk perceptions

To test the prediction that fluency mediates these effects, Hayes’s PROCESS macro Model 7 was used. This model tests the moderator (political ideology) and mediator (fluency) simultaneously and indicates when the mediator works. The results confirmed that incongruent political appeals increased health risk perceptions through lowered fluency

(relative conditional indirect effects: binding appeal for liberals:  $B = .18$   $SE = .05$ , 95%  $CI = [.084, .291]$ ; individualizing appeal for conservatives:  $B = .14$ ,  $SE = .04$ , 95%  $CI = [.058, .248]$ ) (Figure 5; Table 3).



**Fig. 5** Relative conditional indirect effects of political appeals on health risk perceptions.

<b>Direct Effects</b>						
<b>Outcomes</b>	<b>Fluency (Mediator)</b>			<b>Health Risk Perceptions</b>		
	<i>B</i>	<i>SE</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>t</i>
Constant	4.58	.39	11.7***	3.55	.42	8.34***
	.07	.05	1.42			
			-	.23	.12	1.78
Political Ideology (A)	-.58	.12	4.52***			
Individualizing Appeal (B1)			-	.27	.12	2.15*
Binding Appeal (B2)	-.46	.13	3.52***			
A × B1	-.20	.07	-2.64**			
A × B2	.42	.07	5.49***			
Fluency				-.15	.03	-4.38***
Total $R^2$	.14***			.08***		

### Relative Conditional Indirect Effects of Policial Appeal on Health Risk Perceptions

<b>Individualizing Appeal (B1)</b>	<i>B</i>	<i>SE</i>	LLC	ULCI
			I	
			-	
Political Ideology: Liberals	.03	.03	.022	.101
Political Ideology: Conservatives	.14	.04	.058	.248
Index of Moderated Mediation	.03	.01	.004	.070
<b>Binding Appeal (B2)</b>	<i>B</i>	<i>SE</i>	LLC	ULCI
			I	
			-	
Political Ideology: Liberals	.18	.05	.084	.291
Political Ideology: Conservatives	-.03	.02	.095	.004
			-	
Index of Moderated Mediation	-.06	.01	.106	-.031

**Note:** Participants' age, gender, income, education, self-reported health, and current lifestyle were controlled for in the multivariate analyses.

LLCI = lower limit 95% confidence interval; ULCI = upper limit 95% confidence interval.

The indirect effect is significant when zero is not in the 95% *CI*.

\*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$ .

**Table 3.** Moderated mediation results on health risk perceptions.

## Discussion

The present research demonstrates that incongruent political appeals decrease the effectiveness of food health claims through reduced fluency (see Figures 1 and 3; Table 2). In particular, liberals (*conservatives*) perceive higher health risks when exposed to health claims framed with binding (*individualizing*) appeals than when exposed to health claims with no political appeals. As predicted, no effect of congruent appeals was found. This research makes two main theoretical contributions.

### Theoretical Contributions

First, the present work contributes to the literature on health risk communication. While prior research has demonstrated that health claims reduce perceived risks (Cadario, 2016), the findings establish that incongruent political appeals hamper this effect. By appealing to values in conflict with consumers' ideology, incongruent political framing decreases the feeling of fluency associated with the message (see Figure 5; Table 3). Importantly, congruent political framing does not have any positive effect on consumers' response, an indication that political framing may be considered as an ineffective communication strategy to decrease health risk perceptions.

Second, this research adds to the growing body of literature on political ideology in consumer psychology by expanding the range of phenomena explored and applying the distinction between binding and individualizing appeals to non ethics-related behaviors. While congruent political appeals are an effective way to persuade consumers in a large array of moral domains, including societal and ethical issues (Kidwell et al., 2013; Wolsko et al., 2016), the current results indicate that congruence may not improve food health perceptions. In a context of food safety scandals, scares and distrust (Stevens et al., 2018), political appeals are unlikely to overcome consumers' strategies to reduce health risks (Yeung and Morris, 2001).

Incongruent political framing may reinforce these self-protection strategies and increase health risk perceptions. While congruence improves message persuasiveness for sustainable issues (Kidwell et al., 2013), incongruence results in decreasing the effectiveness of food health claims. These diverging results support the prediction that under high involvement condition, greater value comes from incongruence (Higgins and Scholer, 2009): Consumers are more likely to respond to countering opposite views (*vs.* relying on ease and fluency) when they are highly concerned with the topic of persuasion.

### **Managerial Contributions**

These results are also of practical value, for public health and food companies. It is reassuring to consider that political appeals cannot reduce risk perceptions of unhealthy food. When exposed to health claims framed with values consistent with their own ideology, consumers do not unquestioningly change their food health perceptions. Yet, food companies have been increasingly voicing their political opinion. While brand activism often leads to boycott and buycott movements, as illustrated by the Chick-fil-A same-sex marriage controversy in 2012, less obvious activities, such as food labeling, health-focused reformulation of food, and advertising, may also largely fall under corporate political strategy (Scott et al., 2017). This research indicates that in addition to alienating consumers with opposite views, political appeals are ineffective in helping food companies lower health risk perceptions associated with their products. Conversely, as incongruence negatively affects food health perceptions, policy makers could use political appeals to decrease the perceived healthiness of unhealthy food and influence its consumption.

### **Limitations and Further Research**



As this study is the first to explore the impact of political appeals on food risk perceptions, it should encourage further research into how political ideology can affect food healthiness. Both studies could be criticized for using crowdsourcing samples, which led to an over-representation of liberal respondents. A more representative sample of political ideology in the US population warrants future attention to confirm the present findings. Future research should also investigate whether these findings can be equally applied to other health-related behaviors, such as smoking or exercising. This would help develop a deeper understanding of how the use of moral values by companies and policy makers affects public health.

### **Conclusions**

While food companies increasingly refer to values that appeal to either conservatives (e.g., traditions and patriotism) or liberals (e.g., social justice and diversity), the findings of the current research show that the use of political appeals can reduce the effectiveness of food health claims. In particular, health claims framed with appeals that are incongruent with consumers' political values result in increased health risk perceptions. Conversely, congruent political appeals do not improve the persuasiveness of health claims.

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