

## **Bypassing as a Non-Confrontational Influence Strategy**

Javier A. Granados Samayoa & Dolores Albarracín

University of Pennsylvania, Philadelphia

Pennsylvania, United States

Correspondence concerning this article should be addressed to Javier Granados Samayoa, Annenberg Public Policy Center, University of Pennsylvania, 202 S 36th St., Philadelphia, PA 19104, United States.

Emails: [javier.granadossamayoa@appc.upenn.edu](mailto:javier.granadossamayoa@appc.upenn.edu); [dalba@upenn.edu](mailto:dalba@upenn.edu).

Declaration of interest: none.

### Author Note

This production of this manuscript was supported in part by the National Science Foundation (Award # NSF 2031972), the National Institutes of Health (Award #s: DP1 DA048570, R01 MH114847, R01 MH132415), and the Science of Science Communication Endowment of the Annenberg Public Policy Center (APPC).

The authors declare no conflict of interest.

Word count: 2,978

### Abstract

Psychological interventions tend to be confrontational in nature. That is, when psychologists seek to bring about change in beliefs, attitudes, or behaviors, they often do so by directly confronting the presumed barrier to change. Confrontational approaches can be effective, but suffer from limitations to their efficacy, such as the possibility of arousing discomfort or defensiveness from the recipient. The current piece seeks to highlight an alternative strategy that we refer to as *bypassing*, which refers to a general approach for bringing about behavior change without confrontation. Leveraging insights from research on misinformation, stereotypes, and persuasion, we present evidence that non-confrontational approaches can be as effective, if not more so, than the traditional confrontational paradigm.

*Keywords:* bypassing, misinformation, stereotypes, persuasion, attitude generalization

### **Bypassing as a Non-Confrontational Influence Strategy**

Solving practical problems—the very aim of applied psychology—relies on developing and testing interventions that are best able to bring about change in a particular area. The current manuscript reviews the use of non-confrontational strategies for bringing about change in beliefs, attitudes, and behavior—with a strong emphasis on the domain of misinformation—and contrasts these approaches with the more traditional confrontational models. In so doing, we show that non-confrontational approaches can be as effective, and at times more so, than those that are confrontational in nature.

Psychological interventions can be largely characterized as confrontational. As one example, consider that the most common kind of intervention for responding to misinformation after exposure is the provision of a fact-based correction that directly identifies the false information and refutes it [1], [2]. Corrections seek to attenuate the impact of a false belief on people's attitudes and behavior by triggering a revision of the false belief. Generally speaking, corrections can be effective. A meta-analysis assessing the efficacy of corrections across domains found that, relative to a control condition, corrections produced medium ( $r = .36$ ) to large ( $ds = 1.14-1.33$ ) reductions in the impact of misinformation on people's beliefs and attitudes [3], [4]. However, such interventions are not perfect. For example, misinformation can continue to exert influence on judgment even after it has been retracted [3], partly due to discomfort triggered by the retraction [5]\*\*. In addition, corrections are less effective when recipients generate arguments in support of the misinformation [3]. More broadly, direct confrontation can lead to defensiveness on the part of the recipient, which represents a barrier to belief, attitude, and behavior change [6], [7], [8]. Recent research has continued to unravel what makes corrections more or less effective, including the emotional [9], cognitive [10], and social

aspects [11], [12], [13] of the correction, as well its optimal timing [14], [15] and structure [16], and how individual differences of the recipients interact with corrections [17]\*\*, but more remains to be known.

### **Bypassing: A Non-Confrontational Approach to Addressing Misinformation**

#### **The Rationale for Bypassing**

The provision of corrections, however, is not the only method for attenuating the impact of misinformation. *Bypassing* refers to a general approach for bringing about a change without directly addressing the obstacle, but rather circumventing it. For instance, the central idea behind *misinformation bypassing* is that the downstream impact of false beliefs can be attenuated without directly addressing and refuting misinformation [18]. Specifically, bypassing misinformation involves introducing or bolstering of beliefs that have an opposite evaluative implication relative to the misinformation, triggering change in attitudes tied to the misinformation [18]. To see why this non-confrontational approach is effective, consider the nature of the relation between beliefs and attitudes. Beliefs refer to a probability judgment linking an object (e.g., person, place, thing) to an outcome or attribute [19], [20], [21], [22]. Attitudes refer to evaluations of an object along a positive-negative dimension [21], [23], [24], [25] and often summarize the implications of beliefs about the object. For example, expectancy-value models conceptualize attitudes as the sum of the product of people's beliefs regarding the relation between an object and an attribute and their evaluation of that attribute [21], [22], [26] and information integration theory conceptualizes attitudes as a combination of people's beliefs about an object that are integrated using cognitive algebra [27], [28]. An implication of these theoretical models is the possibility to change attitudes that have been affected by misinformation by adding beliefs with the opposite evaluative implication without ever

mentioning the misinformation. Importantly, certain kinds of attitudes, such as those formed toward behaviors, exert a stronger influence on behavior than beliefs [29]\*, thereby making attitudes a better target for intervention for those seeking to minimize the impact of misinformation.

To illustrate how bypassing works, consider a situation in which a person has been exposed to a news story discussing a fabricated study showing that genetically modified (GM) foods have negative health effects. The concern with such misinformation is that beliefs formed on its basis can impact downstream attitudes and intentions, and thus, shape behavior. The traditional paradigm for addressing such a claim calls for the deployment of a correction that directly identifies the false information and refutes it, with the objective being the revision of the affected false belief and any associated attitudes and behavioral intentions. By contrast, an intervention based on the bypassing approach might not mention the misinformation at all, instead focusing on communicating alternative benefits of GM foods like alleviating world hunger. The alternative benefits can then change the attitudes formed on the basis of the initial misinformation without altering that information.

### **Empirical Evidence for Bypassing Misinformation**

A growing body of evidence supports the effectiveness of bypassing misinformation. Across three between-subjects experiments, bypassing was as effective as correction in attenuating the impact of misinformation on people's policy attitudes and policy-support intentions [18]. In one experiment, participants first read a misinformation news article communicating the results of a study purportedly showing that consuming GM foods led to cancerous tumors in rats. Next, they were randomly assigned to either (1) read an article highlighting the value of GM foods for saving the bee population (bypassing condition), (2) read

an article issuing a correction to the first article in which the misinformation was identified and refuted (correction condition), or (3) not read an additional article (misinformation control condition). A fourth group of participants was not exposed to misinformation at all (true control condition). After reading the articles, participants reported their belief in the misinformation, belief that GM foods help save the bee population, attitudes toward policies that seek to restrict the use of GM foods, and intentions to support such restrictive policies.

The results revealed that participants in the correction condition reported less endorsement of the misinformation relative to the bypassing and control conditions. In fact, endorsement of misinformation in the correction condition was indistinguishable from the true control. With regard to the bypassing belief, those in the bypassing condition endorsed it to a greater extent relative to all other conditions. Most importantly, bypassing and correction were successful at attenuating the impact of misinformation on attitudes toward restrictive policies and intentions to support restrictive policies relative to the misinformation control condition, yet both bypassing and correction were indistinguishable from the true control [18]. This general pattern of results was replicated in two additional experiments. Together, these data provided strong support for the effectiveness of bypassing in attenuating the downstream impact of misinformation in a manner similar to that of correction.

Following up on these between-subjects experiments, a subsequent investigation [30]\*\* developed a more powerful within-subjects paradigm in which participants read a series of news headline-like statements instead of lengthier news articles—a context that mimics the manner in which a large portion of the American public consumes news [31]. On each trial of this headline paradigm, participants read an initial misinformation headline (“The chemical TSF causes anxiety”), followed by either a bypassing message (“The chemical TSF reduces the price of

goods”), a correction (“The chemical TSF does not cause anxiety”), or an unrelated control message (“City council approves new bike lane”). Half of the initial misinformation headlines were negative (as above) and half were positive (“The food additive vernabol reduces the price of food”). Participants read four bypassing messages, four corrections, and four control messages. Bypassing messages were pre-tested to match the evaluative extremity of the initial misinformation. After reading a pair of headlines, participants reported their attitudes toward policies seeking to restrict the object in question and their intentions to support such a policy. Paralleling the results obtained with the between-subjects paradigm, both bypassing and correction messages were successful at attenuating the impact of initial misinformation on people’s attitudes toward restrictive policies and intentions to support those restrictive policies relative to control messages. Notably, however, bypassing was significantly more effective at shifting attitudes toward restrictive policies and intentions to support restrictive policies relative to correction, thereby showing an advantage for the bypassing technique in this context.

Having established that bypassing can be even more effective than correction at attenuating the impact of misinformation in the context of news headlines, the mental processes by which this advantage was produced were studied [30]\*\*. Specifically, the manner in which people processed information was investigated as a potential moderator of the efficacy of bypassing. People can make judgments in an “online” manner in which they use information to form judgments as they receive it or “memory-based” manner in which they must recall relevant information to construct a judgment when required to do so [32]. In the context of attenuating the impact of misinformation, receiving a bypassing message when people are making online judgments requires cognitive change of the attitude, a process akin to that triggered by the provision of a correction. In contrast, receiving a bypassing message when people are making

memory-based judgments provides a more salient piece of information on which to construct an attitude relative to a situation in which a correction is provided, potentially facilitating an advantage for bypassing. To test this idea, participants were randomly assigned to complete the news headline task under one of three information processing modes: focused on forming beliefs based on the news headlines (memory-based), focused on forming attitudes based on the news headlines (online), or a condition in which no focus was instilled (control). As predicted, the advantage of bypassing in attenuating the impact of misinformation on attitudes emerged in the control condition. More to the point, the advantage of bypassing was observed in the memory-based condition, but not in the online judgment condition, providing support for the hypothesized role of information processing mode in determining the advantage of bypassing [30]\*\*.

One concern surrounding the application of bypassing may be that because bypassing does not directly counter the misinformation belief, this belief is left unchanged and may later be activated and produce socially undesirable behaviors. First, although bypassing does not diminish belief in misinformation as strongly as corrections, due to a spillover type of effect, it has been shown to reduce belief in misinformation relative to a control condition [30]\*\*. Perhaps more importantly, attenuating the impact of misinformation on attitudes and behaviors is the primary concern for the public, policy makers, and scientists. Given that behavioral attitudes tend to predict behavior more strongly than beliefs [29]\* and bypassing can change those attitudes more than correction, the efficacy of bypassing makes it a viable choice for policy makers.

To be sure, however, we do not suggest that bypassing need be superior to correction in all circumstances. Although the research discussed above shows that bypassing is as good or better than correction for attenuating the impact of misinformation on attitudes and intentions,



future research should more comprehensively map when corrections can be superior to bypassing.

### **Bypassing Beyond Misinformation**

Defining bypassing as a general approach for bringing about change without confrontation allows for the grouping of seemingly disparate approaches to changing beliefs, attitudes, and behavior under the same umbrella. One example comes from the study of stereotypes—beliefs about the characteristics of members of a certain group (e.g., linking elderly people with fragility; Hilton & von Hippel, 1996). In particular, the presentation of counterstereotypes—examples that are the opposite to that of the content of a stereotype in question (e.g., elderly people who are strong)—has been shown to lower stereotype activation, prejudice, and discrimination. Building on earlier research showing that a training in which participants negated stereotypic associations (e.g., responding “NO” when presented with a stereotypic pairing of stimuli) and affirmed counterstereotypic associations (“YES” when presented with a counterstereotypic pairing of stimuli) reduced stereotype activation [34], subsequent work found that it was the affirmation of counterstereotypes that accounted for the suppression effects on the activation of stereotypes and automatic prejudice [35], [36], [37]. In fact, negating stereotypic associations (i.e., the confrontational approach to combating stereotyping) led to increases in subsequent activation of stereotypes and automatic prejudice [35]. Counterstereotype training has also been shown to influence behavior, including actions in economic games [36], hiring decisions [36], [38], [39], and legal judgments [40]. Notably, people who undergo counterstereotypic training may wish to correct for its impact on subsequent decisions [41]. Accordingly, the impact of counterstereotype training is most evident when people are less aware of this impact, are not able to correct for its presumed influence, or have

already corrected for it in a previous task [38], [39]. Overall, there is strong evidence that the introduction of counterstereotypes (exemplars that run counter to the target stereotype) can bring about change in belief and attitude activation, as well as shifts in behavior—thereby providing additional evidence for the value of not directly confronting that which one wishes to change.

A second example of how change can be triggered without direct confrontation regarding a focal object comes from the literature on attitude generalization—a phenomenon in which attitude change for a focal object spreads to related attitude objects [42], [43]. In one experiment, counterattitudinal persuasive messages about *GM foods* led to significant attitude change toward *GM foods*, as well as attitude change toward the closely related object of the *use of hormones in food production* [44]. However, there was no attitude generalization for more distantly related objects like the *Eat Local movement* and the *Paleo Diet* [44]. Similarly, generalization effects have been observed for closely-related attitude objects in the domains of consumer goods, vaccination, climate change, and social policies [45], [46], [47], [48]\*. Interestingly, generalization effects have been observed in the clinical domain: participants who underwent exposure therapy for fear of spiders subsequently showed not only less fear of spiders, but also less of fear of heights relative to those in the control condition [49].

Generalization effects can be specifically leveraged to achieve change in non-targeted objects through less confrontational means. Specifically, attitude change toward an object of interest (i.e., a target object) may be achieved by presenting persuasive material focused not on the target object, but rather an alternative object that is related to the target object. For example, persuasive messages that focus on the value of equality are more effective at changing attitudes toward affirmative action policies than messages directly focused on affirmative action policies themselves [50]. This less confrontational influence strategy appears to be more effective

because it focuses on a target that is more easily attacked (values are less often attacked and defended, and thus, more vulnerable), as opposed to a direct confrontation, which triggers defensive processes in the form of counterarguing. This work demonstrates that change in attitudes toward a target object for which one is likely to encounter resistance may be more efficiently achieved without focusing on direct confrontation but instead identifying a related object (in this case, a value but perhaps a less staunchly-held attitude) that is more susceptible to change.

### **Conclusion**

The typical approach to bringing about change in behavioral science adopts a fundamentally confrontational stance. That is, researchers and policy makers often attempt to identify the presumed barrier to change and directly attack it. One potential issue with this approach is that individuals often resist direct attacks on their beliefs and attitudes [6]. We argue that there is value in adopting a non-confrontational perspective in which change in beliefs, attitudes, or behavior is sought by finding avenues with less resistance to change. In the sections above, we review evidence supporting the value of this alternative approach. Specifically, we focus our attention on emerging research on misinformation bypassing that has been successful at combating the effects of misinformation on people's attitudes and intentions by bolstering and introducing beliefs whose evaluative implication is opposite to that of misinformation [18], [30]\*\*. To buttress our argument regarding the value of bypassing more generally, we review research conducted in other domains in which less confrontational approaches have been shown to be effective. In so doing, we find that counterstereotype training in which participants repeatedly affirm the validity of exemplars that oppose the stereotype can lead to reductions in stereotype and automatic prejudice activation, as well as shifts in behavior across a number of

domains [35], [36], [38], [39], [40]. Moreover, we highlight how generalization may be leveraged to achieve change in a focal attitude [44], [50]. Notably, avoiding confrontation can sometimes be more effective at triggering change than confrontational persuasion attempts [30], [50].

We hope that this brief overview of the efficacy of less confrontational strategies inspires researchers to apply them to tackle other important societal issues—like those involving the activation of health behaviors, climate-friendly behaviors, or prejudice reduction—. In this sense, applied psychologists can stand to benefit from incorporating less confrontational methods into their research and practice and, along the way, also contribute to our understanding of the processes implicated in bypassing. As just one example of how this may be deployed, misinformation about clean energy sources like that which surrounds the use of wind turbines may be addressed by pointing to alternative benefits of such energy sources (e.g., impact on the economy) instead of through the use of corrections. Moreover, we hope that such integration will lead to the development of new methods of bringing about change via less confrontational means.

### References

- [1] U. K. H. Ecker *et al.*, “The psychological drivers of misinformation belief and its resistance to correction,” *Nature Reviews Psychology*, vol. 1, no. 1. Nature Publishing Group, pp. 13–29, Jan. 01, 2022. doi: 10.1038/s44159-021-00006-y.
- [2] S. Lewandowsky, U. K. H. Ecker, C. M. Seifert, N. Schwarz, and J. Cook, “Misinformation and Its Correction: Continued Influence and Successful Debiasing,” *Psychological Science in the Public Interest, Supplement*, vol. 13, no. 3, pp. 106–131, Dec. 2012, doi: 10.1177/1529100612451018.
- [3] M. pui S. Chan, C. R. Jones, K. Hall Jamieson, and D. Albarracín, “Debunking: A Meta-Analysis of the Psychological Efficacy of Messages Countering Misinformation,” *Psychol Sci*, vol. 28, no. 11, pp. 1531–1546, Nov. 2017, doi: 10.1177/0956797617714579.
- [4] N. Walter and S. T. Murphy, “How to unring the bell: A meta-analytic approach to correction of misinformation,” *Commun Monogr*, vol. 85, no. 3, pp. 423–441, Jul. 2018, doi: 10.1080/03637751.2018.1467564.
- [5] M. W. Susmann and D. T. Wegener, “The role of discomfort in the continued influence effect of misinformation,” *Mem Cognit*, vol. 50, pp. 435–448, 2022, doi: 10.3758/s13421-021-01232-8/Published.
- [6] E. S. Knowles and J. A. Linn, *Resistance and Persuasion*. Psychology Press, 2004. doi: 10.4324/9781410609816.
- [7] Y. Ma and J. D. Hmielowski, “Are You Threatening Me? Identity Threat, Resistance to Persuasion, and Boomerang Effects in Environmental Communication,” *Environ Commun*, vol. 16, no. 2, pp. 225–242, 2022, doi: 10.1080/17524032.2021.1994442.
- [8] Y. Ma, G. Dixon, and J. D. Hmielowski, “Psychological Reactance From Reading Basic Facts on Climate Change: The Role of Prior Views and Political Identification,” *Environ Commun*, vol. 13, no. 1, pp. 71–86, Jan. 2019, doi: 10.1080/17524032.2018.1548369.
- [9] R. Tao, J. Li, L. Shen, and S. Yang, “Hope over fear: The interplay between threat information and hope appeal corrections in debunking early COVID-19 misinformation,” *Soc Sci Med*, vol. 333, Sep. 2023, doi: 10.1016/j.socscimed.2023.116132.
- [10] J. A. Sanderson, V. Bowden, B. Swire-Thompson, S. Lewandowsky, and U. K. H. Ecker, “Listening to Misinformation While Driving: Cognitive Load and the Effectiveness of (Repeated) Corrections,” *J Appl Res Mem Cogn*, Jul. 2022, doi: 10.1037/mac0000057.
- [11] L. H. Butler, N. Fay, and U. K. H. Ecker, “Others (dis-)endorse this so it must (not) be true: High relative endorsement increases perceived misinformation veracity but not correction effectiveness,” *Appl Cogn Psychol*, vol. 38, no. 1, Jan. 2024, doi: 10.1002/acp.4146.

- [12] C. S. Traberg, T. Harjani, J. Roozenbeek, and S. van der Linden, “The persuasive effects of social cues and source effects on misinformation susceptibility,” *Sci Rep*, vol. 14, no. 1, Dec. 2024, doi: 10.1038/s41598-024-54030-y.
- [13] S. H. Kessler and E. Bachmann, “Debunking health myths on the internet: the persuasive effect of (visual) online communication,” *Journal of Public Health (Germany)*, vol. 30, no. 8, pp. 1823–1835, Aug. 2022, doi: 10.1007/s10389-022-01694-3.
- [14] N. M. Brashier, G. Pennycook, A. J. Berinsky, D. G. Rand, and M. Levi, “Timing matters when correcting fake news,” *Proceedings of the National Academy of Sciences*, vol. 118, no. 5, 2021, doi: 10.1073/pnas.2020043118/-/DCSupplemental.
- [15] S. Ahn, D. E. Bergan, S. Ma, and D. Carnahan, “Estimating the impact of immediate versus delayed corrections on belief accuracy,” *Commun Monogr*, vol. 90, no. 3, pp. 372–392, 2023, doi: 10.1080/03637751.2023.2202728.
- [16] S. Connor Desai and S. Reimers, “Does explaining the origins of misinformation improve the effectiveness of a given correction?,” *Mem Cognit*, vol. 51, no. 2, pp. 422–436, Feb. 2023, doi: 10.3758/s13421-022-01354-7.
- [17] M. R. DeVerna, A. M. Guess, A. J. Berinsky, J. A. Tucker, and J. T. Jost, “Rumors in Retweet: Ideological Asymmetry in the Failure to Correct Misinformation,” *Pers Soc Psychol Bull*, vol. 50, no. 1, pp. 3–17, Jan. 2024, doi: 10.1177/01461672221114222.
- [18] C. Calabrese and D. Albarracín, “Bypassing misinformation without confrontation improves policy support as much as correcting it,” *Sci Rep*, vol. 13, no. 1, Dec. 2023, doi: 10.1038/s41598-023-33299-5.
- [19] D. Albarracín, *Action and Inaction in a Social World*. Cambridge University Press, 2021. doi: 10.1017/9781108878357.
- [20] R. S. Wyer and D. Albarracín, “Belief Formation, Organization, and Change: Cognitive and Motivational Influences.,” in *The handbook of attitudes*, D. Albarracín, B. T. Johnson, and M. P. Zanna, Eds., Lawrence Erlbaum Associates Publishers, 2005, pp. 273–322.
- [21] M. Fishbein and I. Ajzen, *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading: Addison-Wesley, 1975.
- [22] M. Fishbein and I. Ajzen, *Predicting and changing behavior: The reasoned action approach*. New York, NY, US: Psychology Press, 2010.
- [23] R. E. Petty, D. T. Wegener, and L. R. Fabrigar, “ATTITUDES AND ATTITUDE CHANGE,” *Annu Rev Psychol*, vol. 48, no. 1, pp. 609–647, Feb. 1997, doi: 10.1146/annurev.psych.48.1.609.
- [24] R. H. Fazio, “Attitudes as Object–Evaluation Associations of Varying Strength,” *Soc Cogn*, vol. 25, no. 5, pp. 603–637, Oct. 2007, doi: 10.1521/soco.2007.25.5.603.

- [25] D. Albarracín, M. P. Zanna, B. T. Johnson, and G. T. Kumkale, "Attitudes: Introduction and Scope," in *The handbook of attitudes*, D. Albarracín, B. T. Johnson, and M. P. Zanna, Eds., Lawrence Erlbaum Associates Publishers, 2005, pp. 3–19.
- [26] M. Fishbein, "An Investigation of the Relationships between Beliefs about an Object and the Attitude toward that Object," *Human Relations*, vol. 16, no. 3, pp. 233–239, Aug. 1963, doi: 10.1177/001872676301600302.
- [27] N. H. Anderson, "Information integration theory applied to attitudes about U.S. presidents.," *J Educ Psychol*, vol. 64, no. 1, pp. 1–8, Feb. 1973, doi: 10.1037/h0033874.
- [28] N. H. Anderson, "Integration theory and attitude change.," *Psychol Rev*, vol. 78, no. 3, pp. 171–206, May 1971, doi: 10.1037/h0030834.
- [29] D. Albarracín, B. Fayaz-Farkhad, and J. A. Granados Samayoa, "A review of determinants of behavior and their efficacy as targets in behavior change interventions," 2024.
- [30] J. A. Granados Samayoa and D. Albarracín, "Bypassing Versus Correcting Misinformation: Efficacy and Fundamental Processes," 2024.
- [31] American Press Institute, "How Americans get their news," 2014.
- [32] R. Hastie and B. Park, "The Relationship Between Memory and Judgment Depends on Whether the Judgment Task is Memory-Based or On-Line," 1986.
- [33] J. L. Hilton and W. von Hippel, "Stereotypes," *Annu Rev Psychol*, vol. 47, pp. 237–271, 1996.
- [34] K. Kawakami, J. F. Dovidio, J. Moll, S. Hermsen, and A. Russin, "Just Say No (to Stereotyping): Effects of Training in the Negation of Stereotypic Associations on Stereotype Activation," 2000.
- [35] B. Gawronski, R. Deutsch, S. Mbirkou, B. Seibt, and F. Strack, "When 'Just Say No' is not enough: Affirmation versus negation training and the reduction of automatic stereotype activation," *J Exp Soc Psychol*, vol. 44, no. 2, pp. 370–377, Mar. 2008, doi: 10.1016/j.jesp.2006.12.004.
- [36] K. W. Chua and J. B. Freeman, "Facial Stereotype Bias Is Mitigated by Training," *Soc Psychol Personal Sci*, vol. 12, no. 7, pp. 1335–1344, Sep. 2021, doi: 10.1177/1948550620972550.
- [37] A. Woodcock and M. J. Monteith, "Forging links with the self to combat implicit bias," *Group Processes and Intergroup Relations*, vol. 16, no. 4, pp. 445–461, Jul. 2013, doi: 10.1177/1368430212459776.
- [38] K. Kawakami, J. F. Dovidio, and S. van Kamp, "Kicking the habit: Effects of nonstereotypic association training and correction processes on hiring decisions," *J Exp Soc Psychol*, vol. 41, no. 1, pp. 68–75, Jan. 2005, doi: 10.1016/j.jesp.2004.05.004.

- [39] K. Kawakami, J. F. Dovidio, and S. van Kamp, "The impact of counterstereotypic training and related correction processes on the application of stereotypes," *Group Processes and Intergroup Relations*, vol. 10, no. 2, pp. 139–156, Apr. 2007, doi: 10.1177/1368430207074725.
- [40] Y. Hong, K. W. Chua, and J. B. Freeman, "Reducing Facial Stereotype Bias in Consequential Social Judgments: Intervention Success With White Male Faces," *Psychol Sci*, vol. 35, no. 1, pp. 21–33, Jan. 2024, doi: 10.1177/09567976231215238.
- [41] D. T. Wegener and R. E. Petty, "The Flexible Correction Model: The Role of Naive Theories of Bias in Bias Correction," 1997, pp. 141–208. doi: 10.1016/S0065-2601(08)60017-9.
- [42] T. Glaser, N. Dickel, B. Liersch, J. Rees, P. Süssenbach, and G. Böhner, "Lateral Attitude Change," *Personality and Social Psychology Review*, vol. 19, no. 3, pp. 257–276, Aug. 2015, doi: 10.1177/1088868314546489.
- [43] F. M. Turner-Zwinkels and M. J. Brandt, "Belief system networks can be used to predict where to expect dynamic constraint," *J Exp Soc Psychol*, vol. 100, May 2022, doi: 10.1016/j.jesp.2021.104279.
- [44] S. M. Brannon, A. Dejong, and B. Gawronski, "DETERMINANTS OF LATERAL ATTITUDE CHANGE: THE ROLES OF OBJECT RELATEDNESS, ATTITUDE CERTAINTY, AND MORAL CONVICTION," *Soc Cogn*, vol. 37, no. 6, pp. 624–658, 2019.
- [45] R. Linne, T. Glaser, K. Pum, and G. Böhner, "LATERAL ATTITUDE CHANGE: STALKING THE ELUSIVE DISPLACEMENT EFFECT Lateral attitude change (LAC) occurs when an attempt to change a person's evaluation of one attitude object (focal object) produces a change of evaluation toward," 2020.
- [46] R. Linne, "Targeting one Attitude to Change Another: Lateral Attitude Change as a Mechanism to Indirectly Influence Evaluations of Products, Policies, and Values," 2020.
- [47] S. M. Cruz, "Lateral attitude change on environmental issues: implications for the climate change debate," *Clim Change*, vol. 156, no. 1–2, pp. 151–169, Sep. 2019, doi: 10.1007/s10584-019-02474-x.
- [48] J. P. Dillard and L. Shen, "Pro-Vaccination Flu and COVID-19 Messages: Evidence of Congenial Targeted and Spillover Effects," *COVID*, vol. 4, no. 3, pp. 363–377, Mar. 2024, doi: 10.3390/covid4030024.
- [49] I. Kodzaga, E. Dere, and A. Zlomuzica, "Generalization of beneficial exposure effects to untreated stimuli from another fear category," *Transl Psychiatry*, vol. 13, no. 1, Dec. 2023, doi: 10.1038/s41398-023-02698-7.



- [50] K. L. Blankenship, D. T. Wegener, and R. A. Murray, "Circumventing resistance: Using values to indirectly change attitudes," *J Pers Soc Psychol*, vol. 103, no. 4, pp. 606–621, Oct. 2012, doi: 10.1037/a0029226.

**Annotated References**

- \*\*[5] Demonstrates that the continued influence effect of misinformation is partly driven by discomfort aroused by retractions.
- \*\* [17] Found that bypassing is as effective as the provision of a correction with regard to attenuating the impact of misinformation on attitudes and intentions.
- \* [29] Shows that behavioral attitudes influence behavior more strongly than beliefs.
- \*\* [30] Found that bypassing can be more effective than corrections in the context of news headlines.
- \* [42] Shows that lateral attitude change is moderated by distance to focal attitude and mediated by changes in the focal attitude.
- \* [47] Demonstrates generalization of persuasive arguments for one kind of vaccine (e.g., the flu vaccine) to another kind of vaccine (e.g., COVID vaccine).
- \* [48] Documents a generalization effect of exposure therapy for spiders onto fear of heights.