

Journal of Personality and Social Psychology

In What Ways Do Accessible Attitudes Ease Decision Making? Examining the Reproducibility of Accessibility Effects Across Cultural Contexts

Aaron J. Barnes and Sharon Shavitt

Online First Publication, November 30, 2023. <https://dx.doi.org/10.1037/pspa0000363>

CITATION

Barnes, A. J., & Shavitt, S. (2023, November 30). In What Ways Do Accessible Attitudes Ease Decision Making? Examining the Reproducibility of Accessibility Effects Across Cultural Contexts. *Journal of Personality and Social Psychology*. Advance online publication. <https://dx.doi.org/10.1037/pspa0000363>

In What Ways Do Accessible Attitudes Ease Decision Making? Examining the Reproducibility of Accessibility Effects Across Cultural Contexts

Aaron J. Barnes¹ and Sharon Shavitt²

¹ Department of Marketing, University of Louisville

² Department of Business Administration, University of Illinois at Urbana-Champaign

Making attitudes more accessible via rehearsal has been shown to ease decision making by speeding the act of choosing and increasing the correspondence between one's attitudes and choices (e.g., Fazio, 1995; Fazio et al., 1992; Fazio & Williams, 1986). These effects are central to decades of attitude research and are citation classics in social psychology. We report 25 studies ($N = 6,162$), conducted in a diverse and culturally inclusive set of samples and contexts, that shed light on the reproducibility of these seminal findings. We examined the effects of attitude accessibility on decision latency, on the self-reported readiness to make a decision, and on attitude-choice correspondence. Results showed that the effect of attitude accessibility on decision latency is highly reproducible across multiple methods and cultural contexts, and that the effect on attitude-choice correspondence also appears robust in choice contexts that parallel the original experiments but not in choice contexts that highlight the need to consider others' preferences. Effects on self-reported readiness to decide did not emerge. No robust role for culture was observed in moderating these effects, though the limitations of the studies temper these conclusions. In sum, we build on prior research by showing which types of effects are likely to be reliably influenced by attitude accessibility.

Keywords: attitude accessibility, decision latency, choice correspondence, culture, individualism and collectivism

Supplemental materials: <https://doi.org/10.1037/pspa0000363.supp>

Are people more prepared to make choices when they have top-of-mind attitudes? Attitudes have been posited to serve important coping functions (Allport, 1935; Smith et al., 1956). One key function of attitudes is to impose structure on one's environment and to smooth the process of making the myriad decisions required in daily life (Katz, 1960; Smith et al., 1956).

However, not all attitudes are equally functional. They can vary in terms of their salience in memory. Two people can provide identical ratings on a measure of their attitude toward an object, yet one person's attitude may be easily activated when encountering the attitude object, whereas another's may not come readily to mind. This difference in *attitude accessibility* has important consequences for the impact of an attitude on subsequent judgments and decisions. As many studies have shown, attitudes that are more accessible exert a

greater influence on perceptions, judgments, and behavior (e.g., Fazio et al., 1989; Fazio & Williams, 1986; Roskos-Ewoldsen & Fazio, 1992). These effects of attitude accessibility, and the theorizing underlying them, are central to the study of attitudes. A recent Google search found over 32,000 citations for this foundational literature spanning dozens of publications.

One particularly important effect of attitude accessibility is on coping with decision demands (Blascovich et al., 1993; Fazio et al., 1992; Fazio & Powell, 1997). Having attitudes that are readily accessible in memory facilitates making choices (Fazio et al., 1989; Fazio & Williams, 1986) by increasing the readiness to act and reducing the difficulty of choosing (Blascovich et al., 1993; Fazio et al., 1992; Fazio & Powell, 1997; Holland et al., 2003; Katz, 1960; Smith et al., 1956). In this way, attitudes that are more accessible are seen as

Krishna Savani served as action editor.

Aaron J. Barnes  <https://orcid.org/0000-0003-1296-5806>

Sharon Shavitt  <https://orcid.org/0000-0001-6052-3397>

This research was supported by the Walter H. Stellner Funds in Marketing and the Department of Business Administration at the Gies College of Business, University of Illinois at Urbana-Champaign, and by the College of Business, University of Louisville.

The authors are grateful to Dov Cohen, Russ Fazio, Frank Kardes, Minkyung Koo, Carlos Torelli, Tiffany White, and the Culture and Consumer Behavior Lab at the University of Illinois for their invaluable feedback on earlier versions of the article. The authors declare no conflicts of interest.

The study received approval from the ethical committees of all involved institutions. Data sets and Statistical Package for Social Sciences scripts are available on the Open Science Framework at <https://osf.io/a28sw/>.

Aaron J. Barnes played a lead role in data curation, formal analysis, investigation, project administration, and visualization and an equal role in conceptualization, methodology, supervision, writing—original draft, and writing—review and editing. Sharon Shavitt played a supporting role in data curation and supervision and an equal role in conceptualization, methodology, writing—original draft, and writing—review and editing.

Correspondence concerning this article should be addressed to Aaron J. Barnes, Department of Marketing, University of Louisville, 110 West Brandeis Avenue, Louisville, KY 40208, United States. Email: aaron.barnes@louisville.edu

more functional for the individual, readying them to make faster, easier decisions (Blascovich et al., 1993; Fazio et al., 1992) that correspond with their personal likes and dislikes (Fazio et al., 1989, 1992).

Because these effects of attitude accessibility are citation classics in the attitude literature, it is important to gauge their reproducibility across a broad set of contexts, stimuli, and methods. Accordingly, in this article, we examine the robustness of attitude accessibility effects on decision latency, the perceived readiness to decide, and attitude–choice correspondence. Although there is already a large and robust literature pertaining to attitude accessibility effects, we examine these effects for the first time across a wider range of cultural contexts, social contexts, and outcome measures. Our findings show that the effects of attitude accessibility on decision latency and attitude–choice correspondence are reproducible across multiple methods and cultural contexts. However, effects on self-rated readiness to decide are not robust. We further show that social contexts affect the robustness of attitude accessibility effects on attitude–choice correspondence: The effects emerge in social contexts in which one’s own attitudes are relevant to the choice but do not emerge in contexts that highlight the need to accommodate others’ specific preferences.

Attitude Accessibility

When attitudes are highly accessible, they are more likely to be automatically activated in the presence of the attitude object, making them more likely to guide judgments and decisions (Fazio, 1995). Attitudes are conceptualized as object–evaluation associations. The accessibility of an attitude is a function of the strength of the association in memory between the attitude object and one’s evaluation of it (Fazio et al., 1982). The stronger the association, the more quickly the evaluation springs to mind in the presence of the object (Fazio, 1995). Attitudes can be situationally made more accessible through rehearsal via repeated attitude expression or can be chronically accessible in memory, as indexed by the latency of responding to an attitudinal inquiry (Fazio & Williams, 1986). In other words, attitude accessibility can be manipulated or measured, and both experimental and correlational studies have shown that more accessible attitudes exert a stronger influence on subsequent judgments and behavior (e.g., Fazio et al., 1982, 1989, 1992; Olson & Fazio, 2004; Towles-Schwen & Fazio, 2006).

Accessibility is distinct from other dimensions of attitude strength such as attitude certainty because accessibility need not include a judgment about correctness or confidence in the attitude (e.g., Bassili, 1993). That is, although accessibility and other indicators of attitude strength can be related (see Petty & Krosnick, 1995; Rucker & Petty, 2004; Tormala & Rucker, 2007), an attitude can be more accessible without being stronger on other dimensions. Indeed, accessibility is a central index of attitude strength (Roese & Olson, 1994) that precedes other meta-attitudinal outcomes (Bassili, 1993; Holland et al., 2003; Petrocelli et al., 2007). For instance, when their attitudes were made more accessible via rehearsal, people reported greater certainty in their attitudes and more commitment to them (Holland et al., 2003).

Decades of research on attitude processes have established these consequences of attitude accessibility on outcomes ranging from judgments of political candidates and issues (e.g., Fazio & Williams, 1986; Holland et al., 2003; Houston & Fazio, 1989), to racial prejudice and interracial relationships (e.g., Fazio & Hilden, 2001;

Olson & Fazio, 2004; Towles-Schwen & Fazio, 2006), to evaluations and behaviors toward snack foods and other consumer products (e.g., Berger & Schwartz, 2011; Fazio et al., 1989; Young & Fazio, 2013).

As already noted, a rich and important stream within this research domain has established that more (vs. less) accessible attitudes are functional for the individual, facilitating decision making by decreasing the difficulty of choosing (Blascovich et al., 1993; Fazio et al., 1989, 1992; Fazio & Powell, 1997; Holland et al., 2003). In one key example, U.S. participants who rehearsed their attitudes toward abstract paintings (vs. not), thus manipulating attitude accessibility, took less time deciding between the same paintings in a later task (Fazio et al., 1992, Study 4). This effect of attitude accessibility on decision latency suggested that simply holding more (vs. less) accessible attitudes improved decision making by reducing the effort needed to make decisions. In another important finding, attitudes that were made more accessible corresponded more closely with subsequent choices people made between paintings (Fazio et al., 1992, Studies 2 and 3), and attitude accessibility also predicted greater attitude–behavior consistency when selecting snack foods (Fazio et al., 1989). In other words, attitude accessibility led to choices that were more in line with what participants liked. In another example, attitude accessibility, indexed by the response latency with which Dutch participants evaluated European Unification or the Dutch crown prince, mediated the relationship between attitude rehearsal and attitude confidence (Holland et al., 2003). In line with prior research, Holland et al. suggested that increased attitude accessibility is beneficial to the individual because it decreases the cognitive effort required to respond to an attitude-relevant stimulus, increasing the readiness to act.

Our studies focused on this aspect of accessible attitudes—their functional role in facilitating the act of choosing. As such, we examined the impact of increasing the salience of attitudes on three measures intended to index whether attitude accessibility facilitates making choices: (a) decision latency, or the speed with which subsequent choices involving those attitudes are made, (b) the perceived readiness to decide, and (c) the correspondence of choices with personal attitudes. We describe these outcomes next, as well as the contexts in which we examined these effects.

Effects of Attitude Accessibility on Distinct Outcome Measures

In previous research, although the effects of accessibility are generally quite robust, the effect has sometimes differed depending on the dependent measure. Fazio et al. (1992) found that increased attitude accessibility reduced the difficulty or stressfulness of a subsequent pairwise preference task, as indicated by physiological changes in diastolic blood pressure (Studies 2 and 3), and that attitude accessibility also reduced response latencies in the subsequent pairwise preference task (Study 4). Despite these measures indicating that attitude accessibility was associated with easing the act of choosing, in those same studies (Studies 2 and 3), there was no effect of accessibility on a self-report measure of the difficulty of making the pairwise choices.

Decision Latency

Based on the findings just reviewed, we did not assume that the effects of increasing attitude accessibility would be equally strong or

robust across the dependent measures we employed. It seemed likely that a cognitive measure, decision latency, would be especially sensitive to the effect of rehearsing one's attitudes. Decision latency reflects the cognitive process of paired-associate learning, specifically the effects of increasing the strength of an object–evaluation association on the response time to make a subsequent judgment. The expectation is that the more salient one's attitude in memory, the faster one will be able to use that attitude to make a subsequent decision. This does not require any introspective access to the feelings that accompany one's decision process.

Perceived Readiness to Decide

We also examined the impact of attitude accessibility on how prepared, confident, and ready participants felt about making a choice as a measure of whether accessible attitudes facilitated the readiness to decide. Although our self-report measure was not used in previous research on attitude accessibility, based on the findings suggesting that attitudes that are highly accessible are more functional for easing decision making (Blascovich et al., 1993; Fazio et al., 1989, 1992; Fazio & Powell, 1997; Holland et al., 2003) and are associated with greater self-rated certainty about one's attitudes (Holland et al., 2003), we reasoned that enhancing the accessibility of an attitude may enhance the degree to which one feels prepared to make a subsequent choice.

However, direct self-reports of feelings regarding making a decision may not be as sensitive to the subtle effects of attitude accessibility, in line with the null results reported by Fazio et al. (1992) on their measure of perceived decision difficulty. The authors speculated that these null results may have reflected that their measure was insufficiently sensitive or that the timing of the measure did not enable participants in the no-rehearsal condition to retrospectively recall the difficulty that accompanied the choice task.

To maximize the likelihood of observing effects on perceived readiness to decide, we administered this measure immediately upon exposure to the decision context, so that judgments of perceived readiness were not made retrospectively. However, because rating one's felt readiness to decide calls for self-appraisal, it is still possible that the effects of increased attitude accessibility would not be reliably observed on this measure, as it is unclear whether people have introspective awareness of the effects of attitude accessibility on their feelings. In either case, it should be noted that the six studies we report examining the effects of attitude accessibility on perceived readiness to decide should not be seen as replication studies. Instead, they examine the robustness of a conceptual implication of the previous classic research.

Attitude–Choice Correspondence

Finally, we examined whether increasing attitude accessibility would increase the correspondence between one's attitudes and subsequent choices. Previous work has shown that attitude accessibility predicts greater correspondence with subsequent choices (Fazio et al., 1989, 1992). The reason is that, when attitudes come readily to mind, they are more likely to guide the appraisal of objects in line with the attitudes, making subsequent actions more reflective of those attitudes (Fazio, 1995; Fazio et al., 1984).

Thus, based on past work, we expected to observe greater attitude–choice correspondence when attitudes are made more

accessible. We examined the reproducibility of these previous effects by having participants make choices in a broader range of social contexts than previously examined. Specifically, our expectation was that when there is a need to accommodate others' specific preferences (e.g., a vegetarian dinner guest), this may constrain the tendency to act in accordance with accessible personal attitudes, weakening the effect of attitude accessibility on attitude–choice correspondence. In contrast, when there is no salient need to accommodate others' specific preferences, one may feel less constrained in choosing based on one's own attitudes, especially when those attitudes are more accessible.

Attitude Accessibility and Culture

Despite extensive research on attitude accessibility, we are not aware of any studies that examined whether these classic effects are reproducible across cultural contexts. In the years since the original studies of attitude accessibility were published, a burgeoning body of research on the role of culture in attitudinal processes has shed light on multiple cultural differences in the formation and functions of attitudes (e.g., Kim & Markus, 1999; Riemer et al., 2014; Savani et al., 2008). Given that all of the most-cited studies of attitude accessibility were conducted in Western contexts likely to cultivate an individualistic cultural orientation, we aimed to examine attitude accessibility effects across broader cultural contexts that included comparisons of people with a relatively individualistic or collectivistic cultural orientation.

There are a number of reasons to think that the effects of attitude accessibility may differ across cultures. In individualistic cultures and groups, people tend to prioritize personal goals over group goals (Markus & Kitayama, 1991; Triandis, 1995). These cultural contexts tend to cultivate a more independent self-construal in which the self is defined as separate from others (Markus & Kitayama, 1991), facilitating a sense that one's own preferences should guide one's decisions, and that choosing based on those preferences is natural and desirable (Riemer et al., 2014). In these contexts, accessible personal preferences are well positioned to facilitate choice.

However, in collectivistic cultures and groups, personal attitudes play a different role. Compared to individualists, collectivists tend to prioritize group goals over personal goals and to pursue harmony in their relationships (Triandis, 1995). These cultural contexts tend to cultivate a more interdependent self-construal in which the self is defined as interconnected and embedded within groups of important others (Markus & Kitayama, 1991), reducing the sense that one's personal preferences are important or suitable as decision guides. Thus, people in collectivistic cultures are less likely to nurture personal preferences (Miller et al., 1990), to behave in accordance with their personal preferences (Chan & Lau, 2001; Eom et al., 2016; Morling et al., 2002; Savani et al., 2008, 2012, 2015), or to be satisfied or motivated by choosing according to their personal preferences (Iyengar & Lepper, 1999; Kitayama et al., 2004). In these cultural contexts, having personal attitudes that readily spring to mind may signal that one's personal wants are too salient. This might not be desirable in cultures where one is expected to be attentive to others' needs and preferences (Riemer et al., 2014). Thus, we explored whether making one's personal attitudes highly accessible would increase collectivists' readiness to decide or the likelihood of choosing based on those attitudes.

This research is the first to examine the robustness of attitude accessibility effects across a range of dependent measures, cultural contexts, and social contexts. To understand how accessible attitudes function in these contexts, our studies use a broad set of decision scenarios, stimuli, and methods of operationalizing attitude accessibility. We also use multiple converging operationalizations of cultural orientation, including comparisons of groups based on ethnicity or cultural background, of people based on scores on cultural orientation measures, and of situations that activate different culturally linked goals. Across 25 studies, we examine whether the effects of more (vs. less) accessible attitudes on decision latency, readiness to decide, and attitude–choice correspondence are robust to these varied contexts and methods.

Overview of Studies

Across 25 studies ($N = 6,162$), examining a range of outcomes with different types of participants, we examined the reproducibility of attitude accessibility effects. Of these studies, 21 were preregistered on <https://aspredicted.org/>. Studies 1–12 ($k = 12$) focused on the effects of attitude accessibility on subsequent response latency to make decisions. Studies 13–18 ($k = 6$) focused on the effects of accessibility on the perceived readiness to decide. Studies 19–25 ($k = 7$) focused on the effects of accessibility on attitude–choice correspondence with Studies 19–22 set in high-constraint social contexts in which the need to accommodate others' specific preferences was made salient, and Studies 23–25 set in low-constraint social contexts. All studies, with the exception of Study 8, were conducted with online participants. Study 8 was conducted in a lab setting with undergraduate participants. The participant populations ranged from undergraduate students at two U.S. universities, an international pool of students in an online MBA program, and adult U.S. participants recruited from either the Prolific or MTurk platform. We report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures in each study. All materials, data, code, and Supplemental Materials are available at <https://osf.io/a28sw/>.

We report studies conducted between September 2020 and May 2023 that either enrolled a sufficient number of participants to achieve a power of 80% to detect effects or were limited by the availability of student subjects. For decision latency and attitude–choice correspondence, we set the estimated effect sizes based on the average effect size for accessibility reported in previous studies examining these outcomes (Fazio et al., 1992). Based on a medium-sized effect (Cohen's $d = .71$), the decision latency studies required $N = 66$ for between-subjects designs and $N = 18$ for within-subjects designs. Based on a large-sized average effect (Cohen's $d = .97$), the attitude–choice correspondence studies required $N = 11$ for within-subjects designs. All of the decision latency and attitude–choice correspondence studies exceeded these criteria.

Because no published studies have shown significant effects of attitude accessibility on self-reported readiness to decide, we aimed for at least 200 participants per cell when sample size was not limited by the availability of student participants. Note that the studies focused statistical power on assessing the main effect of attitude accessibility versus the interaction of accessibility and cultural orientation. That is, most of our studies are highly powered for testing the main effect but underpowered for testing the interaction with culture. Nevertheless, we sometimes aimed to have sufficient power for examining the interactions with culture (e.g.,

Study 23). See Supplemental Material 1 for details on determining statistical power.

All studies used a similar experimental design, manipulating attitude accessibility (high vs. low) and either measuring cultural orientation (individualistic vs. collectivistic) or priming individualistic versus collectivistic goals or comparing groups with individualistic versus collectivistic cultural backgrounds. In all studies, participants were told that they would be participating in several short studies. The manipulation(s) were therefore ostensibly unrelated to the decision scenario and measures. In all studies, outcome measures were captured after reading a scenario about a specific social context that involved making an attitude-relevant choice with others in mind. It should be noted that this is a departure from the original attitude accessibility paradigms, which did not present any social context for the choices.

There were some differences across studies in the materials and methods (e.g., some studies used snack foods instead of travel destinations as attitude objects). See Supplemental Materials 2, 3, and 4 for details on each study not described here. Supplemental Materials 5 and 6 have the results from two supplemental studies and the attitude accessibility manipulation checks, respectively. Example studies for each outcome measure are described next. We summarize the details of all studies in Table 1 and include the means, standard deviations, and associated p values for the accessibility effect for all studies in Table 2.

Example Decision Latency Study: Study 1

Design and Participants

We preregistered this study (As Predicted No. 97294). The study used a 2 (attitude accessibility: high vs. low) \times 2 (ethnicity: European Americans vs. Latinx Americans) between-subjects design. Following prior work (e.g., Evans et al., 2000; Wasti & Cortina, 2002), we recruited 100 European/White people and 100 Hispanic or Latinx people (representing individualistic and collectivistic groups, respectively) from the United States on Prolific. We designed the study using the Qualtrics platform. After the preregistered exclusions, there were 184 participants. After following the exclusion criteria preregistered in Studies 2–6 regarding latency outliers (i.e., we excluded participants whose choice latencies were either below 300 ms or were 3 SD s above the mean decision latency for all participants), there were 179 participants (126 women, 50 men; three nonbinary/other; $M_{\text{age}} = 31.98$, $SD = 12.62$; 98 participants reported being non-Hispanic White and 81 participants reported being Hispanic or Latinx). Although we did not preregister it, we performed this same exclusion on all the other decision latency studies (Studies 2–12).

Stimuli

The attitude objects were 10 popular travel destinations in the United States: Boston, Chicago, Honolulu, Las Vegas, Los Angeles, Miami, New York City, Orlando, San Francisco, and Washington, DC.

Attitude Accessibility Manipulation

As part of our cover story, participants read that we were studying travel products and services and that we wanted to know their knowledge level and opinions. Then, following prior work (e.g., Descheemaeker et al., 2014; Fazio et al., 1992), we randomly

Table 1
Brief Details of All Studies

Study no.	N	Attitude accessibility manipulation	Between or within-subjects	Culture variable	Attitude objects	Trial(s)	DV(s)	Sample
1	179	Eval task versus noneval task	Between	European/White versus Latinx	Travel destinations	1	Decision latency	Prolific
2	398	Eval task versus noneval task	Between	Measured cultural orientation	Travel destinations	1	Decision latency	MTurk
3	397	Eval task versus noneval task	Between	Sostoras prime	Travel destinations	1	Decision latency	Prolific
4	449	Eval task versus noneval task	Between	Sostoras prime	Travel destinations	1	Decision latency	Prolific
5	169	Eval task versus noneval task	Within	Sostoras prime	Travel destinations	10	Decision latency	Masters students
6	566	Eval task versus noneval task	Within	Sostoras prime	Travel destinations	10	Decision latency	Prolific
7	93	Eval task versus noneval task	Within	Sostoras prime	Travel destinations	10	Decision latency	Undergraduates
8	158	Eval task versus noneval task	Within	European/White versus Asian and Latinx	Travel destinations	10	Decision latency	Undergraduates (in-person)
9	151	Eval task versus noneval task	Within	European/White versus Latinx	Travel destinations	10	Decision latency	Prolific
10	114	Eval task versus noneval task	Within	Self versus group prime	Snacks	10	Decision latency	Prolific
11	208	Eval task versus noneval task	Within	Self versus group prime	Snacks	10	Decision latency	Undergraduates
12	91	Eval task versus noneval task	Within	European/White versus Latinx	Snacks	10	Decision latency	Prolific
13	230	Rehearsal	Between	European/White versus Asian	Soft drinks	1	Perceived readiness to decide	Masters students
14	194	Rehearsal	Between	Double self versus group prime	Soft drinks	1	Perceived readiness to decide	Masters students
15	225	Rehearsal	Between	European/White versus Asian and Latinx	Soft drinks	1	Perceived readiness to decide	Masters students
16	364	Rehearsal	Between	Double self versus group prime	Soft drinks	1	Perceived readiness to decide	Masters students
17	463	Rehearsal	Between	European/White versus Asian and Latinx	Video apps	1	Perceived readiness to decide	Masters students
18	467	Rehearsal	Between	European/White versus Asian and Latinx	Video apps	1	Perceived readiness to decide	Prolific
19	125	Rehearsal	Within	Pronoun prime	Video apps	1	Perceived readiness to decide	Prolific
20	101	Rehearsal	Within	Pronoun prime	Restaurants	18	Attitude-choice correspondence	MTurk
21	92	Rehearsal	Within	Pronoun prime	Restaurants	18	Attitude-choice correspondence	MTurk
22	98	Rehearsal	Within	Sostoras prime	Restaurants	18	Attitude-choice correspondence	MTurk
23	469	Rehearsal	Between	Measured cultural orientation	Snacks	15	Attitude-choice correspondence	MTurk
24	184	Rehearsal	Between	Measured cultural orientation	Travel destinations	15	Attitude-choice correspondence	Undergraduates
25	177	Rehearsal	Within	Sostoras prime	Restaurants	18	Attitude-choice correspondence	Prolific

Note. The between or within-subjects column refers to the attitude accessibility manipulation. Cultural orientation (individualistic and collectivistic) was measured with Triandis and Gelfand's (1998) scale. Cultural goals were primed using Trafimow et al.'s (1991) Sostoras story, Brewer and Gardner's (1996) pronoun story, or a self versus other episodic prime adapted from Mandel (2003). Ethnicity/cultural background was grouped by European/White people and Asian or Latinx people. DVs = dependent variables; MTurk = Amazon Mechanical Turk.

Table 2
Means (and Standard Deviations) in All Studies

Study no.	<i>N</i>	AsPredicted preregistration	Dependent variable	<i>M</i> low attitude accessibility (<i>SD</i>)	<i>M</i> high attitude accessibility (<i>SD</i>)	<i>p</i> value of mean difference
1	179	97294	Decision latency	2.68 (.58)	2.49 (.48)	.015
2	398	97531	Decision latency	2.52 (.53)	2.30 (.53)	<.001
3	397	97647	Decision latency	2.52 (.53)	2.34 (.52)	.001
4	449	97727	Decision latency	2.49 (.56)	2.39 (.56)	.047
5	169	98809	Decision latency	1.88 (.32)	1.77 (.31)	<.001
6	566	101169	Decision latency	1.69 (.30)	1.61 (.28)	<.001
7	93	107844	Decision latency	1.78 (.41)	1.70 (.38)	.086
8	158	108504	Decision latency	1.78 (.33)	1.66 (.29)	<.001
9	151		Decision latency	1.75 (.33)	1.58 (.29)	<.001
10	114		Decision latency	1.89 (.40)	1.75 (.40)	<.001
11	208		Decision latency	1.56 (.38)	1.45 (.35)	<.001
12	91		Decision latency	1.96 (.41)	1.75 (.40)	<.001
13	230	49958	Perceived readiness to decide	5.30 (1.37)	4.89 (1.72)	.048
14	194	58510	Perceived readiness to decide	4.82 (1.90)	4.97 (1.80)	.558
15	225	62592	Perceived readiness to decide	5.09 (1.58)	4.84 (1.59)	.245
16	364	67794	Perceived readiness to decide	5.40 (1.60)	5.43 (1.65)	.864
17	463	69562	Perceived readiness to decide	5.33 (1.42)	5.50 (1.19)	.170
18	467	70498	Perceived readiness to decide	5.11 (1.52)	4.89 (1.57)	.138
19	125	76106	Attitude-choice correspondence	0.66 (.88)	0.78 (.88)	.002
20	101	76285	Attitude-choice correspondence	0.85 (.79)	1.00 (.87)	.152
21	92	76384	Attitude-choice correspondence	1.18 (1.05)	0.97 (.94)	.139
22	98	76489	Attitude-choice correspondence	1.04 (1.04)	1.17 (.89)	.254
23	469	127145	Attitude-choice correspondence	11.27 (2.61)	11.67 (2.42)	.080
24	184	127412	Attitude-choice correspondence	10.83 (2.31)	11.59 (2.17)	.022
25	177	131269	Attitude-choice correspondence	0.71 (.81)	0.88 (.93)	.009

assigned participants to attitude accessibility conditions that used validated evaluative and nonevaluative rehearsal tasks.

Participants in the low attitude accessibility condition then read that,

For the next part, you will see several U.S. travel destinations. We would like you to indicate the body of water that is closest to each city. The options will be the Atlantic Ocean, Pacific Ocean, Great Lakes, and Gulf of Mexico. Accuracy is extremely important. To ensure accuracy, each aspect will be repeated a number of times to ensure consistency across your ratings.

On the next page, they read a reminder of the instructions (i.e., “Remember: We would like you to indicate the body of water that is closest to each U.S. travel destination. Click below to indicate that you understand the instructions.”). Then, participants saw each destination appear on the screen, one at time in randomized order, and selected whether the destination was closest to the Atlantic Ocean, Pacific Ocean, Great Lakes, or the Gulf of Mexico, four times each.

In contrast, participants in the high attitude accessibility condition read that,

For the next part, you will see several U.S. travel destinations. We would like you to rate whether you personally like or dislike each one, reflecting your personal feelings. Accuracy is extremely important. To ensure accuracy, each aspect will be repeated a number of times to ensure consistency across your ratings.

On the next page, they read a reminder of the instructions (i.e., “Remember: We would like you to rate each U.S. travel destination in terms of your personal liking or disliking. Click below to indicate that you understand the instructions.”). Then, participants saw each

destination appear on the screen, one at time in randomized order, and rated their liking on 4-point scales (*strongly dislike, dislike, like, strongly like*), four times each.

Thus, participants either completed 40 nonevaluative tasks or 40 evaluative tasks for the same 10 travel destinations.

Social Context

After the attitude accessibility manipulation, participants were taken to what was described as a study on “imagination and visualization techniques” and asked to imagine themselves in the following scenario:

Please imagine that you are planning a family vacation. This will be a vacation with your significant other’s parents (or your mother-in-law, father-in-law). Before continuing, take a few moments to reflect on your significant other’s parents and what it would feel like to choose something that pleased or displeased them.

Next, participants read that,

To get the planning started, you all have decided to collect votes on everyone’s preferred travel destination. Your significant other sent the family this message: Hey everyone, please complete the poll below to vote for your preferred vacation destination. The results should help us make a decision without too much difficulty. Hope to hear from you soon!

Decision Latency

On the next screen, participants saw a dropdown menu of the 10 destinations from the attitude accessibility manipulation with the following instructions, “Use the dropdown menu to cast your vote

for the destination where you would most like to vacation with your in-laws.” Decision latency was captured by the Qualtrics platform as the time it took participants to choose a destination and advance to the next screen. (Note that in Studies 5–12 decision latency was captured by presenting destinations or snacks one at a time. In those studies, participants used two specific keys to decide whether to recommend or eliminate a destination or snack.)

Self-Rated Difficulty of Choosing

Next, participants completed exploratory measures of their subjective reactions to the task (adapted from Fazio et al., 1992). Participants indicated on 0–10 scales how difficult, stressed, and worried they were about making their choice. This measure was not significantly affected by attitude accessibility condition, consistent with Fazio et al. (1992), $M_{\text{Low accessibility}} = 2.92$, $SD = 2.43$, $M_{\text{High accessibility}} = 2.87$, $SD = 2.25$; $t(176) = .153$, $p = .878$. It was dropped in subsequent studies.

Ethnicity/Cultural Background

As previously mentioned, we recruited U.S. participants who identified as either European/White or Latinx. To confirm the effectiveness of our sampling procedure, participants also completed a short demographics questionnaire where they indicated their race or ethnicities by selecting one or more of the following: White non-Hispanic, Hispanic/Latino, American Indian or Alaska Native or Indigenous People, Asian (including East, South, Southeast Asian), Black or African American, Native Hawaiian or Pacific Islander, or other (please specify). As preregistered, we retained only those participants who identified exclusively as either White non-Hispanic or Hispanic/Latino.

Example Perceived Readiness to Decide Study: Study 13

Design and Participants

We preregistered Study 13 (AP No. 49958). It used a 2 (attitude accessibility: high vs. low) \times 2 (ethnicity: European/White vs. Asian and Latinx) between-subjects design. We were allocated 275 graduate students from an international subject pool of learners in online business courses who participated for extra credit. Because previous research suggests that Asian and Latinx people tend to have collectivistic cultural orientations (e.g., Evans et al., 2000), we aimed to broaden the ethnicity/cultural background categories to include Asian people. However, in Study 13, there were no Latinx people in the sample of graduate students, so the comparison was between White people and Asian people. After preregistered exclusions, there were 230 participants (99 women, 130 men, one nonbinary/other; $M_{\text{age}} = 36.37$, $SD = 7.57$). 153 participants reported being non-Hispanic White and 77 reported being Asian. We designed the study using the Qualtrics platform.

Stimuli

The attitude objects were four soft drink brands widely marketed internationally: Fanta, Mountain Dew, Pepsi, and Sprite. Fanta and Sprite were the focal attitude objects.

Attitude Accessibility Manipulation

At the beginning of the study, participants read,

We are interested in attitudes and opinions toward various consumer products and services. There are no right or wrong answers, we would like to know your actual opinions. Tell us how you personally feel. For the next part, you will see several objects. We would like you to indicate whether you personally like or dislike each one as quickly and as accurately as possible. Accuracy is extremely important. To ensure accuracy, each object will be repeated a number of times to ensure consistency across your ratings.

Then, following prior work (e.g., Fazio et al., 1982, 1992; Powell & Fazio, 1984), we randomly assigned participants to attitude accessibility conditions that used validated attitude rehearsal tasks. In each condition, participants saw the same four soft drink brands appear one at a time in the middle of the screen.

Participants in the first attitude accessibility condition rated their scalar attitudes to Fanta five times, Mountain Dew and Pepsi three times each, and Sprite once. Here, Fanta attitude accessibility was high, but Sprite attitude accessibility was low.

In the second attitude accessibility condition, participants rated their scalar attitudes to Sprite five times, Mountain Dew and Pepsi three times each, and Fanta once. Here, Sprite attitude accessibility was high, but Fanta attitude accessibility was low.

Social Context

The scenario began with the same “imagination and visualization techniques” cover story as in earlier studies. Then, participants were asked to,

Please imagine that you work for a management consulting company. You have worked there for about a year. Your company helps local clients solve challenges and identify opportunities in their business or nonprofit. You also provide help with planning an organization’s meetings and activities. Client satisfaction is important to you and your company.

On the next page, participants read, “Now imagine that one of your client groups is asking your help to plan a socially distant retreat in a nearby city. This will be the first time you meet with all five members of the client team. They sent you this email:

Hello,

Thanks again for all of your hard work on this project! We really appreciate it and are looking forward to discussing it at our upcoming retreat.

We are also glad to hear that you will be joining us for our outdoor lunch. We’re all contributing so the food costs are paid. Now, we just need someone to bring drinks. Would you please pick up a case of soda or soft drinks? There is a grocery nearby with many different options.

Thanks for your help!

Best,

Alex”

Next, participants were randomly assigned to view one of two screens. Version 1 [2] continued the scenario as if they were considering bringing Fanta [Sprite] (i.e., “On the day of the retreat, you stop at the small grocery store to get a case of soft drinks. There

is a display of Fanta [Sprite], and you consider whether to choose this.”).

Perceived Readiness to Decide

To capture the degree to which attitude accessibility affects feelings of readiness to decide, we adapted measures of self-appraised decision comfort and confidence (Bandura, 1977; Fazio et al., 1992; Lazarus, 1991; Parker et al., 2016; Zhou et al., 2009). As such, our operationalization of readiness to decide reflects the functional usefulness of possessing an attitude in coping with decision demands, as emphasized in prior attitude literature (Katz, 1960; Smith et al., 1956). This measure was designed to capture the degree to which having an accessible attitude helps people to feel prepared to act and feel confident and ready to make decisions (in this case, making a decision about a soft drink). Specifically, participants completed three items on 7-point scales (i.e., “How comfortable/ready/prepared do you feel making this decision?”).

Participants also rated their familiarity with each of the four soft drink brands on 7-point scales (1 = *not at all familiar*, 7 = *very familiar*). In this study, we found no cultural difference in familiarity with Sprite, $M_{\text{European/White}} = 6.63$, $SD = 0.818$, $M_{\text{Asian}} = 6.79$, $SD = 0.614$; $t(228) = -1.56$, $p = .120$. We did find that Asian people ($M = 6.66$, $SD = 0.771$) were more familiar with Fanta than were European/White people, $M = 5.72$, $SD = 1.60$, $t(228) = -4.88$, $p < .001$, $d = -.68$, but this difference did not emerge in later studies (e.g., Study 15).

Across studies, Cronbach α s for the three-item dependent measures ranged from .90 to .95. Finally, participants completed a short demographics questionnaire.

Ethnicity/Cultural Background

As previously mentioned, we were interested in participants who identified as either European/White or Asian or Latinx. However, there were only European/White and Asian participants in the sample. To categorize participants into ethnic groups, participants completed a short demographics questionnaire where they indicated their races or ethnicities by selecting one or more of the following: White non-Hispanic, Hispanic/Latino, American Indian or Alaska Native or Indigenous People, Asian (including East, South, Southeast Asian), Black or African American, Native Hawaiian or Pacific Islander, or other (please specify). We retained only those participants who identified exclusively as White non-Hispanic or Asian.

Example Attitude–Choice Correspondence Study in Socially Constrained Contexts: Study 19

Studies 19–22 (see Supplemental Material 4) examined attitude–choice correspondence in a social context that highlighted a need to accommodate others’ preferences in choosing a restaurant. This context was likely to constrain the decision that participants could make, rendering one’s personal attitudes less relevant to the choice. These studies allowed us to examine whether attitude–choice correspondence effects would emerge in constrained social situations.

Design and Participants

We preregistered the design, sample size, and exclusion criteria of Study 19 (AP No. 76106). We made an error in preregistering the

analyses: To effectively test the correspondence between participants’ attitudes and their choices, we should have specified that the analyses would focus on the share of rehearsed and nonrehearsed restaurants that were *rated favorably* and chosen, not the total share of rehearsed and nonrehearsed restaurants that were chosen. The study used a 2 (attitude accessibility: high vs. low; within subjects) \times 2 (cultural goals prime: individualistic vs. collectivistic) mixed design. We recruited 150 people from the United States from MTurk. After preregistered exclusions, there were 125 participants (57 women, 63 men, four nonbinary/other, and one who preferred not to say; $M_{\text{age}} = 40.88$, $SD = 11.74$; 103 participants reported being Caucasian, 12 African American, four Hispanic, nine Asian, one Native American, and one other ethnicities). The ethnicity totals exceed sample size because some participants identified with multiple ethnicities. We designed the study using the Qualtrics platform.

Stimuli

Applebees and Chili’s were the focal attitude objects.

Attitude Accessibility Manipulation

Same as in Study 13 except that in the low attitude accessibility condition, participants rated Buffalo Wild Wings, Chili’s, PF Chang, and Red Lobster once each. This made it so that participants either completed five or one attitude rating(s) toward the focal attitude object, Applebees. To achieve a within-subjects manipulation, participants in one attitude accessibility condition rated their attitudes on 4-point scales (*strongly dislike*, *dislike*, *like*, *strongly like*) to Applebees, Red Lobster, PF Chang, and Olive Garden four times each and rated their attitudes to Buffalo Wild Wings, TGI Fridays, The Cheesecake Factory, and Outback Steakhouse once each. Participants in the other attitude accessibility condition rated their attitudes on 4-point scales to Chilis, Red Lobster, PF Chang, and Olive Garden four times each and rated their attitudes to Buffalo Wild Wings, TGI Fridays, The Cheesecake Factory, and Outback Steakhouse once each. Then, all participants gave binary evaluative ratings of 16 restaurants, including Applebees and Chili’s. Therefore, in the first attitude accessibility condition, Applebees was high accessibility and Chili’s was low, and in the second condition, Chili’s was high and Applebees was low.

Cultural Goal Priming

After the attitude accessibility manipulation, we primed individualistic and collectivistic goals using a method developed and validated by Brewer and Gardner (1996). The prime consisted of reading a brief story about a trip to the city. In the individualistic condition, the story contained first-person singular pronouns (i.e., I, me, my). In the collectivistic condition, the story contained first-person plural pronouns (i.e., we, us, our). After reading the randomly assigned scenario, participants counted how many pronouns were in the story.

Socially Constrained Context

This scenario differed from those used in prior studies in that it made salient to participants the vegetarian preferences of the group.

We expected the salience of the group's specific preferences, and the implied need to accommodate them, to constrain the tendency to choose a restaurant based on one's personal attitudes.

The scenario began with the same "imagination and visualization techniques" cover story as in earlier studies. Then, participants read,

Please imagine that you are a part of a consulting organization. You have worked there for about a year. Your team helps local clients solve challenges and identify opportunities in their business or nonprofit. You also provide help with planning an organization's meetings and activities. Client satisfaction is important to you and your organization.

On the next page, participants read, "Now imagine that one of your client groups is asking your help to plan a socially distant retreat in a nearby city. This will be the first time you meet with the full client team. They sent you this email:

Hi there-

Thanks again for all of your hard work on this project! We really appreciate it and are looking forward to discussing it at our upcoming retreat. We are also glad to hear that you will be joining us for the retreat luncheon. Speaking of lunch, one of our logistic challenges is deciding what restaurant to cater. Our group tends to prefer known chain restaurants and several of us are eating vegetarian these days. Who do you recommend we get to cater lunch? I see several restaurants nearby, including an Applebees. Should we use them, or not?

Thanks for your help!

Best,

Alex"

Attitude–Choice Correspondence

After reading Alex's email, participants read, "What restaurant(s) would you recommend to cater the retreat? Check all that apply." Below this prompt were 18 options (Applebees, Chili's, Red Lobster, PF Chang, Cracker Barrel, The Cheesecake Factory, TGI Fridays, Olive Garden, Bob Evans, Ruby Tuesday, Perkins, Longhorn Steakhouse, Outback Steakhouse, Texas Roadhouse, Buffalo Wild Wings, Panera Bread, McAlister's Deli, and other [please specify]). Participants could select an unlimited number of options. Thus, participants completed 18 choice trials; four for restaurants to which they had rehearsed their attitudes five times, four for restaurants they had previously evaluated twice, and 10 for fillers they had previously evaluated once.

Following prior work (Fazio et al., 1992), we tallied the number of attitude–choice correspondences as the number of times where participants indicated Yes in the binary evaluation and also selected the restaurant to recommend to cater the retreat.

Example Attitude–Choice Correspondence Study in Less Socially Constrained Contexts: Study 23

Studies 23 and 24 (see Supplemental Material 4) looked at attitude–choice correspondence in a social context in which one was choosing a snack or travel destination for the group and the need to accommodate group members' preferences was not made salient. In contrast to the contexts in Studies 19–22, these contexts were less likely to constrain the choices that participants could make, rendering one's personal attitudes more relevant to these choices.

Design and Participants

We preregistered the design, sample size, and exclusion criteria of Study 23 (AP No. 127145). Study 23 used a 2 (attitude accessibility: high vs. low) \times measured cultural orientation between-subjects design. We designed the study using the Qualtrics platform. We recruited 500 people from the United States from MTurk. After preregistered exclusions, there were 469 participants (235 women, 231 men, three nonbinary/other; $M_{age} = 41.81$, $SD = 12.01$; 373 participants reported being Caucasian, 51 African American, 19 Hispanic, 28 Asian, and 16 other ethnicities). The ethnicity totals exceed sample size because participants could identify as multiple ethnicities.

Stimuli

The focal attitude objects were 10 popular salty snacks: Cheetos, Cheez-Its, Combos, Doritos, Fritos, Goldfish, Popchips, pretzels, Pringles, and sunflower seeds.

Attitude Accessibility Manipulation

The attitude accessibility manipulation was the same as in Study 1 except that in the low attitude accessibility condition, participants were asked to count the number of times the letter O appeared in the name of the snacks presented.

Less Socially Constrained Context

This scenario was designed to be more similar to those used in Studies 1–18 where the need to consider others' preferences was not made salient, putting less constraint on the tendency to choose in accordance with one's personal attitudes. After reading the cover story about "imagination and visualization techniques" and practicing the decision latency measurement procedure, participants were asked, "Please imagine that you have planned to get together with a group of your close friends this weekend. It's a casual get-together where you all do what you normally do when you hang out."

Attitude–Choice Correspondence

Following prior work (Fazio et al., 1992, Studies 2 and 3), participants completed a pairwise preference task. We formed 15 snack pairs such that each snack appeared three times. Each pair appeared on the screen in random order, and participants used the S and L keys on their keyboards to indicate that they preferred the snack on the left or right, respectively. Finally, participants rank-ordered all 10 snacks from 1 (most preferred) to 10 (least preferred). We counted correspondences as the number of times that participants' preferences corresponded with their rankings. For example, if one preferred Doritos to Cheetos and then ranked Doritos higher than Cheetos, that counted as one correspondence.

Cultural Orientation

After measuring the dependent variable, we administered the cultural orientation measure developed and validated by Triandis and Gelfand (1998) consisting of 16 items tapping individualism and collectivism. An example of an item tapping individualism is, "I often do my own thing." An example of an item tapping collectivism is, "Family members should stick together, no matter what sacrifices are

required.” Items were rated on a 7-point Likert-type scale (*strongly agree to strongly disagree*). As preregistered and following past work (Agrawal et al., 2007; Allen et al., 2018; Briley et al., 2017; Riemer & Shavitt, 2011), we created a single index by subtracting the individualism subscale ($\alpha = .71$) from the collectivism subscale ($\alpha = .82$). Higher scores on this index reflect a more collectivistic cultural orientation.

Study 25

We designed Study 25 to assess whether the differences in the effects in Studies 19–22 versus Studies 23 and 24 were the result of the degree of social constraint in the decision context or due to other differences in the studies’ designs (e.g., number of observations, presence of a cultural goal prime, within-subject accessibility manipulation). Thus, Study 25 was similar to Studies 19–22 in assessing attitude–choice correspondence in four observations, with a cultural goal prime and a within-subject design, but it used a low-constraint social context (as in Studies 23 and 24).

Design and Participants

We preregistered the design, sample size, and exclusion criteria of Study 25 (AP No. 131269). Study 25 used a 2 (attitude accessibility: high vs. low; within-subjects) \times 2 (cultural prime: individualistic goals vs. collectivistic goals; between-subjects) mixed design. We designed the study using the Qualtrics platform. We recruited 200 people from the United States from Prolific. After preregistered exclusions, there were 177 participants (82 women, 93 men, two nonbinary/other; $M_{\text{age}} = 39.88$, $SD = 13.11$; 137 participants reported being Caucasian, 20 African American, 15 Hispanic, nine Asian, and five other ethnicities). The ethnicity totals exceed sample size because participants could identify as multiple ethnicities.

Stimuli

The focal attitude objects were Applebees, PF Chang, Red Lobster, and Olive Garden (note that we made an error in the preregistration by listing eight restaurants as focal when there were only four).

Attitude Accessibility Manipulation

Same as in Study 19.

Cultural Goal Priming

We primed individualistic and collectivistic goals using a method developed and validated by Trafimow et al. (1991). Participants read a brief scenario about a Sumerian warrior named Sostoras who had to decide who to put in command of a detachment of soldiers he was sending to aid his emperor in battle. In the individualistic condition, the warrior selected a talented general whose exploits would enhance his personal power and prestige. In the collectivistic condition, the warrior selected a member of his family in order to show his loyalty to them and increase the power and prestige of the family. After reading the randomly assigned scenario, participants rated how much they admired Sostoras.

Low-Constraint Social Context

After practicing the decision latency measurement procedure and reading the cover story about “imagination and visualization techniques,” participants saw the same social context from Study 1 except that they were asked to imagine planning a family dinner with their in-laws/significant others’ parents at a restaurant. To ensure that the scenario was relevant to all participants, we included a screener question before continuing. The question asked about participants’ current relationship status. Participants indicated whether they were: single and interested in a relationship at some point, single and not interested in a relationship at any point, or currently in a relationship. Based on preregistered exclusion criteria, participants were excluded if they indicated they were not interested in a relationship at any point.

Attitude–Choice Correspondence

To increase the comparability between the high and low-constraint attitude–choice correspondence studies, Study 25 used a similar attitude–choice correspondence task as Study 19. The only difference was that participants read, “What restaurant(s) would you recommend for dinner? Check all that apply.” Participants could select an unlimited number of options from the same set of 18. Following prior work (Fazio et al., 1992), we tallied attitude–choice correspondence as the number of times participants indicated Yes in the binary evaluation and also selected the restaurant to recommend for dinner.

Results

In this section, we first present the overall effect of attitude accessibility across our 25 studies before looking separately at the extent to which accessibility effects differed across dependent variables and cultural and social contexts. To provide reliable estimates of the overall accessibility and interaction effects, we synthesized findings across our 25 studies in two meta-analyses with the individual effects of each study reported in Figures 1 and 2. We used Meta-Essentials software to perform the meta-analyses (Suurmond et al., 2017).

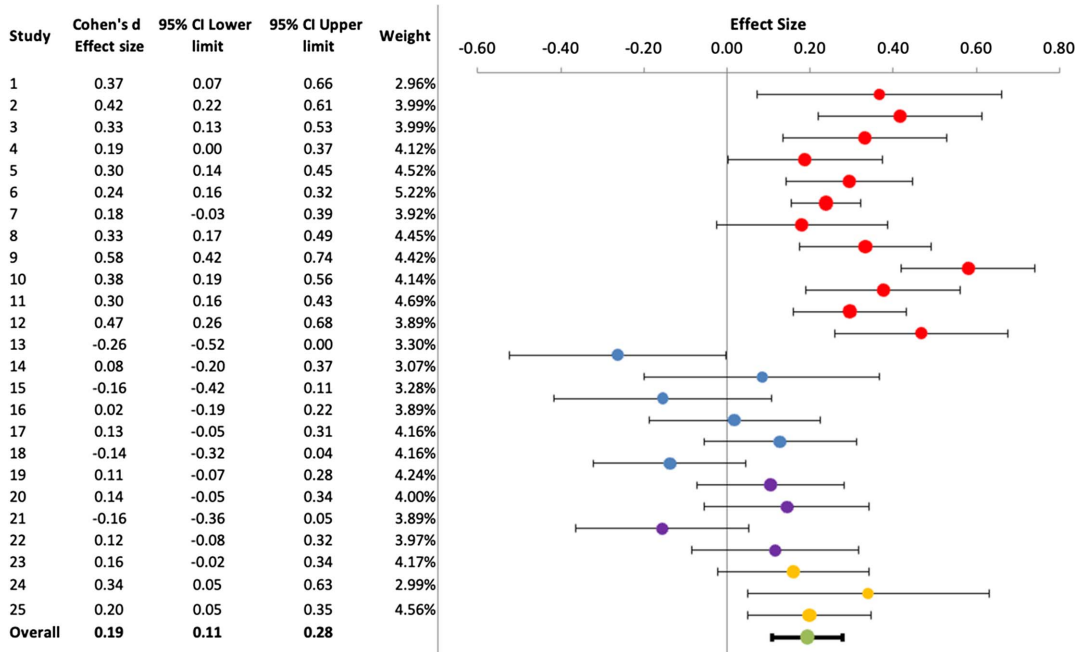
Overall Effect of Attitude Accessibility

For the accessibility effects, we used Cohen’s d as the effect size estimate because we could compute them in all studies and their interpretation is intuitive. For Studies 1–4, 13–18, 23, and 24, we computed Cohen’s d with independent samples t tests. For Studies 5–12, 19–22, and 25, we computed Cohen’s d with paired-samples t tests. In all studies, the attitude accessibility variable was coded from low to high in ascending order. We multiplied by -1 the effect sizes for Studies 13–25 (i.e., the perceived decision readiness and attitude–choice correspondence studies) so that positive effect sizes would reflect positive effects of attitude accessibility (i.e., higher perceived decision readiness and higher attitude–choice correspondence). We used a random-effects approach because of the variety of methodologies used across studies.

We grouped studies by dependent variable. Within the attitude–choice correspondence studies (19–25), we created subcategories for those studies that used high- and low-constraint social contexts.

We present the meta-analytic results in two forest plots that depict both the individual effects observed in each study (see Figure 1) and the overall effects estimated across dependent variables (see

Figure 1
Meta-Analysis of the Overall Attitude Accessibility Effect



Note. Effect sizes are the Cohen's *ds*. Red, blue, purple, and yellow circles represent the effects of decision latency, perceived readiness to decide, attitude–choice correspondence in high-constraint contexts, and attitude–choice correspondence in low-constraint contexts, respectively. The green circle represents the overall effect in our 25 studies. CI = confidence interval. See the online article for the color version of this figure.

Figure 3). The individual effects are represented with a red circle (decision latency studies), blue circle (perceived decision readiness studies), purple circle (high-constraint attitude–choice correspondence studies), and yellow circle (low-constraint attitude–choice correspondence studies). Circle size is positively related to the effect's weight in the overall analysis. The green circle represents the overall effect in our 25 studies. Higher Cohen's *ds* mean a stronger relationship between attitude accessibility and faster decision latencies, higher perceived readiness to act, or higher attitude–choice correspondence. The right side of the forest plots graphically presents these effects with their 95% confidence intervals relative to a reference line set at 0. When the confidence intervals of an effect fall on the right side of the reference line, participants exhibited faster decision latencies, higher perceived readiness to act, or higher attitude–choice correspondence as a function of having more (vs. less) accessible attitudes. Where the confidence intervals overlapped with the reference line, there was no significant difference as a function of attitude accessibility in decision latency, perceived decision readiness, or attitude–choice correspondence.

The test of heterogeneity showed that the effect significantly varied across studies, $Q(24) = 97.61, p < .001, I^2 = 75.41\%$. The overall effect of .19, 95% CI [.11, .28] suggests that, across studies, we replicate the previously documented functional effects of having more (vs. less) accessible attitudes for easing decision making.

We tested the degree to which the accessibility effect differed across dependent variables using subgroups analysis. Recall that we grouped studies by dependent variable, splitting the attitude–choice

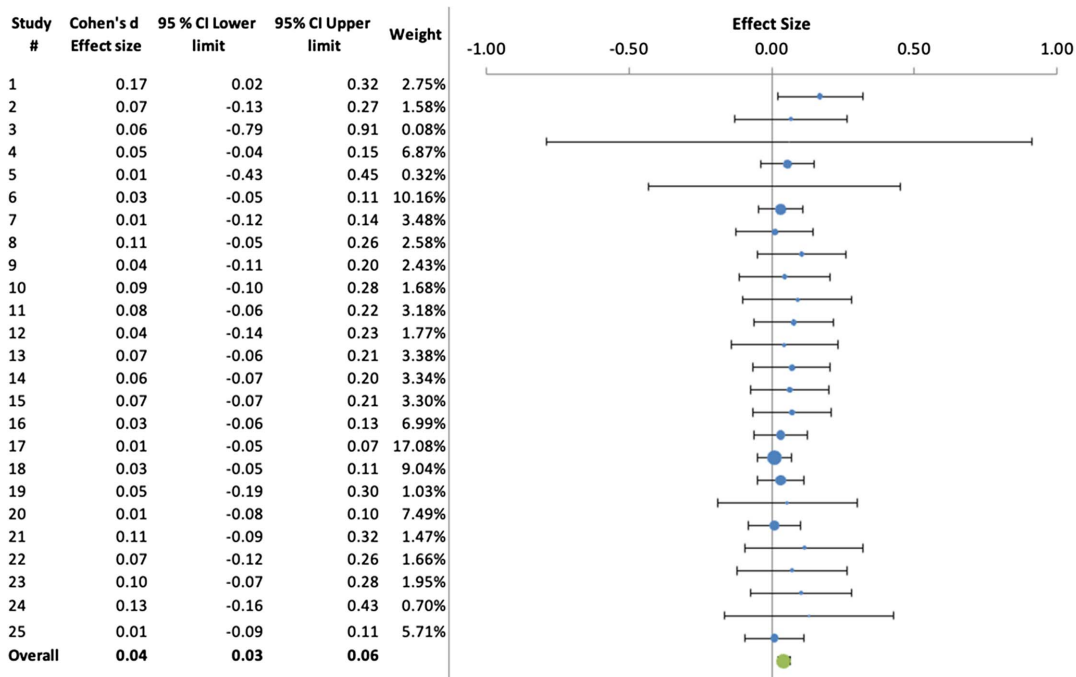
correspondence studies into those that used high- and low-constraint social contexts. The analysis revealed significant category, $Q^*(3) = 35.00, p < .001$, and total effects, $Q^*(24) = 54.58, p < .001$, residual $R^2 = 64.12\%$. The within/residual variance was not significant, $Q^*(21) = 19.58, p = .548$.

Follow-up analyses revealed that, whereas the average accessibility effect was significant in the decision latency studies, $d = .33, 95\% \text{ CI} [.26, .41], Q(11) = 21.41, I^2 = 48.61\%$, and the low-constraint attitude–choice correspondence studies, $d = .20, 95\% \text{ CI} [.03, .38], Q(2) = 1.08, I^2 = 0\%$, it was not significant in the high-constraint attitude–choice correspondence studies, $d = .06, 95\% \text{ CI} [-.16, .27], Q(3) = 5.55, I^2 = 45.92\%$, or perceived decision readiness studies, $d = -.05, 95\% \text{ CI} [-.21, .11], Q(5) = 9.02, I^2 = 44.56\%$. The nonsignificant overall effect of attitude accessibility in the subgroups analysis, $d = .14, 95\% \text{ CI} [-.03, .32], Q(24) = 97.61, I^2 = 75.41\%$, was likely weighed down by the 47% of studies that showed nonsignificant or reversed effects in our analysis.

Interaction Effect of Attitude Accessibility and Culture

For the interaction effects, we converted all effects to Cohen's *ds* for ease of comparison. In all studies, the attitude accessibility variable was coded from low to high in ascending order (e.g., $-1 =$ low attitude accessibility, $1 =$ high attitude accessibility). Culture was also coded so that values always ascended from individualistic to collectivistic (e.g., $-1 =$ individualistic goals prime, $1 =$ collectivistic goals prime). We used a random-effects approach because of the variety of methodologies used across studies.

Figure 2
Meta-Analysis of the Attitude Accessibility × Culture Interaction Effect



Note. Effect sizes are the Cohen's *ds*. Blue circles represent the effects in individual studies. The green circle represents the overall effect in our 25 studies. CI = confidence interval. See the online article for the color version of this figure.

The test of heterogeneity showed that there was little variation in outcomes between studies, $Q(24) = 8.35, p = .999, I^2 = 0\%$, cautioning a quick reader's interpretation of the combined effect of .04, 95% CI [.03, .06]. Although this effect size is significant, the heterogeneity test suggests that, across studies, the effect of attitude accessibility on the outcomes we examined is similar across individualistic and collectivistic people. This is, perhaps, not surprising because many of the studies were not properly powered to detect the interaction with culture.

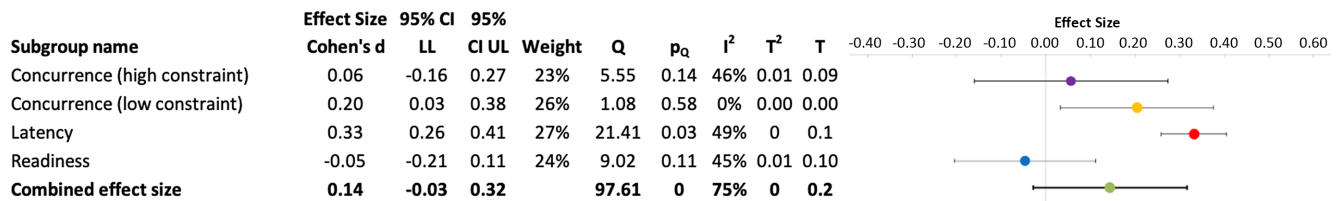
We present the meta-analytic results in a forest plot that depicts both the individual effects observed in each study and the overall effect. The individual effects are represented with blue circles. Circle size is positively related to the effect's weight in the overall analysis. The green circle represents the overall effect in our 25 studies. The right part of the forest plots graphically presents these effects with their 95% confidence intervals relative to a reference

line set at 0. When the confidence intervals of an effect fall on the right side of the reference line, there was a different relationship between attitude accessibility and the outcomes we examined for individualistic versus collectivistic people. When the confidence intervals overlap with the reference line, there was no significant difference across cultures in the relationship between attitude accessibility and the outcomes we examined.

General Discussion

The impact of attitude accessibility on the ease of making a choice is one of the central findings in attitude research and a citation classic in social psychology. Attitudes that are more accessible are more functional for individuals, readying them to act to make faster, easier decisions (Fazio et al., 1992; Holland et al., 2003) that correspond with their personal likes and dislikes (Fazio et al., 1989, 1992). In

Figure 3
Subgroups Analysis of the Overall Attitude Accessibility Effect



Note. CI = confidence interval; LL = lower limit; UL = upper limit. See the online article for the color version of this figure.

the present research, we revisited this important function of attitude accessibility and assessed the robustness or reproducibility of key effects that established it. In 25 studies, we examined whether increasing the accessibility of attitudes, (a) reduces the latency to make a subsequent decision, (b) increases one's perceived readiness to decide, and (c) increases the correspondence between one's attitudes and choices. We examined these impacts of attitude accessibility in more culturally diverse contexts than had been previously studied, expanding the literature to compare contexts in which either individualistic or collectivistic goals were salient. Our studies compared individualistic and collectivistic groups sampled internationally as well as ethnic groups in the United States, situationally primed individualistic and collectivistic goals, and measured cultural orientations, in order to offer a more culturally inclusive look at attitude accessibility effects.

The findings suggest that attitude accessibility effects are relatively robust, and that cultural factors do not substantially qualify these conclusions. Specifically, results of 12 studies indicate that attitude accessibility effects on decision latency are highly reproducible. Making attitudes more accessible via rehearsal did reliably shorten the latency with which subsequent decisions were made. This finding emerged across cultural contexts, indicating that attitude accessibility speeds decision making for individualistic and collectivistic people alike.

However, the findings for perceived readiness to decide were largely null. Making attitudes more accessible was not shown to increase one's self-rated confidence, readiness, and preparation to make a choice, despite six studies examining this effect. This was true for both people with salient individualistic and collectivistic goals. This finding should not be seen as a failure to replicate previous research, as past findings on the effects of accessible attitudes on self-reports have been mixed. Fazio et al. (1992, Studies 2 and 3) found that, despite physiological and decision latency measures indicating that increasing the accessibility of attitudes did ease the act of choosing, no effect of attitude accessibility emerged on the self-reported difficulty and stressfulness of the decision task. Although Holland et al. (2003) found that people whose attitudes were made more accessible reported greater certainty in their attitudes and more commitment to them, Holland et al.'s self-report findings reflected meta-attitudinal inferences from the ease with which an attitude comes to mind rather than self-reports of the feelings accompanying decision making. Our findings, in line with Fazio et al. (1992), suggest that self-reported feelings are not affected by making attitudes more accessible, at least not in the decision contexts we examined.

In our attitude-choice correspondence studies (19–25), we were able to compare the effects of attitude accessibility in contexts that varied the level of social constraint to act based on personal preferences by highlighting (or not) the need to accommodate others' specific preferences. In the high-constraint studies that asked participants to choose restaurants for a group of vegetarians (19–22), increasing the accessibility of attitudes did not increase the correspondence between attitudes and subsequent choices. In contrast, in the low-constraint studies (23–25), increasing the accessibility of attitudes did increase the correspondence between attitudes and subsequent choices. The findings underscore the importance of the social context in understanding the effects of attitude accessibility on attitude-choice correspondence: When there was a need to consider others' preferences, the accessibility of

one's personal attitudes did not increase attitude-choice correspondence. However, when one's choices were less constrained by the situation, the accessibility of one's personal attitudes increased the tendency to choose options that aligned with those attitudes. This was the case for both people with individualistic and collectivistic orientations or goals.

This research makes contributions in several areas. It is the first to address the effects of attitude accessibility in distinct cultural contexts. The notion that accessible attitudes function to facilitate decision making is central to attitude theorizing (e.g., Fazio et al., 1982, 1992). We conceptually replicated this effect on decision latency and attitude-choice correspondence in the cultural context in which it was originally investigated—that is, in populations that have primarily individualistic goals (e.g., European Americans or White participants). Moreover, we obtained similar effects for contexts in which collectivistic goals are dominant (e.g., Asian and Latinx groups sampled internationally and similar ethnic groups within the United States, situationally primed cultural goals, and measured cultural orientations). Our studies also reveal cross-cultural consistency for the findings on self-reported readiness to decide, where effects of attitude accessibility did not emerge. Our studies thus offer a broad and relatively inclusive picture of which attitude accessibility effects are robust.

An additional contribution pertains to the broader theoretical implications of understanding how attitudes function in contexts where it is important to consider others' preferences. To date, theorizing on attitude accessibility has focused on what makes attitudes strong and functional for guiding individual action. The choices examined in prior research involved people deciding for themselves what they preferred or wanted (Fazio et al., 1989, 1992) without any social considerations being salient. In those decision contexts, one's own likes and dislikes were the primary relevant guide. Participants were not asked to choose between paintings or select snacks that others would enjoy. In contrast, our decision scenarios explicitly highlighted social considerations in order to examine whether accessible attitudes are equally functional for individualistic and collectivistic people when making decisions that impact others. We know very little about the strategies that people may use to manage or regulate their highly accessible attitudes when making decisions with others in mind. This research provides a step in that direction, and we suggest that this is a fruitful agenda for future research.

Our findings highlight the importance of social constraints in attitude-choice correspondence. Notably, we replicated the effect of attitude accessibility on attitude-choice correspondence in the type of social context that did not make salient the need to consider others' preferences and thus maintained the relevance of one's own attitudes for making choices. However, we did not obtain the same effect for contexts in which there was a greater need to consider others' specific preferences. This finding is consistent with a large body of evidence suggesting that norms and social contexts can weaken attitude-behavior correspondence (Ajzen et al., 1982; Fazio & Roskos-Ewoldsen, 1994; Shavitt & Fazio, 1991; Snyder & Kendzierski, 1982; Wellen et al., 1998; Zanna et al., 1980). Thus, it can be expected that constraints in the social context will also reduce the degree to which highly accessible personal attitudes are functional in guiding choices.

In addition to allowing comparisons between individualistic and collectivistic cultural contexts, between high- and low-constraint

social contexts, and between distinct outcome measures, our studies provide some evidence for the consistency of attitude accessibility effects across different attitude stimuli. The robust effects on decision latency and attitude–choice correspondence (in some contexts) were observed regardless of whether the attitude objects were travel destinations or snack foods. Likewise, attitude accessibility effects on self-reported readiness to decide were generally not observed, regardless of whether the attitude objects were soft drinks or video conferencing platforms.

Another contribution of our research pertains to the costs of accessible attitudes. Research has suggested that having accessible attitudes can impair one’s ability to notice that the attitude object has changed (Fazio et al., 2000). Fazio et al. (2000, p. 209) concluded that the functional value of accessible attitudes depends “on whether the attitude object remains stable over time.” If the attitude object or the choice context changes, highly accessible attitudes may leave the attitude holder less likely or less able to objectively consider new information (Cooper & Aronson, 1992; DeBono et al., 1995; Schuette & Fazio, 1995). Indeed, previous research shows that accessible attitudes make attitude-congruent aspects of the attitude object more salient, influencing the way that the object, or information about it, is perceived and interpreted (e.g., Fazio & Dunton, 1997; Houston & Fazio, 1989; Olson & Fazio, 2004; Schuette & Fazio, 1995). However, based on our findings, we suggest that, in social settings where there is a salient need to consider others’ preferences, highly accessible attitudes may not have as strong an influence on how the object is perceived. In other words, the costs of highly accessible attitudes in skewing one’s objective perceptions of an object may be limited to contexts in which one’s personal attitudes are the main drivers of one’s decisions.

A final contribution of our research relates to current themes emerging from the burgeoning literature on the reproducibility of classic findings in psychology. Some have argued that psychological findings that are more cognitively mediated tend to be more reproducible than social psychological findings (e.g., Inbar, 2016), though the reasons for this are a matter of debate (e.g., Van Bavel et al., 2016). We find that attitude accessibility effects are highly reproducible when the outcome is decision latency (how quickly people choose objects after they rehearse vs. do not rehearse their attitudes) or when the outcome is choice correspondence when there are few social constraints on choosing based on one’s personal attitudes. The decision latency paradigm involves making rapid choices on screen in a quick succession of trials, a context that pulls for the role of salience in memory. In other words, this paradigm in particular is designed to capture the cognitive process of paired-associate learning, such as the effects of increasing the salience of object–evaluation associations.

In contrast, the effects of accessibility on attitude–choice correspondence in high-constraint social contexts and on self-reported feelings of readiness to decide are likely to be mediated by more social processes. In this regard, our findings that attitude accessibility effects are not observed in such social contexts appear consistent with a broader pattern in the replication literature on reproducibility and contextual sensitivity (Van Bavel et al., 2016).

Limitations and Future Directions

Although our findings are generally consistent across studies of a given outcome, there are a number of limitations to our data and

research designs. For instance, our studies differed from the original attitude accessibility studies in numerous ways, meaning that they cannot be interpreted as direct replication efforts. Instead, they conceptually replicate classic research with new decision contexts and measures. Perhaps the biggest limitation is that, as necessitated by COVID-19 restrictions, the 25 studies we report were conducted entirely online (with the exception of Study 8). This severely limited the experimental control we could exercise over the manipulations and measures and over the attention that participants paid to the stimuli. One might expect this to be a more serious concern for the precise measurement of response latencies to make decisions. Results on the measures of decision latency did show robust effects of attitude accessibility, yet the shortcomings of our online contexts may have minimized the size of the effects. Related to this, limitations of the studies may have muted the potential for cultural differences to emerge in the effects of attitude accessibility. For example, more than half of our studies used cultural priming (13 out of 25). To optimize online participants’ time in the studies, we used validated primes with the largest effect sizes in recent meta-analyses (Oyserman & Lee, 2008) and did not include manipulation checks for the primes. Thus, the null results for those studies could be explained by the potential failure of the primes, especially given the fact that all of the priming studies were run online. Moreover, we note that most studies had inadequate power to detect the interaction effect with cultural variables. These limitations, coupled with the fact that one study showed that attitude accessibility and culture interacted to influence decision latency (see Figure 2), make these studies inconclusive for assessing the role of individualism–collectivism in the effects of attitude accessibility.

Regarding the null results for perceived readiness to decide, it is possible that these measures were not affected by the attitude accessibility manipulation because the measures of attitudes and/or self-reports were completed with less care in the online contexts we used. We did incorporate attention checks into many of our studies and found that data quality was acceptable. The average pass rate on attention checks across studies was 93%. Moreover, we preregistered numerous data exclusion protocols in order to improve data quality (e.g., excluding latency outliers 3 *SDs* above the mean, transforming latency data to reduce skew). That said, examining the role of research modality (online vs. in-person) in the strength of attitude accessibility effects is a worthy topic for further research.

Finally, the online contexts of the studies also limited our ability to examine consequential behavioral decisions. For example, our attitude–choice correspondence studies did not involve incentive-compatible choices (i.e., choices that participants actually obtained, as in Fazio et al., 1989). Following some of the past attitude accessibility research (e.g., Fazio et al., 1992), the present studies examined how attitude accessibility moderates the link between participants’ attitudes and preferences between options. However, a better approach would have been to investigate the robustness of these effects of accessible attitudes on real behavioral outcomes (as in Fazio et al., 1989; Fazio & Williams, 1986).

In conclusion, we replicate previously documented effects of attitude accessibility. Rehearsing one’s attitude decreased decision latency. It also increased attitude–choice correspondence when the context did not highlight the need to accommodate others’ specific preferences. These findings emerged across a variety of attitude objects and subject populations. The inconclusive interaction effects with cultural variables suggest that future high-powered studies

could potentially identify the conditions under which the effects of attitude accessibility reliably differ across cultures.

References

- Agrawal, N., Menon, G., & Aaker, J. L. (2007). Getting emotional about health. *Journal of Marketing Research*, 44(1), 100–113. <https://doi.org/10.1509/jmkr.44.1.100>
- Ajzen, I., Timko, C., & White, J. (1982). Self-monitoring and the attitude-behavior relation. *Journal of Personality and Social Psychology*, 42(3), 426–435. <https://doi.org/10.1037/0022-3514.42.3.426>
- Allen, A. M., Eilert, M., & Pelozo, J. (2018). How deviations from performance norms impact charitable donations. *Journal of Marketing Research*, 55(2), 277–290. <https://doi.org/10.1509/jmr.15.0509>
- Allport, G. (1935). Attitudes. In C. Murchison (Ed.), *A handbook of social psychology* (pp. 798–844). Clark University Press.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Bassili, J. N. (1993). Response latency versus certainty as indexes of the strength of voting intentions in a CATI Survey. *Public Opinion Quarterly*, 57(1), Article 54. <https://doi.org/10.1086/269354>
- Berger, J., & Schwartz, E. M. (2011). What drives immediate and ongoing word of mouth? *Journal of Marketing Research*, 48(5), 869–880. <https://doi.org/10.1509/jmkr.48.5.869>
- Blascovich, J., Ernst, J. M., Tomaka, J., Kelsey, R. M., Salomon, K. L., & Fazio, R. H. (1993). Attitude accessibility as a moderator of autonomic reactivity during decision making. *Journal of Personality and Social Psychology*, 64(2), 165–176. <https://doi.org/10.1037/0022-3514.64.2.165>
- Brewer, M. B., & Gardner, W. (1996). Who is this “we”? Levels of collective identity and self representations. *Journal of Personality and Social Psychology*, 71(1), 83–93. <https://doi.org/10.1037/0022-3514.71.1.83>
- Briley, D. A., Rudd, M., & Aaker, J. L. (2017). Cultivating optimism: How to frame your future during a health challenge. *Journal of Consumer Research*, 44(4), 895–915. <https://doi.org/10.1093/jcr/ucx075>
- Chan, R. Y. K., & Lau, L. B. Y. (2001). Explaining green purchasing behavior: A cross-cultural study on American and Chinese consumers. *Journal of International Consumer Marketing*, 14(2/3), 9–40. https://doi.org/10.1300/J046v14n02_02
- Cooper, J., & Aronson, J. M. (1992). Attitudes and consistency theories: Implications for mental health. In D. N. Ruble, P. R. Costanzo, & M. E. Oliveri (Eds.), *The social psychology of mental health: Basic mechanisms and applications* (pp. 279–300). Guilford Press.
- DeBono, K. G., Green, S., Shair, J., & Benson, M. (1995). Attitude accessibility and biased information processing: The moderating role of self-monitoring. *Motivation and Emotion*, 19(4), 269–277. <https://doi.org/10.1007/BF02856515>
- Descheemaeker, M., Spruyt, A., & Hermans, D. (2014). On the relationship between the indirectly measured attitude towards beer and beer consumption: The role of attitude accessibility. *PLOS ONE*, 9(4), Article e95302. <https://doi.org/10.1371/journal.pone.0095302>
- Eom, K., Kim, H. S., Sherman, D. K., & Ishii, K. (2016). Cultural variability in the link between environmental concern and support for environmental action. *Psychological Science*, 27(10), 1331–1339. <https://doi.org/10.1177/0956797616660078>
- Evans, G., Lepore, S., & Allen, K. (2000). Cross-cultural differences in tolerance for crowding: Fact or fiction? *Journal of Personality and Social Psychology*, 79, 204–210. <https://doi.org/10.1037/0022-3514.79.2.204>
- Fazio, R. H. (1995). Attitudes as object-evaluation associations: Determinants, consequences, and correlates of attitude accessibility. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude strength: Antecedents and consequences* (pp. 247–282). Lawrence Erlbaum.
- Fazio, R. H., Blascovich, J., & Driscoll, D. (1992). On the functional value of attitudes: The influence of accessible attitudes on the ease and quality of decision making. *Personality and Social Psychology Bulletin*, 18(4), 388–401. <https://doi.org/10.1177/0146167292184002>
- Fazio, R. H., Chen, J., McDonel, E. C., & Sherman, S. J. (1982). Attitude accessibility, attitude-behavior consistency, and the strength of the object-evaluation association. *Journal of Experimental Social Psychology*, 18(4), 339–357. [https://doi.org/10.1016/0022-1031\(82\)90058-0](https://doi.org/10.1016/0022-1031(82)90058-0)
- Fazio, R. H., & Dunton, B. C. (1997). Categorization by race: The impact of automatic and controlled components of racial prejudice. *Journal of Experimental Social Psychology*, 33(5), 451–470. <https://doi.org/10.1006/jesp.1997.1330>
- Fazio, R. H., Herr, P. M., & Olney, T. J. (1984). Attitude accessibility following a self-perception process. *Journal of Personality and Social Psychology*, 47(2), 277–286. <https://doi.org/10.1037/0022-3514.47.2.277>
- Fazio, R. H., & Hilden, L. E. (2001). Emotional reactions to a seemingly prejudiced response: The role of automatically activated racial attitudes and motivation to control prejudiced reactions. *Personality and Social Psychology Bulletin*, 27(5), 538–549. <https://doi.org/10.1177/0146167201275003>
- Fazio, R. H., Ledbetter, J. E., & Towles-Schwen, T. (2000). On the costs of accessible attitudes: Detecting that the attitude object has changed. *Journal of Personality and Social Psychology*, 78(2), 197–210. <https://doi.org/10.1037/0022-3514.78.2.197>
- Fazio, R. H., & Powell, M. C. (1997). On the value of knowing one’s likes and dislikes: Attitude accessibility, stress, and health in college. *Psychological Science*, 8(6), 430–436. <https://doi.org/10.1111/j.1467-9280.1997.tb00456.x>
- Fazio, R. H., Powell, M. C., & Williams, C. J. (1989). The role of attitude accessibility in the attitude-to-behavior process. *Journal of Consumer Research*, 16(3), 280–288. <https://doi.org/10.1086/209214>
- Fazio, R. H., & Roskos-Ewoldsen, D. R. (1994). Acting as we feel: When and how attitudes guide behavior. In S. Shavitt & T. C. Brock (Eds.), *Persuasion: Psychological insights and perspectives* (pp. 71–93). Allyn & Bacon.
- Fazio, R. H., & Williams, C. J. (1986). Attitude accessibility as a moderator of the attitude-perception and attitude-behavior relations: An investigation of the 1984 presidential election. *Journal of Personality and Social Psychology*, 51(3), 505–514. <https://doi.org/10.1037/0022-3514.51.3.505>
- Holland, R. W., Verplanken, B., & van Knippenberg, A. (2003). From repetition to conviction: Attitude accessibility as a determinant of attitude certainty. *Journal of Experimental Social Psychology*, 39(6), 594–601. [https://doi.org/10.1016/S0022-1031\(03\)00038-6](https://doi.org/10.1016/S0022-1031(03)00038-6)
- Houston, D. A., & Fazio, R. H. (1989). Biased processing as a function of attitude accessibility: Making objective judgments subjectively. *Social Cognition*, 7(1), 51–66. <https://doi.org/10.1521/soco.1989.7.1.51>
- Inbar, Y. (2016). Association between contextual dependence and replicability in psychology may be spurious. *Proceedings of the National Academy of Sciences of the United States of America*, 113(34), E4933–E4934. <https://doi.org/10.1073/pnas.1608676113>
- Iyengar, S. S., & Lepper, M. R. (1999). Rethinking the value of choice: A cultural perspective on intrinsic motivation. *Journal of Personality and Social Psychology*, 76(3), 349–366. <https://doi.org/10.1037/0022-3514.76.3.349>
- Katz, D. (1960). The functional approach to the study of attitudes. *Public Opinion Quarterly*, 24(2), 163–204. <https://doi.org/10.1086/266945>
- Kim, H. S., & Markus, H. R. (1999). Deviance or uniqueness, harmony or conformity? A cultural analysis. *Journal of Personality and Social Psychology*, 77(4), 785–800. <https://doi.org/10.1037/0022-3514.77.4.785>
- Kitayama, S., Snibbe, A. C., Markus, H. R., & Suzuki, T. (2004). Is there any “free” choice? Self and dissonance in two cultures. *Psychological Science*, 15(8), 527–533. <https://doi.org/10.1111/j.0956-7976.2004.00714.x>
- Lazarus, R. S. (1991). *Emotion and adaptation*. Oxford University Press.
- Mandel, N. (2003). Shifting selves and decision making: The effects of self-construal priming on consumer risk-taking. *Journal of Consumer Research*, 30(1), 30–40. <https://doi.org/10.1086/374700>

- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98(2), 224–253. <https://doi.org/10.1037/0033-295X.98.2.224>
- Miller, J. G., Bersoff, D. M., & Harwood, R. L. (1990). Perceptions of social responsibilities in India and in the United States: Moral imperatives or personal decisions? *Journal of Personality and Social Psychology*, 58(1), 33–47. <https://doi.org/10.1037/0022-3514.58.1.33>
- Morling, B., Kitayama, S., & Miyamoto, Y. (2002). Cultural practices emphasize influence in the United States and adjustment in Japan. *Personality and Social Psychology Bulletin*, 28(3), 311–323. <https://doi.org/10.1177/0146167202286003>
- Olson, M. A., & Fazio, R. H. (2004). Reducing the influence of extrapersonal associations on the Implicit Association Test: Personalizing the IAT. *Journal of Personality and Social Psychology*, 86(5), 653–667. <https://doi.org/10.1037/0022-3514.86.5.653>
- Oyserman, D., & Lee, S. W. S. (2008). Does culture influence what and how we think? Effects of priming individualism and collectivism. *Psychological Bulletin*, 134(2), 311–342. <https://doi.org/10.1037/0033-2909.134.2.311>
- Parker, J. R., Lehmann, D. R., & Xie, Y. (2016). Decision comfort. *Journal of Consumer Research*, 43(1), 113–133. <https://doi.org/10.1093/jcr/ucw010>
- Petrocelli, J. V., Tormala, Z. L., & Rucker, D. D. (2007). Unpacking attitude certainty: Attitude clarity and attitude correctness. *Journal of Personality and Social Psychology*, 92(1), 30–41. <https://doi.org/10.1037/0022-3514.92.1.30>
- Petty, R. E., & Krosnick, J. A. (1995). *Attitude strength: Antecedents and consequences*. Lawrence Erlbaum.
- Powell, M. C., & Fazio, R. H. (1984). Attitude accessibility as a function of repeated attitudinal expression. *Personality and Social Psychology Bulletin*, 10(1), 139–148. <https://doi.org/10.1177/0146167284101016>
- Riemer, H., & Shavitt, S. (2011). Impression management in survey responding: Easier for collectivists or individualists? *Journal of Consumer Psychology*, 21(2), 157–168. <https://doi.org/10.1016/j.jcps.2010.10.001>
- Riemer, H., Shavitt, S., Koo, M., & Markus, H. R. (2014). Preferences don't have to be personal: Expanding attitude theorizing with a cross-cultural perspective. *Psychological Review*, 121(4), 619–648. <https://doi.org/10.1037/a0037666>
- Roese, N. J., & Olson, J. M. (1994). Attitude importance as a function of repeated attitude expression. *Journal of Experimental Social Psychology*, 30(1), 39–51. <https://doi.org/10.1006/jesp.1994.1002>
- Roskos-Ewoldsen, D. R., & Fazio, R. H. (1992). On the orienting value of attitudes: Attitude accessibility as a determinant of an object's attraction of visual attention. *Journal of Personality and Social Psychology*, 63(2), 198–211. <https://doi.org/10.1037/0022-3514.63.2.198>
- Rucker, D. D., & Petty, R. E. (2004). When resistance is futile: Consequences of failed counterarguing for attitude certainty. *Journal of Personality and Social Psychology*, 86(2), 219–235. <https://doi.org/10.1037/0022-3514.86.2.219>
- Savani, K., Markus, H. R., & Conner, A. L. (2008). Let your preference be your guide? Preferences and choices are more tightly linked for North Americans than for Indians. *Journal of Personality and Social Psychology*, 95(4), 861–876. <https://doi.org/10.1037/a0011618>
- Savani, K., Morris, M. W., & Naidu, N. V. R. (2012). Deference in Indians' decision making: Introjected goals or injunctive norms? *Journal of Personality and Social Psychology*, 102(4), 685–699. <https://doi.org/10.1037/a0026415>
- Savani, K., Wadhwa, M., Uchida, Y., Ding, Y., & Naidu, N. V. R. (2015). When norms loom larger than the self: Susceptibility of preference–choice consistency to normative influence across cultures. *Organizational Behavior and Human Decision Processes*, 129, 70–79. <https://doi.org/10.1016/j.obhdp.2014.09.001>
- Schuetter, R. A., & Fazio, R. H. (1995). Attitude accessibility and motivation as determinants of biased processing: A test of the MODE Model. *Personality and Social Psychology Bulletin*, 21(7), 704–710. <https://doi.org/10.1177/0146167295217005>
- Shavitt, S., & Fazio, R. H. (1991). Effects of attribute salience on the consistency between attitudes and behavior predictions. *Personality and Social Psychology Bulletin*, 17(5), 507–516. <https://doi.org/10.1177/0146167291175005>
- Smith, M. B., Bruner, J. S., & White, R. W. (1956). *Opinions and personality*. Wiley.
- Snyder, M., & Kendzierski, D. (1982). Acting on one's attitudes: Procedures for linking attitude and behavior. *Journal of Experimental Social Psychology*, 18(2), 165–183. [https://doi.org/10.1016/0022-1031\(82\)90048-8](https://doi.org/10.1016/0022-1031(82)90048-8)
- Suurmond, R., van Rhee, H., & Hak, T. (2017). Introduction, comparison, and validation of meta-essentials: A free and simple tool for meta-analysis. *Research Synthesis Methods*, 8(4), 537–553. <https://doi.org/10.1002/jrsm.1260>
- Tormala, Z. L., & Rucker, D. D. (2007). Attitude certainty: A review of past findings and emerging perspectives. *Social and Personality Psychology Compass*, 1(1), 469–492. <https://doi.org/10.1111/j.1751-9004.2007.00025.x>
- Towles-Schwen, T., & Fazio, R. H. (2006). Automatically activated racial attitudes as predictors of the success of interracial roommate relationships. *Journal of Experimental Social Psychology*, 42(5), 698–705. <https://doi.org/10.1016/j.jesp.2005.11.003>
- Trafimow, D., Triandis, H. C., & Goto, S. G. (1991). Some tests of the distinction between the private self and the collective self. *Journal of Personality and Social Psychology*, 60(5), 649–655. <https://doi.org/10.1037/0022-3514.60.5.649>
- Triandis, H. C. (1995). *Individualism & collectivism*. Westview Press.
- Triandis, H. C., & Gelfand, M. J. (1998). Converging measurement of horizontal and vertical individualism and collectivism. *Journal of Personality and Social Psychology*, 74(1), 118–128. <https://doi.org/10.1037/0022-3514.74.1.118>
- Van Bavel, J. J., Mende-Siedlecki, P., Brady, W. J., & Reinero, D. A. (2016). Contextual sensitivity in scientific reproducibility. *Proceedings of the National Academy of Sciences of the United States of America*, 113(23), 6454–6459. <https://doi.org/10.1073/pnas.1521897113>
- Wasti, S. A., & Cortina, L. M. (2002). Coping in context: Sociocultural determinants of responses to sexual harassment. *Journal of Personality and Social Psychology*, 83(2), 394–405. <https://doi.org/10.1037/0022-3514.83.2.394>
- Wellen, J. M., Hogg, M. A., & Terry, D. J. (1998). Group norms and attitude–behavior consistency: The role of group salience and mood. *Group Dynamics: Theory, Research, and Practice*, 2(1), 48–56. <https://doi.org/10.1037/1089-2699.2.1.48>
- Young, A. I., & Fazio, R. H. (2013). Attitude accessibility as a determinant of object construal and evaluation. *Journal of Experimental Social Psychology*, 49(3), 404–418. <https://doi.org/10.1016/j.jesp.2012.12.009>
- Zanna, M. P., Olson, J. M., & Fazio, R. H. (1980). Attitude–behavior consistency: An individual difference perspective. *Journal of Personality and Social Psychology*, 38(3), 432–440. <https://doi.org/10.1037/0022-3514.38.3.432>
- Zhou, X., Vohs, K. D., & Baumeister, R. F. (2009). The symbolic power of money: Reminders of money alter social distress and physical pain. *Psychological Science*, 20(6), 700–706. <https://doi.org/10.1111/j.1467-9280.2009.02353.x>

Received December 31, 2022

Revision received August 21, 2023

Accepted August 28, 2023 ■