

## **Hiding from the Truth: When and How Cover Enables Information Avoidance**

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## ABSTRACT

More information is available today than ever before, yet at times consumers choose to avoid it. Even with useful information (“I should find out”), people may prefer ignorance (“But I don’t want to”). Seven studies ( $N=4271$ ) and five supplemental studies ( $N=3013$ ) apply the concept of “cover” to information avoidance for consumer choices with real financial consequences. More consumers avoid information with cover—that is, when they can attribute their decision to another feature of a product or decision context rather than to information they want to avoid. Cover increases avoidance when consumers face intrapersonal conflict—when consumers want to avoid information that they believe they should receive (e.g., calorie information). As such, the effect of cover is reduced by decreasing want-should conflict, whether by reducing the should-preference to receive information or the want-preference to avoid it. Further, cover increases avoidance by helping consumers justify a decision to themselves: avoidance increases only when people can attribute their decision to a relevant (vs. irrelevant) product feature, and operates in public and private settings. Together, this research offers theoretical insights into consumers’ information avoidance and how cover itself operates, with practical implications for marketers.

*Keywords:* information avoidance, consumer motivation, want/should conflict, cover

Information search is an important component of the consumer decision journey and research on consumers' search for information is abundant (Beatty and Smith 1987; Moorthy, Ratchford, and Talukdar 1997; Urbany, Dickson, and Wilkie 1989). Despite a focus on information seeking behaviors, instances of information avoidance have also been documented (Ehrich and Irwin 2005; Golman, Hagmann, and Loewenstein 2017; Huang 2018; Sweeny, Melnyk, Miller, and Shepperd 2010). For example, consumers fail to request ethical attribute information during product search (Ehrich and Irwin 2005; Zane, Irwin, and Reczek 2016), even among consumers who report valuing this information.

When information is useful or relevant ("I should find out"), consumers may still prefer ignorance ("But I don't want to"). Consider a choice between two restaurant menus where one provides calorie information and the other does not. Knowing the calories in each item can help consumers choose in line with their health goals. Nevertheless, because knowing the calories can prevent people from choosing an option preferred for taste, or hinder their enjoyment of the meal, people may avoid this information (Loewenstein and O'Donoghue 2006; Thunström et al. 2016; Woolley and Risen 2018).

When consumers avoid information, we tend to assume they are aware they are doing so, as indicated by terms used to study the phenomenon – *strategic*, *willful*, or *deliberate* ignorance (Ehrich and Irwin 2005; Golman et al. 2017; Hertwig and Engel 2016). Yet some scholars suggest information avoidance can be driven by "nonconscious" (Sweeny et al. 2010) or "implicit" (Howell, Ratliff, and Shepperd 2016) processes. Thus, estimating information avoidance by explicitly asking consumers whether or not they want such information, as typically done, may provide a lower bound for a more common behavior.

Building from this premise, we propose that more consumers will avoid information when they can justify their decision without having to acknowledge that they are avoiding information. While we know that consumers seek justifications for their choices (Kivetz and Zheng 2006; Okada 2005; Tetlock and Boettger 1989; Tetlock and Kim 1987) and choose in ways that are easy to explain (Slovic 1975), it is unclear what serves (and fails to serve) as a justification, and therefore, what is more versus less likely to affect avoidance. Thus, to better understand the processes behind information avoidance, we draw on research on motivated reasoning and attributional ambiguity demonstrating that people use “cover” to flexibly interpret situations and act out desired behavior (Kunda 1990; Snyder, Kleck, Strenta, and Mentzer 1979). We define decisions that provide “cover” as those in which consumers can attribute their choice to another relevant feature in the environment (e.g., another product attribute) rather than to the real reason for their choice. In other words, cover provides consumers with an alternative justification for their decision.

We introduce the concept of cover to the literature on consumer information avoidance to test whether avoidance is more common when it does not need to be acknowledged. In doing so, we offer insights into the motivated nature of information avoidance, and advance overall understanding of how cover itself operates. We develop a theory about the nature of cover, which has not been offered or tested before; specifically, we demonstrate that cover affects behavior primarily in situations when people want to act in a way that they believe they should not and that cover operates by providing a reasonable alternative justification to the self.

This research makes three primary contributions. First, we contribute to the field’s understanding of the motives and processes that underlie information avoidance by connecting research on information avoidance with the literature on want-should conflict. Second, by

examining how people use cover to justify their desire to avoid information, we contribute to the literature on how people manage conflicting motives, and specifically to prior research demonstrating the opposite effect, where people resolve conflict in favor of their long-term goals. Finally, by providing a theory for how cover operates in the context of information avoidance, we contribute to our broader understanding of how cover operates as a tool for motivated reasoning in other want-should conflict domains.

In what follows, we conceptualize the notion of cover, connecting research on information avoidance to the literatures on want-should conflict (Bazerman, Tenbrunsel, and Wade-Benzoni 1998; Cryder, Botti, Simonyan 2017; Khan, Dhar, and Wertenbroch 2005; see also Reczek, Irwin, Zane, and Ehrich 2018), motivation and self-control (Fishbach and Converse 2010; Fishbach, Zhang, and Trope 2010; Myrseth, Fishbach, and Trope 2009; Zhang, Huang, and Broniarczyk 2010), and motivated reasoning (Kunda 1990; Russo, Medvec, and Meloy 1996; Snyder et al. 1979) to offer theoretical insights into the processes underlying consumer information avoidance. We then present evidence from seven studies, providing a theory for when and how cover affects information avoidance. We conclude with a discussion of theoretical and practical implications of cover on avoidance, and discuss how these insights into cover operate more broadly.

## **THEORETICAL BACKGROUND**

### Using Cover to Justify Behavior

People adopt ideas, evidence, and standards to support their preferred conclusion (Kunda 1990; Russo et al. 1996) and flexibly interpret situations to justify their behavior (Gino, Norton,

and Weber 2016; Merritt, Effron, and Monin 2010). For example, prior research demonstrated that in discriminating against female job candidates, people used any acceptable criteria to facilitate their choice of a male candidate (Norton, Vandello, and Darley 2004). By relying on cover, decision makers felt objective and fair despite being discriminatory. Cover provided an illusion of objectivity—those who perceived their judgments as free from bias actually displayed the most bias in hiring (Uhlmann and Cohen 2005).

In another demonstration more directly testing the construct of “cover” on behavior, participants chose which of two rooms to sit in to watch a movie (Snyder et al. 1979). One room held a person in a wheelchair; the other room was empty. Participants learned either that the same movie would play in both rooms (no cover for avoiding the disabled person) or that each room would play a different movie, offering cover to participants. When the movies were different (so that participants had cover), they were more likely to choose to watch the movie alone. Having cover allowed them to discriminate without acknowledging this was the reason for their choice. Instead, they could attribute their choice to differences in movies rather than to a room’s occupants. However, because the experimenters counterbalanced which room played which movie, they could conclude that the movie itself did not drive choice; those with cover were avoiding interacting with a disabled person.

Researchers have used paradigms that provide people with cover to study numerous instances of discriminatory behavior that people prefer not to acknowledge (table 1). In these studies, cover was provided by manipulating additional features of the situation or decision context, such that people could make their preferred decision without appearing to be driven by morally questionable motivations.

TABLE 1: EXAMPLES OF RESEARCH EXAMINING THE EFFECT OF “COVER” ON DECISIONS

Authors	DV	Manipulation	Finding	Motive
Snyder et al. 1979	Choice of room; one room contained a disabled person.	Cover: Different movie playing in each room No-Cover: Same movie playing in each room	Participants in the two-movie (vs. one-movie) condition were more likely to avoid sitting next to the handicapped person.	Prejudice; discrimination
Bernstein et al. 1983	Choice of room; one room contained an attractive female.	Cover: Different movie playing in each room No-Cover: Same movie playing in each room	Male participants in the two-movie (vs. one-movie) condition were more likely to sit next to the attractive female.	Desire to sit next to an attractive female
Batson et al. 1986	Choice of room; one room held a black confederate, the other a white confederate.	Cover: Different movie playing in each room No-Cover: Same movie playing in each room	White participants in the two-movie (vs. one-movie) condition were more likely to avoid a black confederate.	Prejudice; discrimination
Fincher and Tetlock 2015	Choice of more or less violent prison (study 1).	Cover: Five factors differed between prisons, including level of violence No-Cover: Prisons differed only on level of violence	Participants chose the violent prison more when prisons differed on 5 (vs. 1) factor.	Discrimination against prisoners (i.e., retributivist punishment)
Norton et al. 2004	Choice of more highly educated candidate (study 1).	Cover: Male (vs. female) candidate had more education and less experience or less education and more experience	Participants chose the more educated/experienced candidate more when the candidate was male (vs. female).	Gender discrimination

Whereas this previous research focused on discriminatory behavior, we suggest cover applies more broadly. Indeed, Snyder’s (1979) paradigm was not intended to examine avoidance of stigmatized people, but instead served as a “general motive detection strategy” to unearth different behaviors that people preferred not to acknowledge. Bernstein et al. (1983) used the same two-movie paradigm to study a very different motivation, replacing the stigmatized confederate with an attractive woman. Here, male participants were *more*, rather than less, likely to sit next to the confederate when different (vs. the same) movies were playing.

We suggest one reason why the literature on cover has centered on discrimination is that this is a common instance when people experience an intrapersonal want-should conflict; cover allows people to act in line with a want-preference, despite holding a should-preference not to discriminate. With this in mind, we examine cover in the context of information avoidance. We predict that more consumers avoid information when they “have cover” in that they can attribute

their decision to another feature of a product or decision context rather than to the information they want to avoid. That is, we suggest that consumers often want to avoid information without acknowledging their motive to avoid information. Cover allows them to do both.

### Experiencing a Want-Should Conflict over the Decision to Receive Information

The literature on information avoidance is replete with examples of consumers avoiding information relevant for their health and well-being. People avoid calorie information to better enjoy their meals (Thunström et al. 2016). They avoid medical testing, fearing a positive diagnosis (Brashers, Goldsmith and Hsieh 2002; Oster, Shoulson, and Dorsey 2013) and they even avoid “ultraviolet (UV) photographs” showing potentially threatening sun damage to their skin (Dwyer, Shepperd, and Stock 2015). Beyond physical health concerns, people avoid looking at their financial portfolios when the stock market is down, an “ostrich effect” (Karlsson, Loewenstein and Seppi 2009) and they avoid learning whether consumer products are ethically sourced before buying (Ehrich and Irwin 2005) or how their decisions will affect others in economic games (Dana, Weber, and Kuang 2007). Scholars have detailed numerous motives for information avoidance (Golman et al. 2017; Sweeny et al. 2010), whether it be to protect emotions (Dana et al. 2007; Huang 2018; Thunström et al. 2016), decisions (Howell and Shepperd 2013a; Woolley and Risen 2018), or beliefs (Oster et al. 2013).

Of course, there are also reasons to learn information. Learning the calories in a meal can help consumers make healthier decisions, and learning about potential sun damage to skin can help them prevent additional damage. Not only can information improve a decision, it can also

provide hedonic benefits, such as satisfying curiosity (Hsee and Ruan 2016; Kruger and Evans 2009; Loewenstein 1994; Ruan, Hsee, and Lu 2018).

People can thus have conflicting motives, experiencing a *want* preference to avoid information and a *should* preference to acquire it (Bazerman et al. 1998; Bitterly, Mislavsky, Dai, and Milkman 2015). Should-preferences are more reason-based, logical, appropriate, and easily justified, whereas want-preferences are driven by current feelings and desires. This conflict has also been explained as a conflict between two different selves with competing preferences (Fudenberg and Levine 2006; Thaler and Shefrin 1981) or between reason and emotion (Hsee, Yang, Zheng and Wang 2015; Shiv and Fedorikhin 1999). When considering whether to receive or avoid calorie information, for example, the should-preference is to learn calorie information to make an informed, health-conscious decision. In contrast, the want-preference is to avoid the information to promote indulgence or enjoyment.<sup>1</sup>

Since people strive to see themselves as thoughtful and rational, should-preferences often guide choice (Hsee et al. 2015). Such decisions are easier to acknowledge and defend, as they are more objective and unequivocal. In contrast, decisions driven by want-preferences can lead people to feel wasteful, irresponsible, and immoral (Herrnstein and Prelec 1991; Kivetz and Simonson 2002). For example, although healthy and unhealthy food both offer benefits to the consumer, eating unhealthy food is more difficult to justify, because the pleasure and enjoyment

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<sup>1</sup> Despite arguing that people experience a want-should conflict over the decision to avoid information, we do not suggest that information avoidance itself is a bias. Avoiding information can be rational (e.g., when it protects emotions) or irrational (e.g., when it causes consumers to neglect useful information). Indeed, it is also possible for people to feel conflict in the opposite direction, such that they want to learn something (e.g., “I’m so curious”), that they believe they shouldn’t learn (e.g., “I know it would bias my decision”). For example, people may want to know the gender or race of a job applicant, but believe they should stay ignorant while they evaluate a CV for the sake of fairness. We return to discuss this form of conflict in the General Discussion.

provided comes at the expense of long-term health (McClure et al. 2007; Mishra and Mishra 2011; Okada 2005; Prelec and Loewenstein 1998; Shiv and Fedorikhin 1999).

In line with this, people can develop self-control strategies leading them to, implicitly or explicitly, resolve conflict in favor of a should-preference (Fishbach and Trope 2005; Fishbach et al. 2010; Trope and Fishbach 2000). Specifically, research on counteractive evaluation (Fishbach et al. 2010), counteractive self-control (Fishbach and Converse 2010; Myrseth et al. 2009), and counteractive construal (Zhang et al. 2010) found that when faced with a want preference (i.e., temptation), consumers implicitly or explicitly exaggerated the negative value of a temptation to resolve the conflict in favor of the long-term goal. In other words, according to this line of research, people alter their perceptions of temptations and goals to improve self-control, reducing the strength of temptation and bolstering the strength of the goal to resolve conflict in favor of the should preference. For example, dieters experiencing a stronger conflict because they expected to have an opportunity to consume a cookie construed the cookie as containing more calories (Zhang et al. 2010). In contrast, we examine the opposite: whether consumers will use cover to resolve conflict in favor of a want-preference to avoid information. Although should-preferences are generally easier to justify, we argue that cover can provide ambiguity to help consumers justify their want preferences.

#### Using Cover to Justify Information Avoidance for a Want-Should Conflict

We theorize that cover increases avoidance specifically when consumers have conflicting motives—when they want to avoid information that they believe they should receive. Suggestive support for this prediction comes from the literature on memory malleability, where Reczek et al.

(2018) found that consumers were motivated to forget or misremember unethical product attribute information. Whereas consumers want to avoid negative affect associated with such information, at the same time, they believe they should remember it to do the right thing. This prior research thus demonstrated that want-should conflict can interfere with memory processes, such that consumers failed to recall or incorrectly remembered unethical attribute information that they had been required to examine. We instead suggest that experiencing a want-should conflict can cause consumers to avoid information in the first place. Further, we suggest that experiencing a want-should conflict can cause more consumers to avoid information when they have cover.

To test this prediction, we operationalize cover in our studies by offering participants a decision between two options: one option provides information that participants feel they should receive, but want to avoid (e.g., calories on a restaurant menu) and the other does not. For example, consider two restaurants. When there is no cover, the presence or absence of calories on the menu is the only substantive feature that distinguishes the two restaurants. Thus, participants' choice can only be driven by the desire to receive or avoid calorie information. When cover is provided, however, participants receive additional information about each restaurant unrelated to calories (counterbalanced across participants). Thus, participants can choose the option that does not provide calorie information, but attribute their choice to another feature of the restaurant rather than to the information they want to avoid. Because we counterbalance the additional, non-calorie information, we can conclude that no particular added feature drives choice. This allows us to test whether more people avoid information when they can attribute their avoidance to another feature of the decision rather than to the information that

they are conflicted about receiving. Overall, we develop a theory for how intrapersonal conflict drives information avoidance and formalize our predictions as follows:

- H1:** More consumers avoid information when they have (vs. do not have) cover, suggesting that avoidance is greater when consumers do not need to acknowledge their avoidance.

We examine this prediction in three important consumer contexts: 1. Decision to avoid calorie information, which is relevant from a health and policy perspective as chain restaurants are required to provide calorie information (FDA 2018), and calorie labels are used as a policy tool to combat obesity (CDC 2015), 2. Decision to avoid specific marketing or policy messages that provide useful, but potentially threatening information (mirroring corporate social responsibility initiatives or cause-related marketing campaigns that raise awareness for causes such as environmental conservation and diabetes; Drumwright 1996; Du, Bhattacharya and Sen 2011; Krishna 2011), 3. Decision to avoid a free, personal UV photograph that details underlying skin damage, drawing on interventions examining the effectiveness of providing UV photographs at beaches (Emmons et al. 2011; Mahler, Kulik, Gerrard, and Gibbons 2006) and reports of cancer screenings offered at beaches (Dana-Farber Cancer Institute 2019).

Our theory predicts that cover increases avoidance of information that people want to avoid but believe they should receive. Consistent with this theorizing, we predict that reducing pressure from either the should- or want-self attenuates the effect of cover on avoidance:

- H2a:** Reducing pressure from the should-self moderates the effect of cover on avoidance. When consumers do not think they should receive information, they are willing to avoid information even without cover.
- H2b:** Reducing pressure from the want-self moderates the effect of cover on avoidance. When the information does not seem unpleasant, consumers are willing to receive the information even with cover.

According to hypothesis 2a, when consumers do not think they should receive information, such as when deciding whether to receive calorie information during a special occasion, the effect of cover on avoidance will be attenuated; people will avoid information even without cover. On the other hand, according to hypothesis 2b, when information is no longer unpleasant or threatening to receive, such as when it is for someone else rather than for the self, the effect of cover on avoidance will also attenuate. This time, people are no longer motivated to avoid information, thus they will *seek out* information even with cover.

Next, to further refine our theory of when and how cover operates, we examine what constitutes “cover.” We propose that cover operates by allowing people to avoid information while attributing their decision to another relevant decision feature. Thus, situations that vary features of the choice set in addition to the focal difference (i.e., whether or not information is provided) characterize opportunities for cover. Yet not all product features provide reasonable justifications for decisions. Situations can vary irrelevant or unimportant features of the choice set. Because irrelevant product features do not serve as sufficient justification for a decision, when those features differ across options, this will not provide cover nor increase avoidance:

**H3:** More consumers avoid information when they have a reasonable justification to do so (i.e., when “cover” allows them to attribute their decision to another relevant feature of the product or decision context). However, avoidance does not increase when additional features are irrelevant because that does not provide justification.

Finally, we have suggested more people avoid information with cover because they do not want the information, but do not want to acknowledge to themselves that they are avoiding information they “should” receive. However, it is unclear whether people are managing self-perceptions, or perceptions of other people (Baumeister 1982; Tetlock 1985). That is, are people

reluctant to acknowledge to *themselves* their true motivations for avoidance, or are they reluctant to acknowledge these motivations to *others*? In Snyder et al.'s (1979) original movie-choice paradigm, participants made their choice of room publicly, making it impossible to determine whether cover revealed discriminatory motives that participants were hiding from themselves, or from the experimenter, in the no-cover condition. Indeed, the authors do not attempt to characterize whether cover operated by providing participants a justification to themselves or to others.

In the current work, we test whether cover operates by providing a justification to the *self*. First, most of our studies involve private choices. If cover increases avoidance when choices are private, this suggests that cover operates in part by providing justifications to the self. Second, we compare between private and public choice conditions. If cover increases avoidance primarily because it lets people avoid information without acknowledging to others that they are doing so, then cover should have a *bigger* effect when choices are public. However, because we reason that increased avoidance with cover is driven by self-perception motivations or at least by an internalization of others' judgments (Schlenker 1980; Simonson 1989), we predict that cover increases avoidance similarly for public and private choices:

- H4:** Cover increases information avoidance at a similar rate for decisions that are more (vs. less) public, suggesting that cover operates by managing self-perception concerns.

Given we predict a null effect, that cover leads to a similar rate of avoidance when deciding in private and in public, we test hypothesis 4 with Bayesian analyses, which can offer statistical support in favor of the null hypothesis (Jeffreys 1998).

Seven main studies, and five supplemental studies, tested these predictions in important consumer goal domains (healthy eating, purchase decisions, sun protection behaviors). First, we establish that more consumers avoid information when they have (vs. do not have) cover in three incentive-compatible designs, highlighting real consequences to consumers, and using multiple manipulations of cover (studies 1a-1c). We then provide process evidence, demonstrating that the effect of cover on avoidance is attenuated by decreasing intrapersonal conflict, whether by reducing the should-preference to receive information (study 2) or the want-preference to avoid it (study 3). Finally, to test how cover operates, we examine boundaries of the effect, demonstrating that cover requires that there is a reasonable justification (study 4) and that cover facilitates avoidance for public and private decisions (study 5). Outside of study 3, all studies were pre-registered and we reported every independent and dependent variable collected. All studies recruited 200 participants per condition, except study 1b where recruitment constraints limited our sample to 100 per condition. All data files, materials, and preregistration files are at OSF: <https://osf.io/sy2dj/>.

## **STUDY 1: AVOIDANCE WITH COVER IN INCENTIVE-COMPATIBLE CONTEXTS**

We tested our hypothesis that cover increases information avoidance in an incentive compatible context online (study 1a), with students making a real purchase decision in a lab experiment (study 1b), and with beachgoers choosing a free snack (study 1c). We predicted that more people avoid information with cover in these incentive compatible contexts (hypothesis 1).

We first confirmed in a pretest of 201 workers from Amazon's Mechanical Turk (MTurk) that each scenario captured a want-should conflict over the decision to receive or avoid

information. We presented participants with the decision scenarios from each study (study 1a: Decision to choose a restaurant that displays calorie information; study 1b: Decision to purchase a water bottle with information about the world water crisis; study 1c: Decision to receive a snack with a label warning of the dangers of consuming added sugar). In this and all subsequent pretests, we defined a should preference for participants as “reason-based, logical, or more appropriate” and a want preference as “driven by current feelings and desires.” For each scenario, participants answered what they would choose if they were following a want preference and what they would choose if they were following a should-preference from 1 = “do not receive information” to 7 = “receive information” (see web appendix A1 for exact wording and results).

For each scenario, we tested whether people experienced a conflict between the want preference to avoid information and the should preference to receive information. Paired-sample t-tests resulted in the predicted divergence: study 1a:  $M_{\text{want}} = 4.82$ ;  $M_{\text{should}} = 5.73$ ;  $t(200) = -6.35$ ,  $p < .001$ ,  $d = .45$ ; study 1b:  $M_{\text{want}} = 4.00$ ;  $M_{\text{should}} = 5.71$ ;  $t(200) = -10.98$ ,  $p < .001$ ,  $d = .77$ ; study 1c:  $M_{\text{want}} = 2.90$ ;  $M_{\text{should}} = 5.31$ ;  $t(200) = -14.11$ ,  $p < .001$ ,  $d = 1.00$ .

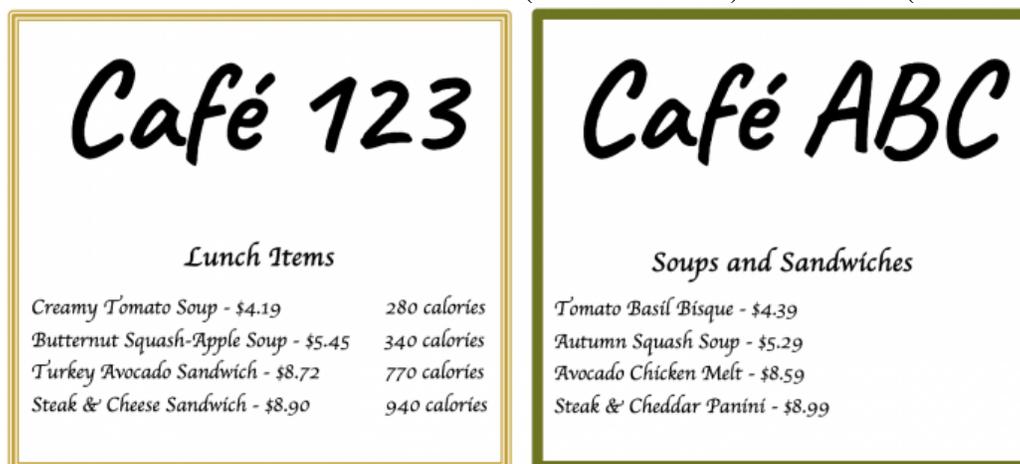
We also created a difference score (want preference minus should preference) to examine the proportion with scores below 0, representing conflict in the predicted direction (i.e., wanting to avoid information more than they thought they should). Across these situations, more people experienced a conflict in the predicted direction (i.e., a negative difference score; study 1a: 39.3%; study 1b: 56.7%; study 1c: 64.7%) than a conflict in the opposite direction (i.e., wanting to receive information more than they thought they should; a positive difference score; study 1a: 11.9%; study 1b: 8.0%; study 1c: 4.5%). Confirming these situations created conflict between the desire to avoid information and the belief that one ought to receive it, we tested our main hypothesis that information avoidance occurs at a greater rate when people have cover.

## Study 1a: Avoiding Calories when Choosing a Restaurant Gift Card

*Method.* We preregistered our data collection and analysis plan and recruited 401 US MTurk workers ( $M_{\text{age}} = 34.76$ ; 46.9% female). Participants also received a Panera Bread gift card based on their choices (\$2 value). We report attrition for all studies following Zhou and Fishbach (2016), which did not differ by condition (web appendix B1).

We assigned participants to condition in a 2 (cover vs. no-cover) between-subjects design. Participants viewed information and partial menus for two nation-wide cafés and chose which café they preferred to go to. They learned that they would receive an electronic gift card (\$2 value) to the café they selected. For each café, they saw the following information: 4-star overall rating; medium-priced; cuisine: bakery and sandwiches; good for lunch; good for groups. Each menu contained a partial listing of similar food items at the same average price (e.g., creamy tomato soup vs. tomato basil bisque). One restaurant provided calorie information for each menu item and the other restaurant did not (counterbalanced across conditions; figure 1).

FIGURE 1: EXAMPLE OF MENUS WITH (VS. WITHOUT) CALORIES (STUDY 1A)



In the no-cover condition, the only substantive difference between the restaurants was the presence or absence of calorie information on the menu. In the cover condition, however,

participants saw additional information that differed between the two restaurants. One restaurant had a rating of 3.8/5 for atmosphere and 4.7/5 for service and the other restaurant had a rating of 4.7/5 for atmosphere and 3.8/5 for service (ratings counterbalanced; table 2).<sup>2</sup> Participants selected the restaurant they preferred to receive a gift card to. We measured information avoidance as the percent of people selecting the restaurant without calorie information.

TABLE 2: EXAMPLES OF COVER VERSUS NO-COVER CONDITIONS (STUDY 1A)

Example of Cover Condition		Example of No-Cover Condition	
Café 123	Café ABC	Café 123	Café ABC
★★★★★	★★★★★	★★★★★	★★★★★
\$-\$\$	\$-\$\$	\$-\$\$	\$-\$\$
Cuisine: <b>Bakery &amp; Sandwiches</b>			
Atmosphere: <b>4.7/5</b>	Atmosphere: <b>3.8/5</b>	Good for <b>Lunch</b>	Good for <b>Lunch</b>
Service: <b>3.8/5</b>	Service: <b>4.7/5</b>	Good for groups: <b>Yes</b>	Good for groups: <b>Yes</b>
Good for <b>Lunch</b>	Good for <b>Lunch</b>		
Good for groups: <b>Yes</b>	Good for groups: <b>Yes</b>		

We measured concern about calorie information and dieting status as covariates (additional ancillary questions reported in web appendix C1). Participants learned they selected Panera Bread and were emailed a \$2 gift card; those who did not want the gift card could instead receive \$0.50 to their Amazon account (77.3%;  $n = 310$ ; opted for the gift card).<sup>3</sup>

<sup>2</sup> Across studies 1-5, there was no significant effect of counterbalancing ratings on avoidance, and we collapsed across ratings in our analysis for all studies. In the current study, 40.0% avoided information when restaurant A was rated higher on atmosphere versus 47.0% when restaurant B was rated higher on atmosphere ( $\chi^2(1, N = 200) = 1.00, p = .318, \phi = .07$ ). We report these results for studies 1b-5 in web appendix B2.

We note that study 1a manipulated cover by providing information on atmosphere and service in the cover condition, with no corresponding information on these ratings in the no-cover condition. Supplemental study S4 in web appendix E4 examines calorie avoidance when balancing service and atmosphere ratings across manipulations of cover. In other words, participants without cover in supplemental study S4 still saw ratings of service and atmosphere, but the ratings were the same for both restaurants. The results of cover on avoidance were the same.

<sup>3</sup> There was no effect of cover on the decision to receive the gift card or not, and the effect of cover on avoidance held when controlling for gift card decision ( $B = .31, SE = .13, Wald = 5.64, p = .018, OR = 1.36$ ), with no effect of gift card decision ( $B = -.15, p = .257, OR = .86$ ), or cover  $\times$  decision interaction ( $B = .13, p = .317, OR = 1.14$ ).

*Results and Discussion.* Supporting hypothesis 1, more people chose to receive a gift card for a café without calorie information in the cover (43.5%) versus no-cover condition (32.8%;  $\chi^2(1, N = 401) = 4.83, p = .028, \phi = .11$ ). This effect was robust to the inclusion of dieting status ( $B = .21, SE = .11, Wald = 3.84, p = .050, OR = 1.23$ ), and marginal when controlling for concern about calorie information ( $B = .20, SE = .11, Wald = 3.45, p = .063, OR = 1.22$ ). There was no significant effect or interactions involving counterbalancing (table 3). We replicate these results in supplemental study S1 (web appendix E1), a scenario study where more people chose a restaurant without calories on its menu when they had cover than when they did not.

TABLE 3: REGRESSION PREDICTING CALORIE INFORMATION AVOIDANCE CONTROLLING FOR COUNTERBALANCING (STUDY 1A)

Variables	<i>B</i>	Wald	Odds Ratio
Condition (1 = cover; -1 = no-cover)	.23*	4.96	1.26
Side (1 = left; -1 = right)	.07	.39	1.07
Menu with calories (1 = cafe A; -1 = B)	.15	2.13	1.16
Condition × Side	.02	.02	1.02
Condition × Menu with calories	-.03	.07	.97
Side × Menu with calories	-.11	1.07	.90
Condition × Menu with calories × Side	.09	.69	1.09

*Note:* Manipulated variables contrast coded; \*  $p < .05$ . Side indicates whether the menu with calorie information was presented on the left or right side of the screen. Menu with calories indicates which restaurant listed calorie information on its menu.

The current study demonstrated that having cover increased avoidance when real money was at stake. In our next study, we replicate and extend this finding to another consequential consumer choice: product purchase. In addition, we address a limitation present in study 1a, where conditions differed in the number of attributes consumers needed to consider. Study 1b holds constant the number of attributes across the manipulation of cover.

Study 1b: Avoiding a Water Crisis Label in a Lab Purchase

In study 1b, participants made a real purchase decision between two water bottles. One bottle provided information about the world water crisis, which, in our pretest, people wanted to avoid, but believed they should receive. This choice mirrors purchase decisions consumers frequently encounter when buying products that use marketing messages to raise awareness about threatening or uncomfortable issues through corporate social responsibility initiatives or cause-related marketing campaigns. These are becoming more prevalent, with Fortune Global 500 firms spending around \$20 billion a year on CSR activities (Meier and Cassar 2018). This scenario in particular was inspired by Starbucks, which sells a water bottle, Ethos Water, that raises awareness about the world water crisis with information about clean water on its label.

*Method.* We preregistered this study and recruited 203 undergraduate and graduate students ( $M_{\text{age}} = 22.94$ ; 60.1% female) to participate for \$6. Participants learned they would use part of their earnings to make a purchase and would receive at least \$4 and their purchase.

We assigned participants to condition in a 2 (cover vs. no-cover) between-subjects design. Participants learned they would purchase a water bottle using part of their study payment. Participants read that the study was for a water bottle company that provided different labels for its bottles. One of the water bottles had a label that provided information about the world water crisis, where people around the world have limited access to clean water. Participants learned that the same company sold another plastic water bottle with a label that did not provide information about the water crisis.

Participants viewed specific information about the two water bottles. Across conditions, participants saw the water was sourced from natural spring water. One bottle provided a label about the water crisis while the other bottle did not. We manipulated cover by providing participants in the cover condition with counterbalanced information about the bottle size (8oz

vs. 12oz) and price (\$1.26 vs. \$1.91). In the no-cover condition, participants also saw price and size attributes to hold the number of attributes participants needed to manage constant across conditions, dealing with a limitation of study 1a. In the no-cover condition, price and size information were matched (both bottles were either 8oz at \$1.26 or 12oz at \$1.91), such that for these participants, the only meaningful difference between the water bottles was the presence of the water crisis label (table 4).

TABLE 4: EXAMPLES OF COVER VERSUS NO-COVER CONDITIONS (STUDY 1B)

Cover Condition Example		No-Cover Condition Example	
Bottle A	Bottle B	Bottle A	Bottle B
Source: <b>Natural spring water</b>	Source: <b>Natural spring water</b>	Source: <b>Natural spring water</b>	Source: <b>Natural spring water</b>
Clean water crisis label: <b>Yes</b>	Clean water crisis label: <b>No</b>	Clean water crisis label: <b>Yes</b>	Clean water crisis label: <b>No</b>
Price: <b>\$1.91</b>	Price: <b>\$1.26</b>	Price: <b>\$1.26</b>	Price: <b>\$1.26</b>
Size: <b>12oz</b>	Size: <b>8oz</b>	Size: <b>8oz</b>	Size: <b>8oz</b>

Participants then chose a water bottle to purchase. We measured information avoidance as the percent of people selecting the water bottle that did not have a water crisis label. We included ancillary questions reported in web appendix C2 and measured thirst as a potential covariate (1 = “not at all thirsty” to 7 = “very thirsty”).

*Results and Discussion.* As predicted, more people avoided the bottle with a water crisis label in the cover condition (46.0%) than in the no-cover condition (31.1%;  $\chi^2(1, N = 203) = 4.78, p = .029, \phi = .15$ ). This effect held when controlling for how thirsty participants were ( $B = .32, SE = .15, Wald = 4.73, p = .030, OR = 1.37$ ). A logistic regression controlling for counterbalancing of water bottle with water crisis label again resulted in a significant effect of cover ( $B = .34, SE = .15, Wald = 5.11, p = .024, OR = 1.40$ ) with no significant effect of

counterbalancing (Bottle A vs. Bottle B;  $B = -.27$ ,  $SE = .15$ ,  $Wald = 3.24$ ,  $p = .072$ ,  $OR = .76$ ) or interaction ( $B = .18$ ,  $SE = .15$ ,  $Wald = 1.48$ ,  $p = .224$ ,  $OR = 1.20$ ).

Study 1b demonstrated the effect of cover on information avoidance when matching the number of attributes across the cover and no-cover conditions. This suggests it is the difference across attributes, rather than the number of attributes, that facilitates greater avoidance with cover. Our next study provides a field test of our prediction that people are more likely to avoid information when they have cover (vs. not), this time using information about social norms (rather than a relevant product feature) to provide cover.

#### Study 1c: Avoiding a Warning Label about Sugar in a Field Setting

In study 1c, participants made a real decision between two identical fruit snack candies. One came with a graphic warning label<sup>4</sup> advertising the dangers of consuming food with added sugars, which our pretest confirmed people wanted to avoid, but believed they should receive. The other did not come with such a label. We used a new manipulation of cover than in studies 1a-1b, manipulating cover through social norms: in the cover condition, one candy was advertised as more popular than the other (counterbalancing whether the labeled or unlabeled snack was said to be more popular). In the no-cover condition, we did not provide information about candy popularity; the warning label was the only difference between candies. We used social norms for cover because 1) they are easy to counterbalance in the field, 2) they do not alter the diagnostic information about the products, 3) they are considered relevant to decision making, and 4) they provide flexible justifications.

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<sup>4</sup> Warning labels to reduce sugar consumption have been proposed by several local and state governments (Donnelly et al. 2018).

If our manipulation affected decisions by serving as a true social norm, then more people should choose the snack without a warning label when the unlabeled snack was the popular choice (and vice versa when told the labeled snack was the popular choice). Instead, we predicted that our manipulation of social norms would affect decisions by providing cover. That is, we expected that information revealing that either snack was more popular than the other would make the snacks different on a dimension other than whether they included a graphic warning label and would therefore provide participants with an alternative justification for avoiding information (e.g., “I’ll go with the popular one” or “I want to be different from the crowd”). Thus, we predicted that more people would avoid the snack with a graphic warning label in both of the counterbalanced cover (vs. no-cover) conditions.

*Method.* We preregistered this study and recruited 491 adults from a public beach in a large Midwestern city in the United States. As pre-registered, we excluded participants who did not choose a snack, leaving a sample of 462 ( $M_{\text{age}} = 31.81$ ; 64.9% female).

We assigned participants to condition in a 2 (cover vs. no-cover) between-subjects design. Participants learned they would make a choice and receive a free fruit snack candy, and that they could choose their candy from one of two bags. Research assistants carried clear bags so that participants could see each bag’s contents. One bag contained candy with information warning about the dangers of eating foods with added sugars, “WARNING: Eating foods with added sugar(s) contributes to: obesity, diabetes, tooth decay” with corresponding images (adapted from Donnelly et al. 2018; see web appendix D1). The other bag contained the same candy without this information. All participants were told, “You can see the candy are the same in both bags. So, just decide which bag you want your candy from.”

We manipulated cover by providing participants in the cover condition with counterbalanced information about social norms (norm-to-receive versus norm-to-avoid information). In the norm-to-receive-information condition, participants were told more people had chosen from the bag WITH information. Specifically, they were told “We’ve been running this study all week and more people have chosen from THIS bag” (research assistant pointed to bag WITH information). In the norm-to-avoid-information condition, participants learned more people had chosen from the bag WITHOUT information, “We’ve been running this study all week and more people have chosen from THIS bag” (research assistant pointed to the bag WITHOUT information). In the no-cover condition, participants did not learn this information; for these participants, the only difference between the fruit snack candies was the presence of the graphic warning label.

Participants then made their choice. We measured information avoidance as the percent of people selecting the candy that did not have a graphic warning label. The research assistant then verbally asked participants their age and gender and recorded whether participants were alone (26.2%), in a pair (47.3%), or in a group of three or more (26.5%).

*Results and Discussion.* As predicted, more people avoided the candy with the graphic warning label in the cover condition (44.3%) than in the no-cover condition (32.3%;  $B = .51$ ,  $SE = .19$ ,  $Wald = 7.02$ ,  $p = .008$ ,  $OR = 1.67$ ). There was no significant effect of counterbalancing within the cover condition (norm-to-avoid-information: 44.8% avoided information; norm-to-receive-information: 43.9% avoided information;  $B = -.04$ ,  $SE = .27$ ,  $Wald = .02$ ,  $p = .883$ ,  $OR = .96$ ). Because we do not see a difference between the counterbalanced conditions, it suggests that the manipulation had its effect by providing cover rather than by serving as a social norm.

Together, we found that the effect of cover on information avoidance has consequences for real choice and purchase behavior. More people avoided receiving a gift card to a café that provided calorie information on its menu when they had cover than when they did not (study 1a), more people avoided purchasing a water bottle with information about the world water crisis when they had cover than when they did not (study 1b), and more people avoided a sugary snack with a graphic warning label about sugar consumption when they had cover than when they did not (study 1c). We created cover by providing attribute information that differed across options (study 1a and 1b) and by providing social norms that differed across options (study 1c). In addition, study 1b matched the number of attributes across the cover and no-cover conditions, supporting the prediction that in studies 1a and 1b, it was the difference across attributes, rather than the number of attributes, that facilitated greater avoidance with cover.

## **STUDY 2: GREATER AVOIDANCE WITH COVER FOR INFORMATION THAT PEOPLE SAY THEY SHOULD RECEIVE**

According to our model, cover allows people to justify their motive to avoid information that they think they should receive. However, when this conflict is reduced, by decreasing pressure from the should-self to receive information, the effect of cover on avoidance will be attenuated – people will avoid information regardless of cover (hypothesis 2a). Similarly, when conflict is reduced by decreasing pressure from the want-self to avoid information, the effect on avoidance will be attenuated – people will receive information regardless of cover (hypothesis 2b). Studies 2-3 tested this proposed process by manipulating the belief that one should get information and the desire to avoid information, respectively.

Study 2 tested hypothesis 2a by manipulating the belief that one should get calorie information. We compared the decision to receive or avoid calories for an ordinary occasion (as

in study 1a) versus a special occasion. We reasoned that people would experience a conflict between wanting to avoid information and thinking they should receive it for an ordinary occasion, but that for a special occasion they would be less likely to think they should receive calorie information.

We confirmed that our manipulation reduced pressure from the should-self in a pretest with 102 MTurk workers. Participants indicated their want and should preferences for calorie information on seven-point scales for either an ordinary or special occasion (see web appendix A2 for exact wording and results). We found a significant interaction between preference (want vs. should) and occasion (ordinary vs. special) ( $F(1, 100) = 6.55, p = .012, \eta_p^2 = .38$ ); want and should preferences for calorie information diverged more for an ordinary occasion ( $M_{\text{want}} = 3.68; M_{\text{should}} = 6.02; F(1, 100) = 44.24, p < .001, \eta_p^2 = .31$ ) than for a special occasion ( $M_{\text{want}} = 3.67; M_{\text{should}} = 4.71; F(1, 100) = 8.09, p = .005, \eta_p^2 = .07$ ). Indeed, as predicted, more people felt they should receive information for an ordinary (vs. special) occasion ( $F(1, 100) = 11.31, p = .001, \eta_p^2 = .10$ ), though both wanted to avoid information ( $F(1, 100) = .00, p = .990, \eta_p^2 < .01$ ).<sup>5</sup>

Confirming that our manipulation reduced the should preference for calorie information, we tested whether the reduction in want-should conflict attenuates the effect of cover on avoidance. Participants imagined selecting a café for an ordinary or special occasion. We predicted that whereas cover would increase avoidance for an ordinary occasion (replicating study 1a and supplemental study S1), cover would not affect avoidance for a special occasion, as consumers would feel justified in avoiding calorie information regardless of cover.

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<sup>5</sup> To examine the proportion facing a want-should conflict, we created a difference score as in the study 1 pretest. For an ordinary occasion, 64.2% faced the predicted conflict of wanting to avoid information they thought they should receive, which was marginally greater than chance ( $z = 1.92, p = .054$ ) and only 5.7% faced the opposite conflict. For a special occasion, 46.9% wanted to avoid information they thought they should receive, which did not significantly differ from chance ( $z = -.29, p = .775$ ), with 10.2% facing the opposite conflict.

## Method

We preregistered our study and recruited 803 US MTurk workers ( $M_{\text{age}} = 37.22$ ; 51.1% female). We assigned participants to one of four conditions in a 2 (condition: cover vs. no-cover)  $\times$  2 (occasion: special vs. ordinary) between-subjects design. Participants first entered their name into the survey. Participants in the ordinary occasion scenario read they were leaving work and going to dinner with some co-workers. They faced a decision between two cafés and saw the last page of the menu for each café, with some of the drinks and desserts each café offered. One café provided calorie information and the other did not (counterbalanced).

In the special occasion scenario, participants read that their family and friends were planning a party for their next big birthday. Participants learned they were helping choose which café should host their party. Their chosen café would provide a custom menu for their big day for guests to look at to decide what dessert to order. Participants saw a mock-up menu for each café as it would appear for the party, with some of the drinks and desserts offered. Participants' name was piped into each menu (e.g., "Sam's Birthday Menu"; see web appendix D2). Thus, across conditions, participants believed their choice would affect themselves and others.

All participants saw information that they found about each of the cafés (i.e., 4-star overall rating; medium priced; American cuisine; good for dinner; good for groups). In the no-cover condition, the only substantive difference between the two cafés was the presence or absence of calorie information. In the cover condition, the cafés also differed on atmosphere and service ratings, similar to study 1a. Participants then selected their preferred café. We measured information avoidance as the percent selecting the café without calorie information.

We included two manipulation checks: whether the occasion felt special and whether participants felt they deserved to indulge (0 = "did not feel special/did not deserve to indulge" to

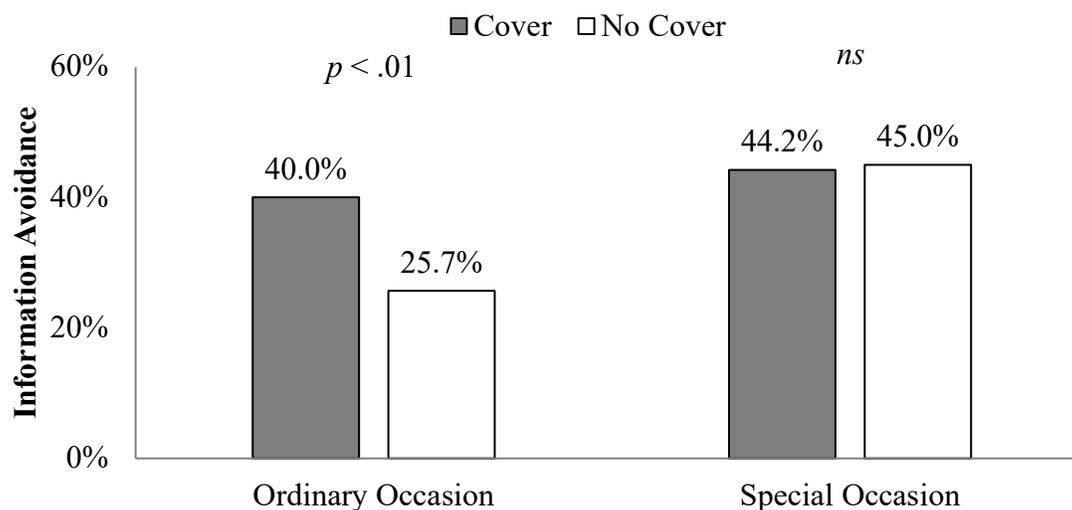
6 = “felt very special/definitely deserved to indulge”) and measured dieting status (dieting vs. not dieting) as a covariate. Ancillary questions are reported in web appendix C3.

## Results and Discussion

We confirmed our manipulation of a special occasion ( $M_{\text{special}} = 5.70$ ;  $M_{\text{ordinary}} = 3.65$ ;  $t(801) = 19.09$ ,  $p < .001$ ,  $d = 1.35$ ) and deservingness to indulge ( $M_{\text{special}} = 5.83$ ;  $M_{\text{ordinary}} = 4.30$ ;  $t(801) = 15.07$ ,  $p < .001$ ,  $d = 1.06$ ).

If cover increases avoidance because people want to avoid information, but believe they should have it, then the effect of cover will be attenuated when people do not believe they should have the information. In this case, they should avoid information even without cover. A logistic regression predicting avoidance resulted in a significant cover  $\times$  occasion interaction ( $B = -.17$ ,  $SE = .07$ ,  $Wald = 5.43$ ,  $p = .020$ ,  $OR = .84$ ; figure 2). Whereas participants in the ordinary occasion scenario were influenced by the manipulation of cover, with greater avoidance in the cover (40.0%) versus no-cover condition (25.7%;  $\chi^2(1, N = 402) = 9.26$ ,  $p = .002$ ,  $\phi = .15$ ), there was no significant effect for a special occasion ( $\chi^2(1, N = 401) = .03$ ,  $p = .867$ ,  $\phi = -.01$ ). We also found the predicted effect of occasion: more people avoided calorie information for a special (44.6%) versus ordinary occasion (32.8%;  $B = .26$ ,  $SE = .07$ ,  $Wald = 12.27$ ,  $p < .001$ ,  $OR = 1.29$ ), highlighting that people were willing to avoid information regardless of cover when it was a special occasion, and a significant effect of condition (cover: 42.1% vs. no-cover: 35.4%;  $B = .16$ ,  $SE = .07$ ,  $Wald = 4.42$ ,  $p = .036$ ,  $OR = 1.17$ ).

FIGURE 2: EFFECT OF COVER ON CALORIE INFORMATION AVOIDANCE FOR AN ORDINARY AND SPECIAL OCCASION (STUDY 2)



We found a similar interaction between cover and occasion when including dieting status as a covariate ( $B = -.16$ ,  $SE = .07$ ,  $Wald = 4.61$ ,  $p = .032$ ,  $OR = .85$ ), and when controlling for counterbalancing (see table 5).

TABLE 5: REGRESSION PREDICTING CALORIE INFORMATION AVOIDANCE (STUDY 2)

	$B$	Wald	Odds Ratio
Condition (1 = cover; -1 = no-cover)	.16*	4.39	1.17
Occasion (1 = special; -1 = ordinary)	.26***	12.25	1.30
Menu with calories (1 = café A; -1 = B)	.05	.38	1.05
Condition $\times$ Occasion	-.17*	5.42	.84
Condition $\times$ Menu with calories	.00	.00	1.00
Occasion $\times$ Menu with calories	.08	1.16	1.08
Condition $\times$ Occasion $\times$ Menu with calories	.01	.01	1.01

*Note:* Manipulated variables contrast coded; \*  $p < .05$ , \*\*\*  $p < .001$ . Occasion indicates whether it was a special or ordinary occasion. Menu with calories indicates which restaurant listed calorie information on its menu.

Overall, study 2 provided evidence of the robustness of the effect of cover on avoidance. For an ordinary occasion, more people avoided calorie information when they could attribute their decision to another feature of the restaurant, replicating studies 1a-1c. Furthermore, we provided evidence for the underlying process. Reducing the experience of want-should conflict by decreasing pressure from the should-self attenuated the effect of cover on avoidance (hypothesis 2a). Because people do not think they should receive calorie information for a special occasion, people were willing to avoid information regardless of cover.

This study further demonstrated that the previous findings were not driven by cover increasing random responding (i.e., regression to 50%). Cover systematically increased avoidance compared with no cover when there was a want-should conflict, but not when the conflict was reduced. If cover were having its effect by increasing random responding, then we would see that in the special occasion condition too. We provide additional evidence that the effect of cover on avoidance is not due to random responding in supplemental study S3 (web appendix E3) where avoidance reached rates above 50%.

Moreover, along with study 1b, this study further demonstrated that our previous findings were not driven by more attribute information being presented in the cover condition. Across our occasion manipulations, participants in the cover (vs. no-cover) conditions had the same attribute information to deal with. However, the effect of cover was only significant for an ordinary occasion when people were conflicted about receiving information. Our next study provides additional evidence that want-should conflict drives information avoidance when cover is present, this time by reducing pressure from the want-self to avoid information.

### **STUDY 3: GREATER AVOIDANCE WITH COVER FOR INFORMATION THAT PEOPLE SAY THEY WANT TO AVOID**

Study 3 explored the other half of the want-should conflict and its role in information avoidance by manipulating pressure from the want-self to avoid unpleasant, but useful information. In particular, we examined avoidance of information about potential skin sun damage. Skin cancer is a public health concern affecting five million individuals each year. Researchers have examined the effectiveness of providing skin cancer prevention education in beach settings by providing beachgoers personal UV photographs (Emmons et al. 2011; Mahler et al. 2006), and public health campaigns have started offering “pop-up cancer screenings” at beaches (Dana-Farber Cancer Institute 2019). Viewing personal UV photographs depicting skin damage is an effective method for changing sun protection cognitions and behaviors, yet people choose to avoid it (Dwyer et al. 2015).

We accordingly tested whether more people would avoid a personal UV photograph when they could (vs. could not) attribute their decision to another feature of the choice, and whether this attenuates when deciding for a friend. Whereas information about personal skin sun damage is threatening, leading to information avoidance, information about others’ skin sun damage does not threaten the self and is unlikely to prompt an avoidant motivation. Thus, while study 2 was designed to reduce the should-preference to receive information, study 3 was designed to reduce the want-preference to avoid information.

We first confirmed in a pretest that choosing for another person, rather than for the self, attenuates the want-should conflict by reducing the want preference to avoid information with 100 MTurk workers. Participants indicated their want and should preferences for a UV photo on seven-point scales when making a decision either for the self or for a friend (see web appendix A3 for exact wording and results). We found a significant interaction between preference (want vs. should) and decision scenario (self vs. other) ( $F(1, 98) = 11.52, p < .001, \eta_p^2 = .11$ ); want and

should preferences for a UV photo diverged more when making a decision for the self ( $M_{\text{want}} = 3.30$ ;  $M_{\text{should}} = 5.70$ ;  $F(1, 98) = 60.61, p < .001, \eta_p^2 = .38$ ) than for a friend ( $M_{\text{want}} = 5.06$ ;  $M_{\text{should}} = 5.98$ ;  $F(1, 98) = 8.91, p = .004, \eta_p^2 = .08$ ). Indeed, more people wanted to avoid the UV photo when the decision was for the self than for a friend ( $F(1, 98) = 16.24, p < .001, \eta_p^2 = .14$ ), though people thought they both should view the UV photo ( $F(1, 98) = .76, p = .386, \eta_p^2 < .01$ ).<sup>6</sup>

Having confirmed this, we moved to hypothesis testing. We predicted a cover  $\times$  decision interaction such that cover would increase avoidance of UV photo information when choosing which beach to go to for the self (replicating supplemental study S2; web appendix E2), but not when the decision was for another person, as receiving information for someone else is less threatening (hypothesis 2b); in this case, people should receive information even with cover.

## Method

We recruited 801 US MTurk workers ( $M_{\text{age}} = 38.23$ ; 52.9% female). We assigned participants to one of four conditions in a 2 (condition: cover vs. no-cover)  $\times$  2 (decision: self vs. other) between-subjects design. Participants first entered a friend's name into the survey. Participants either imagined that they were on vacation or that their friend was on vacation. They learned that either they or their friend were deciding between two different beaches to go to. One beach provided a free personal UV photograph to everyone as they entered, and the other beach did not. They read information about the UV photograph and saw an example image (see stimuli in web appendix D3).

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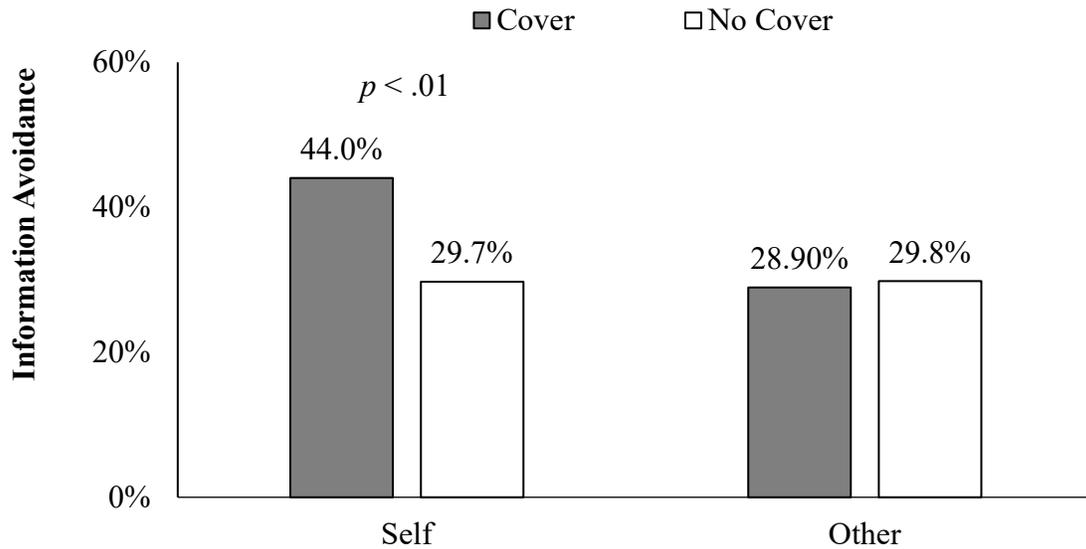
<sup>6</sup> To examine the proportion facing a want-should conflict, we created difference scores as in the pretests for studies 1 and 2. For the self, 66.0% faced the predicted conflict (negative difference score) of wanting to avoid information they thought they should receive, which was significantly greater than chance ( $z = 2.12, p < .001$ ) and only 6.0% faced the opposite conflict (positive difference score). When deciding for a friend, 46.0% wanted to avoid information they thought they should receive, which did not significantly differ from chance ( $z = -.42, p = .671$ ), with 12.0% facing the opposite conflict.

Participants saw the same information for each beach (i.e., 4-star overall rating; 85° average temperature; good for groups; private parking lot). In the cover condition, participants saw additional information that differed between the two beaches. One beach had a rating of 3.3/5 for activities and 4.7/5 for amenities and the other beach had the opposite ratings (counterbalanced). In the no-cover condition, the only substantive difference between the beaches was the presence or absence of a UV photo booth. Participants then selected a beach for themselves or their friend, depending on condition. We measured information avoidance as the percent of people selecting the beach that did not offer a UV photograph. We assessed concern about skin sun damage for themselves or their friend (1 = “not at all concerned” to 7 = “very much concerned”) and report additional ancillary questions in web appendix C4.

## Results and Discussion

We tested for an interaction between cover and who the decision was for on avoidance, which resulted in a significant interaction ( $B = .17$ ,  $SE = .08$ ,  $Wald = 4.80$ ,  $p = .028$ ,  $OR = 1.18$ ; figure 3). Whereas cover increased avoidance when choosing for the self (cover: 44.0%; no-cover: 29.7%;  $\chi^2(1, N = 402) = 8.83$ ,  $p = .003$ ,  $\phi = .15$ ), this attenuated when choosing for a friend ( $\chi^2(1, N = 399) = .04$ ,  $p = .836$ ,  $\phi = -.01$ ). We further found the predicted effect of decision: more people avoided information when choosing for the self (36.8%) than for a friend (29.3%;  $B = .16$ ,  $SE = .08$ ,  $Wald = 4.67$ ,  $p = .031$ ,  $OR = 1.18$ ), highlighting that people were willing to receive information regardless of cover when deciding for a friend. We also found a marginally significant effect of cover on avoidance (cover: 36.4%; no-cover: 29.8%;  $B = .14$ ,  $SE = .08$ ,  $Wald = 3.58$ ,  $p = .059$ ,  $OR = 1.16$ ).

FIGURE 3: UV PHOTO AVOIDANCE FOR SELF AND OTHER (STUDY 3)



This cover  $\times$  decision interaction held when controlling for concern about sun damage ( $B = .23$ ,  $SE = .08$ ,  $Wald = 7.93$ ,  $p = .005$ ,  $OR = 1.26$ ) and effects of counterbalancing (see table 6). We conceptually replicated the effect of cover on avoidance within the self-condition in supplemental study S2 (web appendix E2).

TABLE 6: REGRESSION PREDICTING UV PHOTO AVOIDANCE (STUDY 3)

	$B$	Wald	Odds Ratio
Condition (1 = cover; -1 = no-cover)	.14 <sup>+</sup>	3.61	1.16
Decision (1 = self; -1 = other)	.16*	4.64	1.18
Beach with UV photo (1 = West; -1 = East)	.01	.01	1.01
Condition $\times$ Decision	.17*	4.82	1.18
Condition $\times$ Beach with UV photo	.03	.20	1.03
Decision $\times$ Beach with UV photo	.004	.002	1.00
Condition $\times$ Decision $\times$ Beach with UV photo	.06	.55	1.06

*Note:* Manipulated variables contrast coded; <sup>+</sup>  $p = .058$ , \*  $p < .05$ . Decision indicates whether the decision was for the self or for another person. Beach with UV photo indicates whether the beach labeled “East Beach” or “West Beach” offered a free UV photo booth.

Like study 2, the interaction pattern for avoidance makes it clear that our earlier results were not due to cover increasing random responding or regression towards 50%. Instead, study 3 confirms hypothesis 2b, according to which consumers' information avoidance is moderated by pressure from the want-self to avoid information. When information no longer seems unpleasant, as when it is for someone else, the effect of cover on avoidance is weakened. Participants in our study were willing to receive information regardless of cover when making a decision for someone else. Thus, together studies 2 and 3 found that cover did not affect avoidance when people did not think they should receive the information or did not want to avoid it, respectively. Our account also predicts (and we found in a separate study) that cover does not affect avoidance of neutral information that people do not want to avoid, but also do not think they should receive (see supplemental study S4 in web appendix E4).

Furthermore, study 3 highlights why we consider the effect of cover on information avoidance to be a motivated process. If cover changed people's preference for UV information because the activity and amenity information encouraged them to make different inferences about the beaches or the UV photo, then we would expect the same effects for the self and other. The fact that we find a self-other difference supports our motivated account (see also Brown 1986; Brown 2012; Kunda 1990; Wilson and Ross 2001; Zuckerman 1979). In other words, these results support our theory that cover creates ambiguity so that the *personal* desire to avoid information can drive decisions.

Our next study provides further evidence for the underlying process—we suggest cover influences avoidance by providing plausible justification, allowing people to forgo information they want to avoid, but feel they should receive by attributing their decision to another relevant feature. However, when the choice set does not provide plausible justification, such as when the

options differ on attributes irrelevant to the decision at hand, these differences will not provide ample cover for participants to justify avoiding unwanted information.

#### **STUDY 4: COVER REQUIRES DIFFERENCES ON RELEVANT (VS. IRRELEVANT) ATTRIBUTES**

Study 4 examined what constitutes cover using an incentive-compatible design. Similar to study 1b, participants made a consequential choice between two cases of bottled water that differed based on whether or not they had a label with information about the world water crisis. We compared avoidance when the alternatives 1) differed on additional attributes relevant to the decision (which served as “cover” in our previous studies and was designed to provide reasonable justification here too), 2) differed on additional attributes irrelevant to the decision (which was designed to NOT provide a reasonable justification), and 3) when they did not differ on any attributes other than the water crisis label (which served as “no cover” in our previous studies). We expected that the first option would provide cover (as it had in previous studies), but that the latter two would not. Thus, we predicted an interaction such that differences on additional attributes would increase avoidance when the information was relevant and provided a justification for avoidance (i.e., number/size of water bottles in a case), but not for irrelevant information that failed to provide a justification (i.e., cap/label color).

#### Method

We preregistered this study and recruited 801 US MTurk workers ( $M_{\text{age}} = 36.35$ ; 48.8% female). We assigned participants to one of four conditions in a 2 (condition: additional attribute differences vs. no differences)  $\times$  2 (attributes: relevant vs. irrelevant) between-subjects design.

Participants learned they would see information for two different cases of bottled water from the same water bottle company. In addition to their base payment for taking the study, they learned they would be entered into a lottery for \$50 and that if they won the lottery, they would use some of the money to purchase a case of bottled water. Thus, they read that they should treat the choice as a real purchase decision. They read that for one case of water, the water bottles had a label with information about the world water crisis whereas the other case sold by the same company did not provide this information.

Across conditions, one case provided a label about the clean water crisis while the other case did not (counterbalanced across conditions; table 7). In the relevant-differences condition, we counterbalanced information about the number of bottles in the case (12 vs. 24 bottles) and the bottle size (half liter vs. one liter). In the relevant-no differences condition, participants also saw information about bottle number and size, which was held constant (i.e., both had 24 half-liter bottles or 12 one-liter bottles) such that the only meaningful difference was the label.

TABLE 7: EXAMPLES OF CONDITIONS (STUDY 4)

<b>Additional attribute differences-relevant</b>		<b>No attribute differences-relevant</b>	
Case A	Case B	Case A	Case B
Source: <b>Natural Artesian Water</b>	Source: <b>Natural Artesian Water</b>	Source: <b>Natural Artesian Water</b>	Source: <b>Natural Artesian Water</b>
Learn about clean water crisis: <b>Yes</b>	Learn about clean water crisis: <b>No</b>	Learn about clean water crisis: <b>Yes</b>	Learn about clean water crisis: <b>No</b>
Price: <b>\$37</b>	Price: <b>\$37</b>	Price: <b>\$37</b>	Price: <b>\$37</b>
Case: <b>24 bottles</b>	Case: <b>12 bottles</b>	Case: <b>12 bottles</b>	Case: <b>12 bottles</b>
Bottle size: <b>.5 liter</b>	Bottle size: <b>1 liter</b>	Bottle size: <b>1 liter</b>	Bottle size: <b>1 liter</b>
<b>Additional attribute differences-irrelevant</b>		<b>No attribute differences-irrelevant</b>	
Case A	Case B	Case A	Case B
Source: <b>Natural Artesian Water</b>	Source: <b>Natural Artesian Water</b>	Source: <b>Natural Artesian Water</b>	Source: <b>Natural Artesian Water</b>
Learn about clean water crisis: <b>Yes</b>	Learn about clean water crisis: <b>No</b>	Learn about clean water crisis: <b>Yes</b>	Learn about clean water crisis: <b>No</b>
Price: <b>\$37</b>	Price: <b>\$37</b>	Price: <b>\$37</b>	Price: <b>\$37</b>
Cap color: <b>blue</b>	Cap color: <b>white</b>	Cap color: <b>blue</b>	Cap color: <b>blue</b>
Label color: <b>white</b>	Label color: <b>blue</b>	Label color: <b>white</b>	Label color: <b>white</b>

In the irrelevant-differences condition, participants received counterbalanced information about the bottle cap color (white vs. blue) and label color (blue vs. white). A pretest ( $n = 99$ ) confirmed that participants rated the bottle cap and label color as irrelevant to their decision compared to scale midpoint (1 = “not relevant” to 7 = “relevant”;  $M_{\text{cap color}} = 1.89$ ;  $t(98) = -9.51$ ,  $p < .001$ ,  $d = -.96$ ;  $M_{\text{label color}} = 2.35$ ;  $t(98) = -14.09$ ,  $p < .001$ ,  $d = -1.42$ ; see web appendix A4). In the irrelevant-no differences condition, participants also saw information about cap and label color, which was held constant across conditions (i.e., both had a blue cap/white label or a white cap/blue label) such that the only meaningful difference was the water crisis label.

Participants selected which case they preferred to buy. We measured information avoidance as the percent selecting the case without a water crisis label and measured ancillary questions (see web appendix C5). One participant was selected to win the \$50 lottery; they received \$13 and a \$37 gift card to FIJI Water where they could purchase their chosen case.

## Results and Discussion

We tested for an interaction between attribute differences and relevance on avoidance. We predicted that relevant differences would provide cover and lead to increased avoidance, but that irrelevant differences would not. A logistic regression resulted in a significant effect of attribute difference, such that more people avoided information when attributes differed (31.2%) than when they did not (19.8%;  $B = .33$ ,  $SE = .09$ ,  $Wald = 14.54$ ,  $p < .001$ ,  $OR = 1.39$ ), qualified by a significant attribute difference  $\times$  relevance interaction ( $B = .34$ ,  $SE = .09$ ,  $Wald = 15.44$ ,  $p < .001$ ,  $OR = 1.40$ ; figure 4). Within the relevant condition, differences across attributes provided cover, increasing avoidance of a case of bottled water with a water crisis label (37.8%) compared to when there were no differences between attributes (13.9%;  $\chi^2(1, N = 388) = 28.57$ ,  $p < .001$ ,  $\phi = .27$ ). However, when attribute differences were based on irrelevant features and did not

provide reasonable justification, there was no significant effect of attribute differences on avoidance ( $\chi^2(1, N = 413) = .01, p = .930, \phi = -.004$ ). This pattern held when controlling for counterbalancing (table 8).<sup>7,8</sup>

FIGURE 4: RELEVANCE OF ATTRIBUTE DIFFERENCES ON AVOIDANCE (STUDY 4)

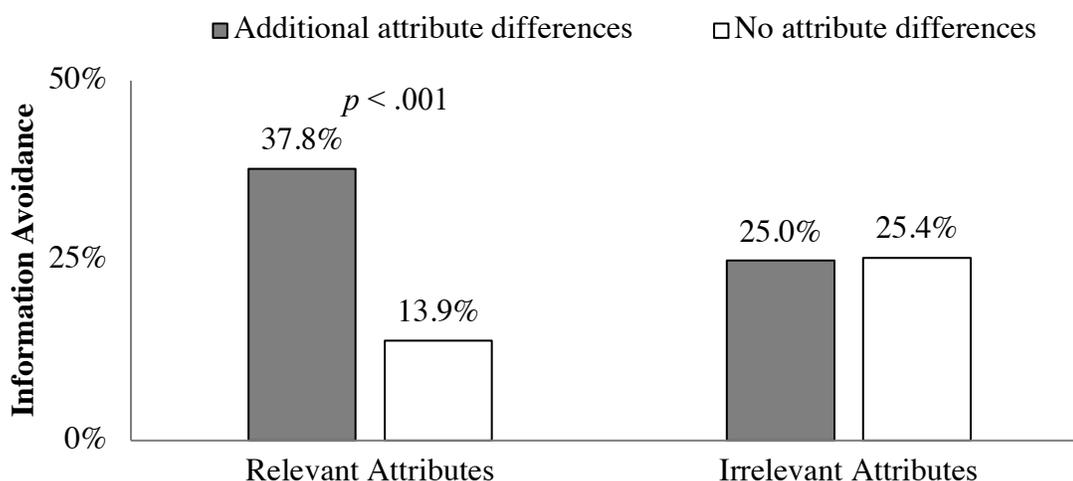


TABLE 8: REGRESSION PREDICTING WATER CRISIS LABEL AVOIDANCE (STUDY 4)

	<i>B</i>	Wald	Odds Ratio
Additional attribute differences (1 = yes; -1 = no)	.36***	15.81	1.43
Relevance (1 = relevant; -1 = irrelevant)	-.06	.52	.94
Case with label (1 = case A; -1 = B)	.19*	4.35	1.21
Attribute differences × Relevance	.37***	16.78	1.44
Attribute differences × Case with label	-.07	.63	.93
Relevance × Case with label	.09	.96	1.09
Attribute differences × Relevance × Case with label	-.11	1.53	.90

*Note:* Manipulated variables contrast coded. \*  $p < .05$ , \*\*\*  $p < .001$ . Relevance indicated whether the additional attributes were relevant or irrelevant to the purchase decision. Case with label indicates which case provided bottles with water crisis information.

<sup>7</sup> This interaction can also be decomposed by comparing the effect of relevant (vs. irrelevant) attributes when these additional attributes differ. In line with our theory, avoidance was greater when differences between attributes were relevant (37.8%) than when they were irrelevant (25.0%;  $\chi^2(1, N = 413) = 7.88, p = .005, \phi = .14$ ). We note that the comparison between relevant and irrelevant attributes when there were no attribute differences was also significant, although we did not have a prediction about this a priori (13.9% vs. 25.4%;  $\chi^2(1, N = 388) = 8.01, p = .005, \phi = -.14$ ) and this specific contrast did not replicate in supplemental study S5 (web appendix E5).

<sup>8</sup> For a conceptual replication of the interaction between relevance and attribute differences on avoidance, see supplemental study S5. Specifically, within the relevant condition, avoidance was marginally greater when attributes differed (43.0%) than when they did not (33.8%;  $p = .059$ ), with no significant effect within the irrelevant condition (32.0% vs. 35.0%;  $p = .526$ ). Avoidance was greater when differences between attributes were relevant (43.0% vs. irrelevant: 32.0%,  $p = .023$ ), with no effect when attributes did not differ (33.8% vs. 35.0%,  $p = .805$ ).

Overall, these findings replicated study 1b, demonstrating the effect of cover on avoiding information about the world water crisis, this time in an incentive compatible purchase of a case of bottled water. Moving beyond this basic effect, we demonstrated that this avoidance occurs specifically when cover offers a plausible justification for avoiding the information. However, irrelevant differences between the cases of water did not provide reasonable justification for consumers to avoid unwanted information about the world water crisis (hypothesis 3). Once again, this rules out an alternative account that the amount of information drives avoidance with cover – those presented with differences on irrelevant attributes had as much information to manage as those presented with differences on relevant attributes, yet those with relevant cover were more likely to avoid the water crisis label. Although in footnote 7 we note that those in the irrelevant attribute conditions avoided information more than those where relevant attributes did not differ, what is important for our theory is that differences between attributes only affected avoidance when these attributes were perceived as decision relevant.

#### **STUDY 5: AVOIDANCE WITH COVER FOR A MORE (VS. LESS) PUBLIC DECISION**

So far, we found that more people avoid information when they have cover than when they do not. These previous studies all involved choices where the decision was fairly private, with the exception of study 1c where choices were viewed by researchers. However, it is unclear how a decision that is more public will affect avoidance with cover. If our effect is primarily driven by self-justification, that is, if cover allows people to avoid information without acknowledging to themselves that they are avoiding it, we should find similar rates of avoidance regardless of whether the decision is private or public. In contrast, people may use cover because they do not want to acknowledge to others that they are avoiding information, which would suggest that cover will have a greater effect on avoidance when choices are public.

To test whether the effect of cover differs when a decision is private (vs. public), we had participants either make their decision in private, as in our previous studies, or in public. For the public decision, participants believed others were watching their choices and would be discussing their responses (i.e., pre-decisional accountability to an unknown audience; Tetlock and Boettger 1989). We predicted that the effect of cover on avoidance would be similar for public and private decisions, suggesting that cover increases avoidance primarily due to the desire to justify the decision to the self.

## Method

We preregistered the study and recruited 800 US MTurk workers ( $M_{\text{age}} = 37.28$ ; 54.0% female). We assigned participants to one of four conditions in a 2 (condition: cover vs. no-cover)  $\times$  2 (setting: control vs. public) between-subjects design using the water crisis label decision from study 1b. Participants in the cover condition received counterbalanced information about bottle size (10oz vs. 12oz) and price (\$1.45 vs. \$1.69). Participants in the no-cover condition saw price/size information that was identical for both options; the only meaningful difference was the presence of a water crisis label.

In the control condition, participants made their choice as in previous studies. In the public condition, we informed participants that their choices would be observed by several other individuals. These observers would view participants' screen, observing their choices and answers, and would discuss participants' choices amongst themselves. Participants saw a counter indicating five observers were viewing their screen as they completed the survey (web appendix D4). Participants in the public condition also learned (before their choice) that they would be asked to provide a reason for why they selected the water bottle they did.

Participants selected which water bottle they preferred to buy. We measured information avoidance as the percent of people selecting the water bottle that did not have a water crisis label. As a manipulation check, participants completed a 4-item public-private index (White, Simpson, and Argo 2014;  $\alpha = .85$ ): “To what degree are your responses in this study going to be: private; confidential; viewed by others; discussed by others,” (1 = “not at all” to 7 = “completely”). Additional ancillary measures are reported in web appendix C6.

## Results and Discussion

We confirmed that responses were perceived as more public in the public (vs. control) conditions ( $M_{\text{public}} = 5.39$ ;  $M_{\text{control}} = 3.18$ ;  $t(798) = 20.04$ ,  $p < .001$ ,  $d = 1.42$ ).

To test whether avoidance with cover differs as a function of setting, we regressed avoidance on cover, setting, and their interaction. We found the predicted effect of cover (cover: 42.2%; no-cover: 34.5%;  $B = .16$ ,  $SE = .07$ ,  $Wald = 4.94$ ,  $p = .026$ ,  $OR = 1.18$ ), with no significant effect of setting (public: 36.0%; control: 40.8%;  $B = -.10$ ,  $SE = .07$ ,  $Wald = 1.87$ ,  $p = .172$ ,  $OR = .90$ ) or interaction ( $B = -.02$ ,  $SE = .07$ ,  $Wald = .06$ ,  $p = .805$ ,  $OR = .98$ ). This pattern held when controlling for counterbalancing (see table 9). The non-significant interaction implies the effect of cover on avoidance did not differ for settings that were more (vs. less) public.

TABLE 9: REGRESSION PREDICTING WATER CRISIS LABEL AVOIDANCE (STUDY 5)

	<i>B</i>	Wald	Odds Ratio
Condition (1 = cover; -1 = no-cover)	.17*	5.24	1.18
Setting (1 = public; -1 = control)	-.11	2.05	.90
Bottle with label (1 = bottle A; -1 = B)	-.13	2.90	.88
Condition × Setting	-.01	.03	.99
Condition × Bottle with label	.10	1.96	1.11
Setting × Bottle with label	-.04	.24	.97
Condition × Setting × Bottle with label	.05	.38	1.05

*Note:* Manipulated variables contrast coded; \*  $p < .05$ . Bottle with label indicates which bottle provided the water crisis information.

We additionally report Bayesian analyses, which provide valid statistical support for a null hypothesis that a more (vs. less) public setting does not influence the effect of cover on avoidance (Jeffreys 1998). Specifically, we computed Bayes factors ( $BF_{10}$  and  $BF_{01}$ ) for the effect of public (vs. control) setting on avoidance within the cover and no-cover conditions.  $BF_{10} > 1$  represents evidence in favor of the alternative model (that there are differences between settings) and  $BF_{01} > 1$  represents evidence in favor of the null model (that there are no differences between settings). Using Bayes factors allows us to establish the degree of support for a null effect of setting. When cover was available, the effect of public (vs. control) was  $BF_{10} = .24$ ;  $BF_{01} = 4.14$ . When there was no cover, the effect of public (vs. control) was  $BF_{10} = .16$ ;  $BF_{01} = 6.23$ . These results provide moderate evidence in favor of the null hypothesis that a more (vs. less) public setting did not influence the effect of cover on avoidance (Wagenmakers et al. 2018).

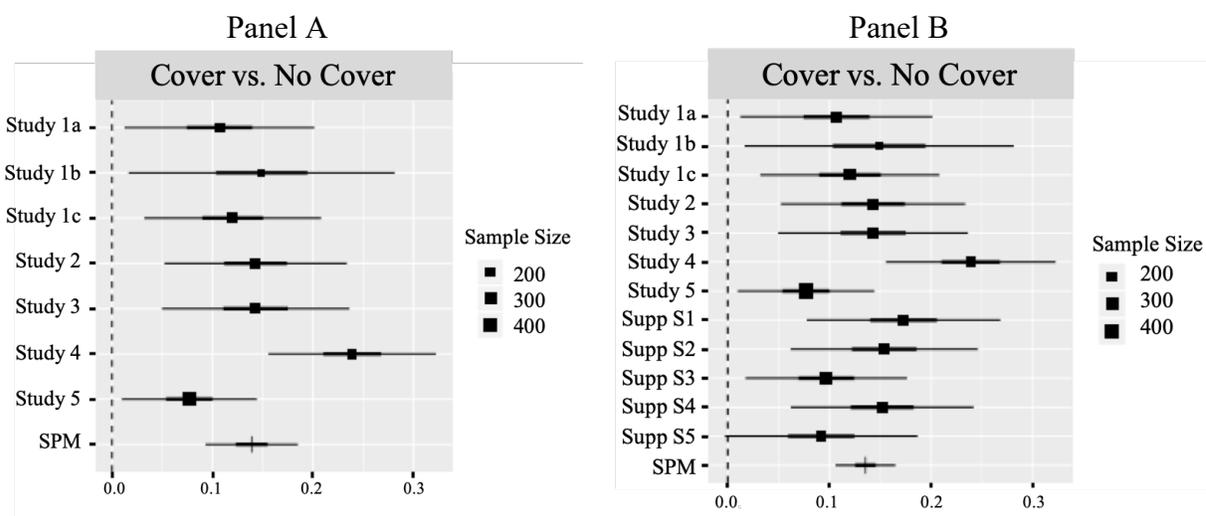
This study replicated the previous effect of cover increasing avoidance when people face a want-should conflict. Because the effect of cover was similar for private and public decisions, it suggests that cover had its effect by allowing people to avoid information while not having to acknowledge the avoidance to themselves (hypothesis 4). Stated differently, because the effect of cover was not larger when the decision was public (even directionally), it suggests that cover was not having its effect by allowing people to manage how they are viewed by others. Thus, cover appears to increase the rate of avoidance by providing justifications to the self rather than justifications to others.

### **SINGLE PAPER META-ANALYSIS**

The seven studies reported here demonstrated that cover increases avoidance of information when people feel a want-should conflict. A single paper meta-analysis (McShane

and Böckenholt 2017) of these studies for conditions in which we predicted an effect of cover estimated that cover causes a 13.90% (95% CI = [9.30%, 18.50%]) increase in avoidance (figure 5, panel A). A meta-analysis including our five supplemental studies (12 studies total, representing all the studies that we pre-registered in advance, i.e., there were no studies pre-registered for this project that are not included; Vosgerau et al. 2019), yielded a similar effect of cover on avoidance (13.55%, 95% CI = [10.60%, 16.49%]; figure 5, panel B).

FIGURE 5: SINGLE PAPER META-ANALYSIS



## GENERAL DISCUSSION

Seven studies reported here and five supplemental studies examined the effect of cover on information avoidance. Across these studies, more people avoided information they were conflicted about receiving when they could attribute avoidance to another feature of the choice than when they could not. This occurred across three different decision domains (restaurant or food choice, product purchase, beach selection), across different manipulations of cover, and with real consequences for marketers of products that provide information consumers are conflicted about receiving. When deciding between two national restaurants to receive a gift card

to, fewer consumers chose the restaurant that provided calorie information with (vs. without) cover (study 1a), when deciding which of two water bottles to purchase, fewer consumers chose the water bottle that provided a label about the world water crisis with (vs. without) cover (study 1b), and when selecting a sugary snack, fewer consumers chose a snack that provided a label warning about the dangers of added sugar with (vs. without) cover (study 1c).

Providing evidence that cover affects avoidance when consumers experience an intrapersonal conflict, reducing the conflict attenuated the effect, whether by decreasing the should-preference to receive information or the want-preference to avoid it (studies 2-3). Further supporting this, there was no effect of cover on avoidance of neutral information that people did not want to avoid, nor think they should receive (supplemental study S4). In addition, cover requires a plausible justification for avoiding information. When two options differed on attributes that were irrelevant to a decision, people no longer had cover to avoid information they were conflicted about receiving (study 4). Lastly, we found suggestive evidence that the effect of cover on avoidance is driven by a desire to rationalize the decision to oneself (vs. others). People avoided information with cover at similar rates for decisions that were more (vs. less) public, suggesting that avoidance with cover is driven by self-perception concerns (study 5).

Ancillary analyses reported in web appendix C provide evidence, albeit indirect, that avoidance with cover occurs through more covert processes. In all studies (except study 1c), we asked participants why they made the choice they did and had research assistants code their open-ended responses. We also asked whether the option they chose provided the critical information (e.g., calories, water crisis label, UV photo), for which they could respond “yes”, “no”, or “unsure.” Finally, we asked what differences they noticed between the two options and provided a list of possibilities where they checked all the attributes that they thought were

different. We expected participants without cover to be more aware of the critical information, recognizing it as something that differed across options compared to participants with cover. Indeed, across all studies, participants with cover were more likely to be *unsure* whether the option they chose provided information they were conflicted about receiving. Participants with cover were also less likely to remember the options differed on that dimension. Finally, in explaining their decision, those with relevant cover were less likely to spontaneously mention information they were conflicted about receiving than those without cover. Although these findings from our ancillary measures do not constitute evidence for information avoidance, as they could also be driven by memory interferences (Reczek et al. 2018), they are consistent with participants in the cover condition not acknowledging the critical information and how it affected their decision compared to those without cover.

### Theoretical Implications

First, this research provides new insights into consumer information avoidance. Beyond prior research showing that people fail to request or look at information (when the default is to not receive information; Ehrich and Irwin 2005; Zane et al. 2016), or that they fail to remember information that they were required to examine (Reczek et al. 2018), we document that people actively avoid such information even when they are facing a choice between receiving relevant information and not receiving any information. By using cover as a means for understanding information avoidance, we demonstrate that avoidance is greater when consumers do not need to acknowledge the behavior. These findings are in line with other research, which suggest, but do not provide causal evidence, that information avoidance is at times driven by a “nonconscious”

or “implicit” process (Howell et al. 2016; Sweeny et al. 2010). By providing experimental evidence, the present research adds to work examining this claim.

In focusing on information avoidance, we connect to research that examined avoidance as a tool to act out selfish motives in a social context (e.g., to avoid feeling guilty; Dana et al. 2007; Ehrich and Irwin 2005). These prior studies found that people who were motivated to behave selfishly avoided information to cultivate uncertainty about how their actions would influence others so as to justify their self-interested decisions. That is, information avoidance was a strategy for enacting other preferences. In contrast, we are the first to demonstrate how cover affects the decision to avoid information itself. In other words, we examine information avoidance as the preference that people want to justify to themselves. In addition, beyond this prior research, we examine avoidance of information relevant only for the self, rather than avoidance of information that could hurt others.

This work also offers new insights into when and how cover operates more broadly, beyond information avoidance. Prior research has primarily focused on how cover facilitates self-interested behavior, including prejudice, discrimination, corruption, and bribery (Gino et al. 2016; Hsee 1996; Norton et al. 2004; Snyder et al. 1979). We instead demonstrate that people use cover more often, and for less sinister, choices. Indeed, people likely use cover for any number of situations involving a want-should conflict. We suggest one reason much of the literature on the construct of cover has centered on understanding cover’s role in justifying discrimination is because this is a common instance when people experience an intrapersonal want-should conflict.

Specifically, we identify that want-should conflict drives the use of cover to justify a want preference. Whereas previous research has suggested that people seek out justifications to

support want-preference or choice of vices (Kivetz and Simonson 2002; Kivetz and Zheng 2006; Okada 2005; Strahilevitz and Myers 1998; Wertenbroch 1998), and has demonstrated that want-should conflict attenuates when reducing pressure from the should self (Reczek et al. 2018), we provide direct empirical evidence for the role of both “selves” in this process. In our research, reducing pressure from the should self (i.e., by decreasing the belief that one ought to receive information), weakened the effect of cover; people avoided information regardless of cover. Juxtapose to this, reducing pressure from the want self (i.e., by decreasing the desire to avoid information), again weakened the effect of cover, but this time people received information regardless of cover.

At the same time, we speak to the literature on counteractive self-control and counteractive construal, which examined the opposite effect – how motivated reasoning allows people to resolve conflict in support of a should preference (i.e., a long-term goal; Fishbach et al. 2010; Zhang et al. 2010). In contrast, we find that when experiencing a want-should conflict over the decision to avoid information, having cover allows people to resolve conflict in favor of their want preference.

In addition to identifying the conditions under which cover leads to avoidance (i.e., a want-should conflict), we also examined the processes by which cover operates. We show that cover requires differences that are relevant to the decision. When two options differed on attributes that were considered irrelevant to the choice, people were no more likely to avoid information than when the attributes were the same, suggesting that cover operates by giving people a justification. Again, although previous research has suggested that people seek out justifications (e.g., Kivetz and Zheng 2006; Okada 2005), we empirically show what serves (and fails to serve) as a justification and therefore what is required for cover to operate.

Lastly, while past research on cover has not disentangled whether it operates by providing justifications to the self or by providing rationale to others (Snyder et al. 1979), we test between these possibilities. Moreover, by examining how cover operates for more public decisions, we connect to research on accountability (Tetlock and Boettger 1989; Tetlock and Kim 1987). If cover increases avoidance because people need justifications to offer to other people, then the effect of cover on avoidance should increase for public decisions. Alternatively, research on accountability could suggest that making decisions public will lead people to follow their should-preference to receive information in all situations regardless of whether they provide cover, decreasing the effect of cover on avoidance (Tetlock 1992). We find no significant effect of choice context (public vs. private) on avoidance with cover, which is similar to other research on attributional ambiguity (Norton et al. 2004). Because we do not see a larger effect for a more public decision and because we see reliable effects on private decisions across our studies, we conclude that cover operates primarily by providing justifications to the self.

### Managerial and Policymaking Implications

Our work offers several implications for marketers from companies with social responsibility initiatives, and/or ones that use cause-related marketing campaigns. Research has found that consumers value a responsibly produced good and at times are willing to pay more for it (Trudel and Cotte 2009). However, we demonstrate that such messages can backfire, either when the message is perceived as threatening and/or when it directly conflicts with the purchase behavior (i.e., learning about water conservation when buying bottled water). A desire to avoid such negative information can cause consumers to switch away from purchasing the product. Notably, this is not only true for products with unethical attributes (e.g., Ehrich and Irwin 2005;

Zane et al. 2016), but for a wider range of products. More importantly, we document when this avoidance is more (vs. less) likely to occur – people will avoid buying products with such messages when the situation affords relevant cover, but are more likely to purchase these products when there is no cover.

Our work also has implications for consumers facing a decision to receive or avoid health-related information. For example, calorie labeling on restaurants' menus is a primary policy tool to combat obesity in the US (CDC 2015), yet its implementation has had mixed success (Cecchini and Warin 2016; VanEpps, Roberto, Park, Economos, and Bleich 2016). Our research suggests one explanation: consumers are finding ways to avoid this information, using cover to justify avoidance. Indeed, a simple intervention of moving calorie information to come before food labels increased the processing of calorie information, reducing the amount of calories consumers ordered (Dallas, Liu, and Ubel 2019). Making it harder for consumers to find cover when avoiding calorie information reduces avoidance.

From the perspective of consumer well-being, viewing calorie labels or information about sun damage to skin is useful as it enables people to make more future-oriented decisions (Thunström et al. 2016; Woolley and Risen 2018). But from a marketer's perspective, providing information that is unpleasant to receive could lead to negative consequences if consumers choose to go with a competitor who does not provide such information. In such situations, marketers may be better off providing additional, justifiable attributes to provide consumers cover to avoid unpleasant information without having to avoid the product or service altogether. Doing so may prevent customers from switching to a competitor's product.

However, for those looking to reduce information avoidance, we suggest making the decision to avoid information very apparent. In the current work, we find that when people do

not have cover for avoiding information, they are less likely to avoid it. Further, in other work, we have found that one way to reduce avoidance is to make the reasons for avoidance very explicit. When consumers first considered how avoidance can be used as a strategy for indulgence, they were then less likely to avoid calorie information. Thus, whereas avoidance increases when people do not have to acknowledge it, avoidance appears to decrease when people explicitly consider it (see also Howell and Shepperd 2013b).

#### Limitations and Avenues for Future Research

In some of the studies, participants in the cover condition were presented with more attributes than were those in the no-cover condition. Thus, for these studies, it is possible that avoidance increased because people had to manage more information. Note, however, that we find the same results when we match the number of attributes participants need to manage in the cover (vs. no-cover) conditions (studies 1b, 4-5, and supplemental studies 4-5). Of course, even when we match the number of attributes, there is still more diagnostic information to manage in the cover condition because the information differs across options. Here, we point to study 1c, which manipulates cover through social norms, without affecting the diagnostic information of the items themselves. Even with this support, however, we note that it would be valuable to identify other manipulations of cover that do not simultaneously manipulate information about the items.

Furthermore, cover significantly and reliably increased information avoidance in our studies, but not above rates expected by chance. Thus, these findings could reflect regression to the mean or random responding in the cover condition. Although the interaction patterns in studies 2-4 speak against this, to better rule out these alternatives and demonstrate that more people are avoiding information because of cover, we aimed to show avoidance rates above 50%.

Supplemental study S3 was designed with this goal. When we used a situation for which more than half of people reported a want preference to avoid information, more than half avoided information with cover. Of course, this is only one study. Future research should continue to test whether people with cover are avoiding (vs. ignoring) information that they are conflicted about receiving, and explore situations in which the want-should conflict is experienced by the vast majority of participants.

More broadly, future research can examine the effect of cover on information avoidance beyond the primary paradigm applied in the current research. We chose this paradigm as it allowed us to examine real choice outcomes, however, we acknowledge that it provides only indirect evidence for information avoidance. More direct evidence for information avoidance, such as forgoing an opportunity to view the information (Ehrich and Irwin 2005) or moving eyes away from a piece of information (Huang 2018), should be examined.

Finally, in addition to wanting to avoid information they believe they should receive, people may also experience the opposite want-should conflict: They can want information that they believe they should not use. For example, people may want to know the gender or race of job applicants, but for the sake of fairness, believe they should remain ignorant while evaluating resumes (Fath, Larrick, and Soll working paper). In this case, if people follow their should-preference, they will avoid the problematic information. If there are two computer programs for sorting resumes that are identical except that one blinds evaluators to demographic information, people who think they should avoid the information will choose the program that hides the information. But if the two computer programs are not identical, this can provide people with cover. Their desire to learn the information may drive their decision such that they choose the program that reveals demographic information without acknowledging that they are choosing to

reveal the information. Thus, when there is a want-should conflict and the want-preference is to receive information, cover may increase information seeking. Future research can test whether information seeking, like avoidance, occurs at a greater rate when people have cover.

## CONCLUSION

We provide a theory for when and how cover affects information avoidance, documenting that greater avoidance with cover stems from conflicting preferences between want and should selves. When people want to avoid information, but feel they should receive it, cover allows them to give into their want-preference and avoid information. Because many situations in which consumers make decisions involve the presence of cover, information avoidance may be higher than what is estimated based on existing research that asks people explicitly whether they want to receive or avoid information. Furthermore, in examining the role of cover in information avoidance, we provide a broader theory for when and how cover is likely to operate for many other domains.

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