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## Abstract

Seven experiments explore people's decisions to share or withhold unsavory information about themselves, and the wisdom of such decisions. When people choose not to reveal information – to be “hidiers” – they are judged negatively by others (Study 1). These negative judgments are most pronounced when hiding is volitional (Studies 2A and 2B), and are driven by decreases in trustworthiness engendered by decisions to hide (Studies 3A, 3B and 3C). Moreover, hidiers do not intuit these negative consequences: given the choice to hide or reveal unsavory information, people often choose to hide; but observers rate those who reveal more positively (Study 4). The negative impact of hiding holds across information ranging from drug use to grades to sexually transmitted diseases, and decisions ranging from whom to date to whom to hire. When faced with decisions about disclosure, decision-makers should be aware not just of the risk of revealing, but of what hiding reveals.

### What Hiding Reveals

Imagine being asked about your recreational drug habits on a job application, and realizing that to be truthful you must admit to the occasional indulgence. Would you lie, come clean, or avoid answering the question all together? When faced with the choice between admission (“I smoked marijuana once”) and opting out (“I choose not to answer”), we suggest that people often choose the latter – a strategy of omission that can lead observers to infer the very worst (“He must smoke *constantly*”). As one columnist noted, “both job seekers and employers wonder aloud about what it means if a job candidate doesn’t have a Facebook account. Does it mean they deactivated it because it was full of red flags? Are they hiding something?” (Hill, 2012). Or as another source had it: “Not having a Facebook account could be the first sign that you are a mass murderer” (Schulze, 2012; Slashdot, 2012).

People are quick to draw personality inferences about others (Ross, 1977). These judgments, even when based on very limited information (Asch, 1946; Gilbert & Malone, 1995; Jones & Harris, 1967; Ross, 1977; Winter & Uleman, 1984), can be surprisingly accurate (Allport, 1937; Goffman, 1979). For example, participants’ judgments of a target person’s traits based on a five minute sample of behavior correlated with targets’ self-ratings (Funder & Colvin, 1988). Ambady and Rosenthal (1993) pushed the boundaries of this effect by showing participants video clips of instructors that were, in some cases, only two seconds long; ratings of instructors’ traits had high inter-rater reliability and even predicted end-of-semester teaching evaluations. In a meta-analysis, Ambady and Rosenthal (1992) showed that 70% of the time, individuals make accurate inferences about others’ traits based on “thin slices” of behavior.

Why are people so good at making personality inferences with extremely limited information? One prevailing explanation – which we draw on in the present research – is that

people are highly attuned to attributes that are essential for survival, such as anger and fear. People are likely to be very skilled at quickly and accurately identifying such traits because they are of such ecological importance. Other, more complex attributes that are less essential for immediate survival, may require more inferential processes to identify and hence, do not lend themselves to accurate identification based on thin slices alone (Carney, Colvin, & Hall, 2007). As a result, in their classic thin slice studies, Ambady and Rosenthal focused on the assessment of traits including dominance, honesty, and likeability. Consistent with this perspective, Zajonc (1980) argued for the validity of fleeting and unarticulated, yet strong, affective reactions. And others have identified cases in which reliance on intuition fosters better decisions than those based on cognition (Dijksterhuis, Bos, Nordgren, & van Baaren, 2006; Wilson & Brekke, 1994; Wilson & Schooler, 1991).

But what about interpersonal judgments in the *absence* of information? How do people judge the character of those who do not disclose information; for example, a person who fails to respond to a sensitive question on his online dating profile? We suspect that given the general tendency to attribute others' behavior to their character (as opposed to situational influences) people are quick to draw trait inferences from others' lack of disclosure. However, relative to even tiny samples of people's behavior and disclosures, there is even less signal in non-disclosure; we propose that the act of hiding information ironically can lead people to make surprisingly harsh judgments of those who fail to reveal. Although non-disclosure could be indicative of explicit hiding of (presumably unsavory) information, infinite other, completely innocuous reasons exist (e.g., the person did not answer the question simply because they were interrupted). Yet, we show that withholding information on a given attribute produces negative character judgments – judgments that can be *worse* than those given to people who disclose that

they possess the worst possible value on that attribute. For instance, a person who chooses not to disclose his lowest grade is judged even more harshly than someone who disclosed that her lowest grade was the lowest possible grade: F.

We posit that this effect arises because when a person fails to reveal information, observers draw inferences about that person's character: the "type" of person who hides information is not someone to be trusted. Given the ecological validity and sheer weight that perceptions of trustworthiness exert in social judgment (e.g., Balliet & Van Lange, 2013), we expected these inferences of untrustworthiness to exert a negative impact on impressions of hidiers over and above that person's *actual* qualities. Consistent with our account, previous research has shown that self-disclosure generally produces favorable impressions because it fosters social connection (Collins & Miller, 1994; Pennebaker, 1990; Sedikides, Campbell, Reeder, & Elliot, 1999); we expected that explicit lack of disclosure fosters negative social perceptions of untrustworthiness, which can be even more damaging than simply disclosing undesirable facts about oneself. In sum, we propose that hiding connotes untrustworthiness, in turn decreasing a person's appeal to others.

### **Overview of Studies**

When a target person chooses not to reveal information and decide to be a "hider," observers react negatively – even more negatively than toward people who reveal extremely unsavory information (Study 1). These negative judgments are particularly pronounced when people volitionally hide information: targets for whom information is inadvertently missing are not judged as harshly as those who choose to hide (Studies 2A and 2B). Hiding causes people to be deemed untrustworthy (Studies 3A and 3B) such that hiding reduces liking for others via

decreased perceptions of trustworthiness (Study 3C). Finally, Study 4 shows that hidiers do not intuit the negative consequences of withholding: given the choice to hide or reveal a piece of negative information, people most often choose to hide, resulting in worse judgments from observers.

### **Study 1**

Study 1 explores how people's dating preferences are affected by prospective dates' propensity to reveal (vs. hide) personal information. We expected that dating prospects that chose not to answer personal questions would be liked less than prospects who answered them. We benchmarked the expected negativity of hiding by asking participants to choose between extreme cases: dating prospects who confirmed that they had frequently engaged in suspect behavior (revealers) and prospects that had simply chosen not to reveal this information (hidiers).

### **Disclosure Statement**

For this and the other online studies, we pre-specified a minimum number of participants per cell, collecting data beyond that point until we had the time to analyze it. Importantly then, collecting more than the pre-specified minimum number of participants was independent from the results. We sought to collect substantially more participants than the minimum of 20 per condition suggested by Simmons, Nelson, and Simonsohn (2011). Therefore, for Study 1 we sought to collect at least 30 participants per cell. This minimum increased in successive studies as scholars began to question whether even cell sizes of 30 might be small (Simmons, 2014). Therefore, we raised the minimum threshold to 50 participants per cell (in Study 4, the second study we conducted), and then again, to 75, for all subsequent online studies (Studies 2A & 2B

and Studies 3A-3C). For our lab study (Study 3A), we collected as much data as we could in two days' worth of sessions. We did not use power analysis in setting our minimum sample sizes because we did not have sufficient information to confidently estimate the effect sizes. We did not analyze the data until all data for a given study had been collected. No data were excluded from analysis and we report all manipulations and measures.

### **Procedure**

Participants from an online panel ( $N=133$ ;  $M_{age}=31.4$ ,  $SD=10.5$ ; 58.7% female) indicated the gender they were interested in dating; the rest of the survey was customized based on this answer.

Each participant viewed two questionnaires that had ostensibly been completed by two prospective dates. The dating prospects had indicated the frequency with which they had engaged in each of five unsavory behaviors (e.g. "Have you ever had a fantasy of doing something terrible (e.g. torturing) to somebody?") using the response scale: "Never / Once / Sometimes / Frequently / Choose not to answer."

In all conditions, one prospect (the *revealer*) had answered all questions, and we manipulated the frequency with which this prospect reported engaging in the undesirable behaviors: Never, Once, Sometimes, or Frequently. The revealer's answers were the same for all five questions. The other prospect (the *hider*) had provided the same answers as the revealer for three questions, but had selected "Choose not to answer" for two questions. In the "Frequently" condition for example, the revealer had selected "Frequently" for all five questions, while the hider had selected "Frequently" for three questions and "choose not to answer" for the remaining two (see Appendix 1 for screen shots of the stimuli).

Participants then selected which of the two prospects they would prefer to date. Next, participants guessed the frequency with which the hider had engaged in the two behaviors s/he had chosen to leave blank.

## Results

**Date choice.** Overall, 78.9% of participants chose to date the revealer ( $z=6.49$ ,  $p<.0001$  vs. 50%). While the relative preference for the revealer weakened as engagement frequency increased ( $\chi^2(3)=9.45$ ,  $p=.02$ ), in all conditions, participants preferred the revealer to the hider (Figure 1). Even in the “frequently” condition, 64% of participants preferred to date the revealer – the person who had admitted to frequently hiding sexually transmitted diseases from dating partners – to a hider who had chosen not to answer that question. These results suggest that choosing not to reveal information can be worse than choosing even the most unsavory option possible.

**Guessed answers.** Estimates of the frequency with which hidere had engaged in the two unanswered items tracked with the hider’s responses to the answered questions ( $M_{never}=2.5$ ,  $SD=.65$ ;  $M_{once}=3.0$ ,  $SD=.88$ ;  $M_{sometimes}=3.4$ ,  $SD=.64$ ;  $M_{frequently}=3.4$ ,  $SD=.74$ ); when targets answered “never” and then “choose not to answer,” participants made less negative inferences than when targets answered “frequently” and then “choose not to answer.” These estimates of what hidere *would* have answered were positively correlated with the preference for the revealer ( $r=.38$ ,  $p<.01$ ) but did not mediate it.

Study 1 provides preliminary evidence that people judge those who withhold information more negatively than their forthcoming counterparts. The results suggest that regardless of the content of admissions, withholding makes people less desirable: observers prefer to date people

who admit to undesirable behaviors than those who decline to answer. This effect persists even when the revealed information is extremely damaging and is particularly surprising in the “frequently” condition of Study 1.

In Study 1 it could be argued that participants simply inferred that the revealers interpreted the scale differently than the hidiers. For example, in the “frequently” condition, participants may have made the (sensible) inference that revealers – who answered “frequently” to all questions – had a lower threshold than hidiers for deeming a behavior to be frequent. Although such a process is unlikely to apply to our subsequent studies, we nonetheless conducted a follow-up study to address this alternative explanation.

We re-ran the “frequently” condition from Study 1 but added a dependent measure: in addition to indicating their date preference, participants ( $N=166$ ;  $M_{\text{age}}=33.1$ ,  $SD=10.00$ ; 58.4% female) were shown the three behaviors for which the prospective dates had both answered “frequently” and rated “how often, if at all, these two respondents engage in each behavior” on a 10-point scale with endpoints labeled “Respondent #983219 does it more” (the revealer) and “Respondent #186273 does it more” (the hider); the midpoint was labeled “The respondents do it the same amount.” Between-subjects, we counterbalanced the administration order of the two dependent measures. Consistent with Study 1, the majority (57%) of participants preferred the revealer to the hider. Most importantly, for all three behaviors for which both targets had answered “frequently,” participants believed the respondents engaged in the behavior the same amount – responses were not significantly different from the midpoint of the scale ( $M_{\text{cheat\_tax}}=4.9$ ,  $SD=.56$ , vs. 5:  $t(165)=1.52$ ,  $p=.13$ ;  $M_{\text{false\_claim}}=5.0$ ,  $SD=.67$ , vs. 5:  $t(165)=.35$ ,  $p=.73$ ;  $M_{\text{fantasy\_terrible}}=5.0$ ,  $SD=.91$ , vs. 5:  $t(165)=.17$ ,  $p=.86$ ). Thus, participants are not making the inference that revealers have lower thresholds for what counts as engaging in the behavior.

### Study 2A

Study 1 provides preliminary evidence that hidiers – those who abstain from disclosing – are disliked. People would rather date revealers than hidiers, even when the former admit to having engaged in extremely bad behavior. Study 2 replicates and extends Study 1.

In Study 1, prospective dates explicitly withheld information, by endorsing “Choose not to answer” (Study 1). The volitional act of withholding is central to our account, which suggests that *choosing* to hide in particular facilitates negative judgment of hidiers. To test this hypothesis, in Study 2A we added an “inadvertent hider” condition in which a computer error prevented the prospective date’s responses from being seen. This new condition also allowed us to address an alternative account for the results of Study 1; namely that they may simply reflect a general aversion to uncertainty (Ellsberg, 1961; Fox & Tversky, 1995; Gneezy, List, & Wu, 2006; Norton, Lambertson & Naylor, 2013). In contrast to this alternative perspective, and in support of our account that willful hiding leads observers to make inferences about the “type of person” that hides, we expected hidiers to be judged more negatively than both revealers and inadvertent hidiers.

Study 2A also includes several new features designed to document the effect’s robustness. In Study 1, participants were given more information about the revealer than the hider: revealers had answered all six questions; hidiers only three. Hence, participants may have avoided the hider simply because they had less information about him or her. In Study 2A prospective dates answered the same number of questions. In the revealer condition, participants saw three answered questions; in the hider and inadvertent hider conditions, participants saw the same three answered questions, plus an additional two unanswered questions.

Finally, whereas Study 1 showed that prospective dates failing to answer questions about *undesirable* behaviors are disliked, Study 2A tests whether this effect holds for desirable behaviors – i.e., are hidiers disliked even when they withhold answers to questions about desirable behaviors?

## Procedure

Participants from an online panel ( $N=214$ ;  $M_{age}=51.4$ ,  $SD=9.94$ ; 53% interested in dating women) completed the survey. Participants first indicated the gender they were interested in dating; the rest of the survey was customized based on this answer.

Each participant viewed one completed questionnaire in which, as in Study 1, a dating prospect had ostensibly indicated the frequency with which he or she had engaged in each of five desirable behaviors on the scale: “Never / Once / Sometimes / Frequently / Choose not to answer.”

Participants were randomly assigned to view one of three different versions of the completed questionnaire. In the *revealer* condition, the prospective date had answered a mixture of “sometimes” and “frequently” across the three questions. In the hiding conditions, participants also saw the prospective date’s answer to three questions, identical to the revealer condition. In the hiding conditions, however, there were two extra questions that were unanswered. In the *hider* condition, the prospective date had endorsed “choose not to answer” to the extra questions. In the *inadvertent hider* condition, a red x icon appeared instead of the normal radio buttons alongside each response option for the extra questions (see Appendix 2 for screen shots of stimuli). Thus although in both conditions respondents did not know the frequency with which the prospective date had engaged in two of the behaviors, the conditions were designed to lead to

different attributions: the lack of information is innocuous in the *inadvertent hider* relative to the *hider* condition, in which the prospective date deliberately opted out of answering.

Below the screen shot of the questionnaire responses, participants were asked “How interested would you be in dating this woman [man]?” on a 1-10 scale with endpoints labeled 1 (not at all interested) to 10 (very interested).

On the next page participants guessed how frequently the prospective date had engaged in the two extra behaviors. In the *revealer* condition participants were asked: “If you had to guess, what do you think this person’s responses were to the items below?” In the *hider* condition, participants were asked: “You may have noticed that the person chose not to answer some of the questions. If you had to guess, what do you think this person’s response would be to these questions?” In the *inadvertent hider* condition, participants were asked: “We’ve been experiencing a periodic computer glitch, whereby sometimes some of the person’s responses don’t show up. You’re viewing this screen because this occurred. If you had to guess, what do you think this person’s response was to these questions?” Participants guessed the respondent’s answers to the extra questions using a response scale labeled: never / once / sometimes / frequently. Finally, to explore whether the treatment produced enduring inferences about the frequency with which the prospective dates engage in other behaviors, all participants were asked: “suppose we were to ask the respondent a new question: “While an adult, have you had sexual desires for a minor?” What do you think the person’s truthful response to this question would be? (never / once / sometimes / frequently).

## Results

**Dating interest.** There were significant differences in dating interest between conditions ( $F(2,213)=8.04, p<.0005$ ). Consistent with Study 1, interest was highest for the *revealer* ( $M=7.3$  out of 11,  $SD=1.55$ ) and lowest for the *hider* ( $M=6.2, SD=1.60; t(140)=3.92, p<.0005$ ). Interest in the *inadvertent hider* ( $M=6.8, SD=1.49$ ) was significantly higher than that of the *hider* ( $t(140)=2.08, p=.04$ ) and lower than that of the *revealer* ( $t(142)=1.99, p=.05$ ).

**Guessed answers.** Estimates of the frequency with which hidiers had engaged in the two unanswered items tracked with the extent to which the prospective date had deliberately withheld ( $M_{control}=3.4, SD=.39; M_{inadvertent\_hider}=2.6, SD=.66; M_{hider}=2.0, SD=.72$ ). Although these guesses were correlated with dating interest ( $r=.29, p<=.01$ ), as in Study 1, they did not mediate the effect. There were no significant differences in estimates of the frequency with which the prospective date engaged in the new behavior ( $F(2, 213)=.751, p=.47$ ).

## Study 2B

We conducted a conceptual replication of Study 2A. The study was similar to Study 2A, except for the following changes. First, we increased the salience of inadvertent hiding. In the *revealer* condition, as in Study 2A, the prospective date had endorsed a mixture of “sometimes” and “frequently” response options across the five questions. In the other two conditions, participants could only see the prospective date’s answer to three of the five questions, which were identical to those in the *revealer* condition. The other two questions were focal to our manipulation: In the *hider* condition, the prospective date had endorsed “choose not to answer.” In the *inadvertent hider* condition, participants were told the following before and while viewing the prospective date’s questionnaire answers: “The dating web site administrators typically

display only a sampling of the respondent's answers. The answers that the administrators chose not to display will be marked "Not displayed" (see Appendix 3 for screen shots of stimuli).

Unlike Study 2A, in which we kept the amount of disclosed information constant across conditions, in the replication we held constant the number of questions participants had ostensibly been presented (five). Thus in the *revealer* condition, the prospective date had answered all five questions (a mixture of "sometimes" and "frequently"); whereas in the *hider* conditions, the prospective date had answered three of the five questions; these responses were identical to those in the *revealer* condition. However in the *hider* condition, the prospective date had endorsed "choose not to answer" for the remaining two questions; and in the *inadvertent hider* condition, "not displayed" was shown for the remaining two questions.

## Results

**Dating interest.** There were significant differences in dating interest between conditions ( $F(2,336)=24.01, p<.0005$ ). Specifically, consistent with Study 2A, interest was highest for *revealers* ( $M=7.5$  out of 10,  $SD=1.79$ ) and lowest for *hidiers* ( $M=6.0, SD=1.65; t(227)=6.82, p<.0005$ ). Interest in the *inadvertent hidiers* fell in between ( $M=6.5, SD=1.75$ ) and was significantly different from both *hidiers* ( $t(219)=2.19, p=.030$ ) and *revealers* ( $t(222)=4.45, p<.0005$ ).

**Inferences.** Estimates of the frequency with which hidiers had engaged in the two unanswered items tracked with the extent to which the prospective date volitionally answered the questions ( $M_{revealer}=3.5, SD=.21; M_{inadvertent\_hider}=2.5, SD=.79; M_{hider}=2.0, SD=.72; F(2,336)=165.9, p<.0005$ ). The pattern of means mirrored the dating interest results: predicted engagement in the (desirable) behaviors was higher in the *revealer* condition relative to both the

hider ( $t(227)=21.07, p<.0005$ ) and the not displayed ( $t(222)=12.59, p<.0005$ ) conditions.

Moreover, *hidere* were deemed even less likely to have engaged in these two desirable behaviors relative to *inadvertent hidere* ( $t(219)=5.23, p<.0005$ ). And as in Studies 1 and 2A, although these inferences were correlated with dating interest ( $r=.35, p\leq.01$ ), they did not mediate the effect of missing information status on dating interest.

Taken together, Studies 2A and 2B show that it is the deliberate act of hiding – and not simply missing information – that observers find particularly off-putting. Moreover, Study 2A addresses an alternative account for the effect, namely, that people avoid uncertainty (Gneezy et al., 2006). Unanswered questions were a source of uncertainty in both the hider and inadvertent hider conditions, yet respondents liked the inadvertent hider more (presumably because hiding was not deliberate in this case).

While both Studies 1 and 2 show that respondents' inferences about the content of the missing information are correlated with their disinterest in the prospective date, they do not mediate the effect. Thus, withholding goes beyond merely shaping inferences about the content of the withheld information (Simmons & Lynch, 1991). We suggest that aversion to hidere is driven by observers' global character judgments of the hider. In Studies 3A and 3B we show that people believe that hidere are untrustworthy. Study 3C then tests whether perceptions of hidere' trait untrustworthiness mediates the disdain for hidere, even when controlling for inferences about the content of the withheld information.

### Study 3A

Study 3A tests whether withholding produces distrust. We moved beyond an “online dating” paradigm and examined the effects of hiding information from others in the same

laboratory session. We used the trust game from experimental economics (Berg, Dickhaut, & McCabe, 1995), in which “senders” are given a sum of money and choose how much to send to “receivers”; the amount sent is tripled, and receivers then choose to send however much of that sum back to the sender as they wish. Note that both parties maximize their earnings if senders entrust their entire sum to receivers (such that the full amount triples in value), but senders risk receivers exploiting this trust and keeping all of the money. In our experiment, before senders made a decision about how much money to entrust to their partner, we manipulated whether receivers hid or revealed information about themselves. There were therefore three between-subjects conditions: sender, receiver hider, and receiver revealer.

We expected that when paired with hiders, senders would be less trusting of their partner and send fewer dollars; in turn, because fewer dollars were sent (and therefore tripled in value), we expected the dyads to make less money overall.

## **Procedure**

Participants ( $N=182$ ;  $M_{age}=23.2$ ,  $SD=4.12$ ; 51% male) took part in a lab study at a university in the northeastern United States for \$25 and the possibility of a bonus. The experiment was part of a monthly battery of studies and was the first study to be conducted in each session. The number of participants ranged from 15 to 30 per session. We collected as much data as we could in two days of sessions.

Participants were randomly paired and each was randomized to be either the sender or the receiver. Senders and receivers were seated on opposite sides of the room and remained anonymous to one another; their only interaction was through paper exchange via an

experimenter. Senders decided how to allocate five one-dollar bills between themselves and their receiver partner.

Before the trust game instructions were announced, receivers were asked five sensitive personal questions (e.g., “Have you tried to gain access to someone else’s email account?” Appendix 4). We randomized each receiver to be either a *revealer* or a *hider* and varied the response scales they saw. *Revealers* answered the questions using the full response scale: “Never / Once / Sometimes / Frequently / Choose not to answer.” *Hiders* only had two options for answering the questions – “Frequently / Choose not to answer” – thus inducing them to select the latter option and appear to be hiding their answers. In both conditions, receivers first selected their answers on a multiple choice, computer-based survey, and then wrote out those same answers on a sheet of paper with five blank spaces. Experimenters collected the answer sheets and delivered them to the partners (“senders”) on the other side of the room. Thus senders simply saw the receivers’ endorsed answer option alongside each question; they were unaware of the response options from which the receiver chose. In other words, if their partner was a *hider*, senders were unaware that they had selected “Choose not to answer” because of the restricted response scale.

After reviewing their partners’ recorded answers, senders initiated the trust game by deciding how to allocate five one-dollar bills. All senders were told that they could transfer some, all, or none of the money to their receivers, and that this money would then be tripled. In turn, their receivers would then have the option to send some, all, or none of the money back.

## Results

**Manipulation check.** There was a significant difference between conditions in disclosure: *hiders* selected “Choose not to answer” for more questions ( $M=4.1$  out of 5,  $SD=1.12$ ) than *revealers* ( $M=.04$ ,  $SD=.03$ ;  $t(89)=24.35$ ,  $p<0.001$ ).

**Money sent.** As predicted, senders in the *hider* condition sent marginally significantly less money ( $M=\$2.73$  out of  $\$5$ ,  $SD=1.89$ ) than in the *revealer* condition ( $M=\$3.46$ ,  $SD=1.76$ ;  $t(89)=-1.891$ ,  $p=.06$ ). In turn, each partner pairing in the *hider* condition took home less money overall ( $M=\$10.47$ ,  $SD=3.77$ ) than in the *revealer* condition ( $M=\$11.91$ ,  $SD=3.52$ ;  $t(89)=-1.891$ ,  $p=.06$ ): the cost of distrust.

### Study 3B

In Study 3B we test whether the preference for the revealer is affected by the extent to which participants are cued to use trustworthiness as a decision criterion. Specifically, participants chose which of two prospective dates they would prefer to date using the same stimuli as the “Frequently” condition from Study 1: one of the ostensible prospects had indicated that s/he had frequently engaged in each of six unsavory behaviors, while the other prospect endorsed “frequently” for four of the questions, and chose not to answer the other two. Between-subjects, we manipulated the criterion participants used to make this date choice. Specifically, we expected that heightening the importance of a date’s trustworthiness would increase the preference for the revealer, and that dampening it would decrease this preference.

### Procedure

The procedure was the same as Study 1 except for the criterion manipulation in which participants ( $N=227$ ;  $M_{age}=32.7$ ,  $SD=12.4$ ; 47% female) were randomized to answer one of three

questions about their preference between the two prospective dates. In the control condition, participants were simply asked, as in Study 1: “Which of the two respondents would you rather go on a date with?” In the condition in which we heightened the importance of trustworthiness, participants were asked: “Suppose you only want to date people who are trustworthy. In other words, you only want to date people who can be trusted. In this case, which of the two respondents would you rather go on a date with?” In the condition in which we downplayed the importance of trustworthiness, participants were asked: “Suppose you only want to date people who are not thieves. In other words, you only want to date people who have NOT stolen anything. In this case, which of the two respondents would you rather go on a date with?”

After indicating their preference, we administered a manipulation check in which participants were asked “Which, if any of the following describes the question you were asked in this survey?” and endorsed one of three response options: “You were asked to indicate which of two people you'd prefer to date, assuming that want to date someone who is trustworthy,” “You were asked to indicate which of two people you'd prefer to date, assuming that you want to date someone who is not a thief,” and “You were simply asked to indicate which of two people you'd prefer to date.”

## Results

**Manipulation check.** Most (81.0%) participants correctly answered the manipulation check and there were no significant differences between conditions ( $\chi^2(2)=2.96, p=.23$ ).

Moreover, the results are even stronger if we restrict the data set to participants who passed the manipulation check.

**Date choice.** There were significant differences in the propensity to choose the revealer as a function of choice criterion. Specifically and as predicted, when the importance of trustworthiness was heightened, 78% of participants chose to date the revealer, compared to only 36% when its importance was downplayed. The propensity to choose the revealer in the control condition (60%) fell in between the other two conditions – and replicates the results of the identical “frequently” condition from Study 1 (64%). A chi square test indicated significant differences between these three groups ( $\chi^2(2)=28.41, p<.0005$ ); follow-up pairwise chi square tests indicated that all conditions were statistically different from each other (all  $p\leq.01$ ).

In sum, when people are primed to seek only trustworthy individuals, they become even more sensitive to target’s decisions to hide – offering further evidence that trustworthiness undergirds the negative costs of hiding.

### Study 3C

To enhance the generalizability of our results, in Study 3C we turn to a different context – revealing versus withholding grades on job applications – an issue that has become increasingly salient in light of new policies that permit graduates to choose whether to disclose their grades to potential employers. Whereas Study 3A demonstrates that hiding affects a behavioral manifestation of our proposed underlying mechanism – trustworthiness – Study 3C provides direct evidence of the entire process underlying the effect: withholding information makes people appear untrustworthy, and these perceptions of trustworthiness in turn mediate the effect of hiding on judgment. Moreover, whereas the previous studies used response options such as “frequently” and “sometimes,” the grade paradigm we use in Study 3C allows us to ask participants to guess the precise grade that the hider actually received. As a result, we can pit

perceptions of actual candidate quality – the estimated grade – against a more psychological input – trustworthiness – to determine which exerts greater weight in judgment. We predicted that perceptions of untrustworthiness would drive our effect even when controlling for inferences about the content of the withheld information: observers' guesses of the hider's actual grade.

## Procedure

Participants ( $N=178$ ; 63% male;  $M_{\text{age}}=29.28$ ,  $SD=9.75$ ) imagined that they were an employer tasked with evaluating two different job candidates. The two candidates provided different answers to a question on the application – “What is the lowest grade you ever received on a final exam in school?” One of the candidates – the *revealer* – had endorsed a grade of F, while the other candidate – the *hider* – had endorsed “Choose not to answer.” Participants (i.e. the employers) were shown an image of the hypothetical job application question and the multiple choice answer set (A, B, C, D, F, and Choose not to answer) with the appropriate answer selected (see Appendix 5 for screen shots of the stimuli). Both candidates' answers were displayed simultaneously, with the order in which they appeared on the screen counterbalanced.

After seeing the two candidates' responses, participants were asked to: 1) impute the estimated numerical score each candidate had received on the exam, 2) indicate which of the two candidates they trusted more, and 3) select the candidate that they were most likely to hire. We counterbalanced the order of the first and second tasks. We collapse across this factor in the results, except in cases where there were order effects. All results hold regardless of whether the counterbalancing is factored into the analysis.

For the first task, participants were shown a standard grade scale converting exam percentages to letter grades (A: 90-100%, B: 80-89%, C: 70-79%, D: 60-69%, F: 0-59%). They were then asked to estimate the score each candidate received on the exam by entering a number from 0 to 100 into a text box.

For the second task, participants indicated which candidate they believed was most trustworthy using a sliding scale with the left endpoint labeled “Candidate 1 – Grade: F – is more trustworthy” and the right endpoint labeled “Candidate 2 – Grade: Choose not to answer – is more trustworthy.” The scale defaulted to the midpoint, labeled “the candidates are equally trustworthy.” Although numbers were not displayed to participants, the endpoints were set from 0 to 100; therefore, a score lower than 50 indicated that the revealer was relatively more trustworthy, whereas a score above 50 indicated that the hider was relatively more trustworthy.

Finally, participants were asked to select which of the two job candidates they would be more likely to hire.

## Results

**Guessed grades.** Participants believed that the hider ( $M_{\text{hider}}=50.8\%$ ,  $SD=.85\%$ ) received higher grades than the revealer ( $M_{\text{revealer}}=40.7\%$ ,  $SD=1.6\%$ ;  $F(1, 176)=35.64$ ,  $p<.0005$ ). This reinforces the finding that inferences about the undisclosed information (in this case, the hider’s grade) do not drive people’s disdain for hidiers. (Note that for this dependent measure, the order of administration significantly impacted the imputed scores, therefore we controlled for order of administration in this analysis. However, the results remain significant if we do not,  $p<.0005$ .)

**Trustworthiness.** Trustworthiness ratings lower than 50 were indicative of the revealer’s relative trustworthiness; the mean trustworthy rating was 18.1 out of 100 ( $SD=19.2$ ; compared to

indifference point of 50 out of 100:  $t(178)=22.23, p<.0005$ ). Thus revealers were generally perceived to be more trustworthy than hidiers.

**Hiring choice.** Despite the fact that they estimated the hider to have received a higher grade, the large majority of participants – 89% (95% CI=83.2% - 93%) – chose to hire the revealer over the hider.

**Mediation.** A mediation analysis revealed that the relationship between revealer status and hiring choice ( $\beta_{\text{revealer}}=4.13, SE=.48, p<.0005$ ) was reduced to nonsignificance when trustworthiness was included in the model ( $\beta_{\text{revealer}}=.32, SE=.76, p=.67; \beta_{\text{trust}}=.093, SE=.018, p<.0005$ ), providing support for full mediation (Sobel test statistic = 5.03,  $p<.0005$ ). In addition, we conducted a binary logistic regression using both guessed grades and trustworthiness as independent variables, and employee preference (hider versus revealer) as the dependent measure. While guessed grades significantly predicted the outcome measure ( $\beta=.049, SE=.020, p=.01$ ), importantly, trustworthiness also emerged as a significant predictor ( $\beta=.084, SE=.018, p<.0005$ ). Moreover, trustworthiness fully mediated the relationship between revealer status and hiring choice when guessed grades were also included in the model (Sobel test statistic = 4.98,  $p<.0005$ ). In other words, trustworthiness drives the effect of hiding on avoidance of hidiers, even when we control for actual quality of the options, providing further evidence that global judgments of untrustworthiness drive the effect.

#### Study 4

Study 4 tests whether hidiers know what hiding reveals. In our opening example, we suggested that a prospective employee who had occasionally indulged in drug use might be tempted to select “choose not to answer” in an effort to avoid being judged negatively by a

prospective employer. Studies 1-3, however, suggest that this decision is unwise: choosing not to answer leads observers to like actors less even than people who admit to frequently engaging in bad behavior. In Study 4, we test whether hidiers understand what hiding reveals. Using a simulated employment task, we explored whether prospective employees (instructed to answer questions to maximize their chances of getting the job) who had used drugs would choose not to divulge that usage – and whether that decision was wise, by asking prospective employers to rate employees who had chosen not to answer and those who had come clean.

We expected that employees in such situations would choose not to answer questions about their drug use: whether employees were frequent or only occasional users of drugs, we predicted that employees would believe that withholding was wiser than disclosing. Consistent with the previous studies however, we predicted that employees who chose to hide this information would be liked less by employers than those who chose to reveal.

### **Procedure**

Participants ( $N=213$ ;  $M_{age}=36.2$ ,  $SD=11.80$ ; 53.9% female) were randomized to the role of prospective employee or employer.

Employees were told to imagine that “you are filling out a job application for a job that you really want” and indicated how they would respond to the question “Have you ever done drugs?” from response options: yes / no / choose not to answer. Employees were randomly assigned either to imagine that they “smoke marijuana regularly and occasionally use harder drugs” (*frequent*), or “smoke marijuana occasionally” (*occasional*). Employees were then instructed to choose between revealing (i.e., answering “yes”) or hiding (i.e., answering “choose not to answer”).

Employers were randomly assigned to rate an employee who had either answered “yes” or “choose not to answer” to the drug question on an 11-point scale (0: definitely will NOT hire – 10: definitely WILL hire).

## Results

**Employee preferences versus employer perceptions.** As predicted, most employees (70.5%) chose to withhold ( $z=4.20$ ,  $p<.0001$ ), a tendency that was directionally stronger among frequent users relative to occasional users (frequent: 77.4%, occasional: 63.5%;  $\chi^2(1)=2.44$ ,  $p=.12$ ; bars in Figure 2). In both groups, most participants felt that opting out was the best strategy. Thus prospective employees believe that hiding reveals less negative information than revealing. In contrast, employers were more interested in hiring people who had answered “yes” relative to those who had opted out of answering ( $M_{yes}=5.3$ ,  $SD=2.14$ ;  $M_{no}=4.4$ ,  $SD=2.04$ ;  $t(99)=2.12$ ,  $p=.04$ ; dotted line in Figure 2).

Thus employers preferred to hire employees who had admitted their drug use to those who had opted out – a preference that demonstrates the error of people’s tendency to withhold.

## General Discussion

Failing to disclose can leave a bad impression. Moreover, those who abstain (i.e., “hidiers”) fail to intuit this negative consequence: given the choice to hide or reveal unsavory information, people often chose to hide – but observers rate revealers more positively. These effects are driven by decreases in trustworthiness when people choose to hold: over and above inferences of actual quality, observers trust and prefer people who reveal to those who hide. Taken together, these results suggest that people are prone to withholding information when they

would be better off sharing it. Even more problematically, the increasing shift toward openness spawned by new internet media may exacerbate these issues, as withholding becomes more anomalous, and hence, more conspicuous.

While we have demonstrated the negative impact of hiding, other research suggests that absent information is desirable. For example, not knowing a piece of information or labeling it “secret” can invoke curiosity (Loewenstein, 1994; Travers, Van Boven, & Judd, 2014), and people rate others favorably when they know very little about them, such that learning more can *decrease* liking (Norton, Frost, & Ariely, 2007; Sears, 1983; Tormala, Jia, & Norton, 2012). Future research should explore other factors – beyond whether hiding is volitional (Study 2) – that moderate the impact of missing information on observers’ judgments. The previous research taken together with our results suggest that whether good or bad, missing information is always privileged.

Previous research has examined the effect of missing information in markets. According to Akerlof’s (1970) “market for lemons,” when sellers have insider information on the quality (or lack thereof) of their products, they are motivated to selectively present favorable information. As a result, people should be suspicious of goods that are incompletely described. But because people are limited in their strategic thinking, they routinely fail to notice when relevant information is absent and to discredit incompletely described products. This tendency accounts for film studios’ decisions to withhold low-quality movies from critics (Brown, Camerer, & Lovallo, 2012): people do not notice the absence of (bad) reviews. However once people are explicitly informed that information on a given attribute (e.g. price, quality) is lacking, they tend to react sensibly by avoiding such products and instead opting for those that are favorably and completely described (Huber & McCann, 1982; Johnson & Levin 1985; Meyer, 1981; Slovic &

MacPhillamy, 1974). We show that, unlike in the study of missing information for consumer products, when a *person* fails to reveal information, observers are quick to make inferences about that person's character: the "type" of person who hides information is not someone to be trusted.

Our findings shed light on the current debate surrounding a recent Supreme Court ruling (*Salinas v. Texas*, 2013). Salinas, accused of murder, had been cooperating in a police interview but suddenly refused to answer when the line of inquiry shifted to the murder weapon. Salinas' unresponsiveness was subsequently presented as evidence in the 2007 trial in which he was convicted of murder. Salinas later appealed to the Supreme Court, arguing that his Fifth Amendment rights had been violated. The Court upheld the conviction, ruling that Salinas' refusal to answer the officers' questions was admissible evidence. Salinas may well be guilty of murder, but the present research calls this ruling into question, by demonstrating that people are prone to drawing unwarrantedly negative conclusions from the absence of disclosure. As one commentator noted, "the Supreme Court has held that you remain silent at your peril" (Garrett, 2013).

Beyond the legal realm to everyday life, horror stories abound of the many people who posted incriminating photographs of themselves on Facebook – half-naked at a frat party – who were denied admission to colleges or rejected for jobs because of their overdisclosure. We document a risk of going too far in the other direction: underdisclosure, especially in environments where the norm is to disclose, can lead observers to infer the worst. Like the commenter who suggested that not having a Facebook page might be a sign of incipient criminality, participants in our studies express negative attitudes towards those who hide. Worse still, hidiers do not seem to understand the risks of withholding information. When faced with

decisions about whether or not to disclose, decision-makers should be aware of not just the risk of revealing, but of what hiding reveals.

### References

- Akerlof, G. A. (1970). The market for 'lemons': Quality uncertainty and the market mechanism. *Quarterly Journal of Economics*, *84*(3), 488-500.
- Ambady, N., & Rosenthal R. (1992). Thin slices of expressive behavior as predictors of interpersonal consequences: A meta-analysis. *Psychological Bulletin*, *11*, 256-274.
- Ambady, N., & Rosenthal, R. (1993). Half a minute: Predicting teacher evaluations from thin slices of nonverbal behavior and physical attractiveness. *Journal of Personality and Social Psychology*, *3*, 431-441.
- Asch, S. E. (1946). Forming impressions of personality. *Journal of Abnormal and Social Psychology*, *41*, 258-290.
- Balliet D., & Van Lange, P. A. M. (2013). Trust, conflict, and cooperation: A meta-analysis. *Psychological Bulletin*, *139*, 1090-1112.
- Berg, J., Dickhaut, J., & McCabe, K. (1995). Trust, reciprocity, and social history. *Games and Economic Behavior*, *10*, 122-142.
- Brown, A.L., Camerer, C.F., & Lovallo, D. (2012). To review or not to review? Limited strategic thinking at the box office. *American Economic Journal: Microeconomics*, *4*(2), 1-26.
- Carney, D. R., Colvin, C. R., & Hall, J. A. (2007). A thin slice perspective on the accuracy of first impressions. *Journal of Research in Personality*, *41*, 1054-1072.
- Collins, N.L., & Miller, L.C. (1994). Self-disclosure and liking: A meta-analytic review. *Psychological Bulletin*, *116*(3), 457-475.
- Dijksterhuis, A., Bos, M.W., Nordgren, L.F., & van Baaren, R.V. (2006). On making the right choice: The deliberation-without-attention effect. *Science*, *311*(5793), 1005-1007.

- Ellsberg, D. (1961). Risk, ambiguity, and the savage axioms. *Quarterly Journal of Economics*, 75(4), 643-669.
- Fox, C. R., & Tversky, A. (1995). Ambiguity aversion and comparative ignorance. *Quarterly Journal of Economics*, 110(3), 585-603.
- Garrett, B. L. (2013). You Don't Have the Right to Remain Silent: The Supreme Court's terrible—and dangerous—ruling this week on the Fifth Amendment. Retrieved July 17, 2013, from [http://www.slate.com/articles/news\\_and\\_politics/jurisprudence/2013/06/salinas\\_v\\_texas\\_right\\_to\\_remain\\_silent\\_supreme\\_court\\_right\\_to\\_remain\\_silent.html](http://www.slate.com/articles/news_and_politics/jurisprudence/2013/06/salinas_v_texas_right_to_remain_silent_supreme_court_right_to_remain_silent.html)
- Gilbert, D. T., & Malone, P. S. (1995). The correspondence bias. *Psychological Bulletin*, 117, 21–38.
- Gneezy, U., List, J. A., & Wu, G. (2006). The Uncertainty Effect: When a risky prospect is valued less than its worst possible outcome. *The Quarterly Journal of Economics*, 121(4), 1283-1309.
- Griffin v. California (1965).
- Hill, K. (2012). Beware, Tech Abandoners. People Without Facebook Accounts Are 'Suspicious.'. Retrieved July 17, 2013, from <http://www.forbes.com/sites/kashmirhill/2012/08/06/beware-tech-abandoners-people-without-facebook-accounts-are-suspicious/>
- Huber, J., & McCann, J. M. (1982). The impact of inferential beliefs on product evaluations. *Journal of Marketing Research*, 19, 324-333.
- John, L., Acquisti, A., & Loewenstein, G. (2011). Strangers on a plane: Context-dependent willingness to divulge sensitive information. *Journal of Consumer Research*, 37, 858-873.
- Johnson, R.D., & Levin, I.P. (1985). More than meets the eye: The effect of missing

- information on purchase evaluations. *Journal of Consumer Research*, 12, 169-177.
- Jones, E. E., & Harris, V.A. (1967). The attribution of attitudes. *Journal of Experimental Social Psychology*, 3, 1-24.
- Loewenstein, G. (1994). The psychology of curiosity: A review and reinterpretation. *Psychological Bulletin*, 116, 75-98.
- Meyer, R. J. (1981). A model of multiattribute judgments under attribute uncertainty and informational constraints. *Journal of Marketing Research*, 18, 428-441.
- Norton, D. A., Lambertson, C., & Walker Naylor, R. (2013). The devil you (don't) know: Interpersonal ambiguity and inference making in competitive contexts. *Journal of Consumer Research*, 40, 239-254.
- Norton, M.I., Frost, J.H., & Ariely, D. (2007). Less is more: The lure of ambiguity, or why familiarity breeds contempt. *Journal of Personality and Social Psychology*, 92, 97-105.
- Pennebaker, J. (1990). *Opening up: The healing power of expressing emotions*. Guilford Press, New York: New York.
- Ross, L. (1977). The intuitive psychologist and his shortcomings: Distortions in the attribution process. In L. Berkowitz (ed.), *Advances in Experimental Social Psychology*, Vol. 10 (pp. 173-214). San Diego, CA: Academic Press.
- Salinas v. Texas (2013).
- Schulze, K. (2012). Machen sich Facebook-Verweigerer verdächtig? *Der Tagesspiegel*. Retrieved from <http://www.tagesspiegel.de/weltspiegel/nach-dem-attentat-von-denver-kein-facebook-profil-kein-job-angebot/6911648-2.html>
- Sears, D. O. (1983). The person-positivity bias. *Journal of Personality and Social Psychology*, 44, 233-250.

- Sedikides, C., Campbell, W. K., Reeder, G., & Elliot, A. J. (1999). The relationship closeness induction task. *Representative Research in Social Psychology*, 23, 1-4.
- Simmons, J. (2014). <http://datacolada.org/2014/04/04/18-mturk-vs-the-lab-either-way-we-need-big-samples/>
- Simmons, C.J., & Lynch, J.G. (1991). Inference effects without inferencemaking? Effects of missing information on discounting and use of presented information. *Journal of Consumer Research*, 17, 477-491.
- Simmons, J., Nelson, L., & Simonsohn, U. (2011). False-positive psychology : Undisclosed flexibility in data collection and analysis allows Presenting anything as significant. *Psychological Science*, 22(11), 1359-1366.
- Slashdot. (2012). Facebook Abstainers Could Be Labeled Suspicious Retrieved July 17, 2013, from <http://tech.slashdot.org/story/12/07/29/1627203/facebook-abstainers-could-be-labeled-suspicious>
- Slovic, P., & MacPhillamy, D. (1974). Dimensional commensurability and cue utilization in comparative choice. *Organizational Behavior and Human Performance*, 11, 179-194.
- Tormala, Z.L., Jia, J.S., & Norton, M.I. (2012). The preference for potential. *Journal of Personality and Social Psychology*, 103, 567-583.
- Travers, M. W., Van Boven, L., & Judd, C. J. (2014). The secrecy heuristic: Inferring quality from secrecy in foreign policy contexts. *Political Psychology*, 35(1), 97-111.
- Wilson, T., & Brekke, N. (1994). Mental Contamination and Mental Correction: Unwanted Influences on Judgments and Evaluations. *Psychological Bulletin*, 116(1), 117-142.
- Wilson, T., & Schooler, J. (1991). Thinking too much: introspection can reduce the quality of preferences and decisions. *Journal of Personality and Social Psychology*, 60(2), 181-192.

Winter, L., & Uleman, J. S. (1984). When are social judgments made? Evidence for the spontaneousness of trait inferences. *Journal of Personality and Social Psychology*, *47*, 237–252.

Zajonc, R.B. (1980). Feeling and thinking: Preferences need no inferences. *American Psychologist*, *35*(2), 151-175.

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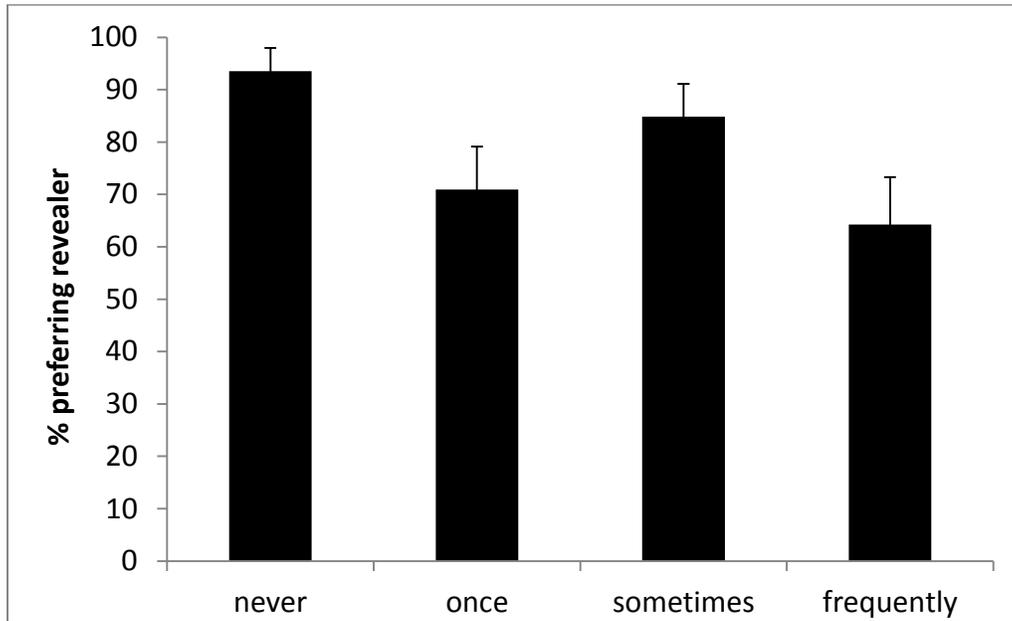


Figure 1. The revealer is generally preferred over the hider (Study 1).

Note: Error bars represent +/- 1 binomial standard error of the sample proportion.

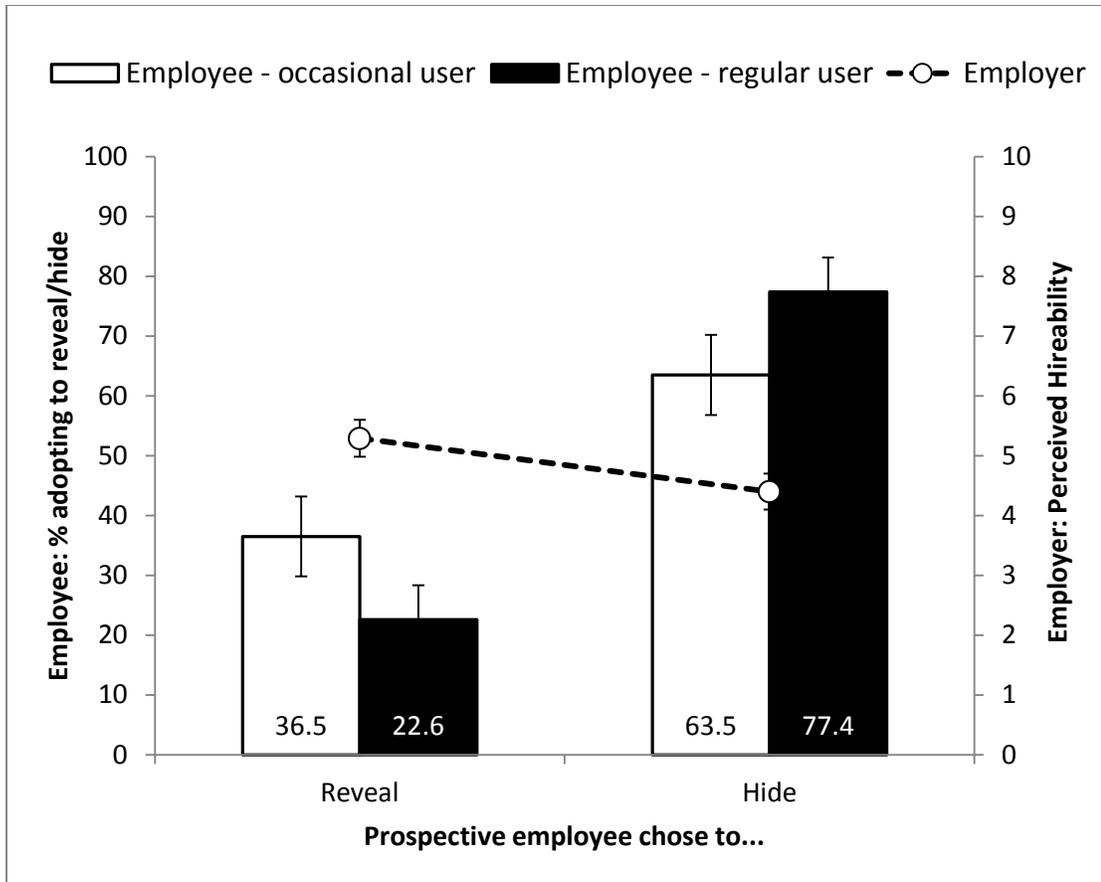


Figure 2. Employees tend to opt out of answering, yet employers prefer to hire those who had admitted their drug use to relative to those who had opted out (Study 4).

Notes: Error bars represent +/- 1 binomial standard error of the estimate. Same-shade columns sum to 100%.

Appendix 1: Stimuli used in Study 1 (and Study 3B), “Frequently” condition

Note: we have replicated the effect when the “Choose not to answer” option appears on the left side of the response scale (i.e., immediately to the left of the “Never” option).

**Respondent #983219**

<b>Have you ever cheated on your tax return?</b>				
Never	Once	Sometimes	Frequently	Choose not to answer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Have you ever made a false insurance claim?</b>				
Never	Once	Sometimes	Frequently	Choose not to answer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Have you ever stolen anything worth more than \$100?</b>				
Never	Once	Sometimes	Frequently	Choose not to answer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Have you ever neglected to tell a partner about an STD you are currently suffering from?</b>				
Never	Once	Sometimes	Frequently	Choose not to answer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Have you ever had a fantasy of doing something terrible (e.g. torturing) to somebody?</b>				
Never	Once	Sometimes	Frequently	Choose not to answer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Respondent #186273**

<b>Have you ever cheated on your tax return?</b>				
Never	Once	Sometimes	Frequently	Choose not to answer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Have you ever made a false insurance claim?</b>				
Never	Once	Sometimes	Frequently	Choose not to answer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Have you ever stolen anything worth more than \$100?</b>				
Never	Once	Sometimes	Frequently	Choose not to answer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Have you ever neglected to tell a partner about an STD you are currently suffering from?</b>				
Never	Once	Sometimes	Frequently	Choose not to answer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Have you ever had a fantasy of doing something terrible (e.g. torturing) to somebody?</b>				
Never	Once	Sometimes	Frequently	Choose not to answer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Appendix 2: Stimuli used in Study 2A

### Revealer condition:

Donating to charity.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Volunteering your time.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Doing your fair share of chores at home.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

### Unintentional Hider condition:

Donating to charity.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Volunteering your time.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Letting someone else have credit for something you did.

Never	Once	Sometimes	Frequently	Choose not to answer
<input checked="" type="checkbox"/>				

Donating blood.

Never	Once	Sometimes	Frequently	Choose not to answer
<input checked="" type="checkbox"/>				

Doing your fair share of chores at home.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

### Intentional Hider condition:

Donating to charity.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Volunteering your time.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Letting someone else have credit for something you did.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Donating blood.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Doing your fair share of chores at home.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

### Appendix 3: Stimuli used in Study 2B

#### Revealer condition:

Donating to charity.

Never	Once	Sometimes	Frequently
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Volunteering your time.

Never	Once	Sometimes	Frequently
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Letting someone else have credit for something you did.

Never	Once	Sometimes	Frequently
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Donating blood.

Never	Once	Sometimes	Frequently
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Doing your fair share of chores at home.

Never	Once	Sometimes	Frequently
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

#### Unintentional Hider condition:

Donating to charity.

Never	Once	Sometimes	Frequently	Not displayed
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Volunteering your time.

Never	Once	Sometimes	Frequently	Not displayed
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Letting someone else have credit for something you did.

Never	Once	Sometimes	Frequently	Not displayed
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Donating blood.

Never	Once	Sometimes	Frequently	Not displayed
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Doing your fair share of chores at home.

Never	Once	Sometimes	Frequently	Not displayed
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

#### Intentional Hider condition:

Donating to charity.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Volunteering your time.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Letting someone else have credit for something you did.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Donating blood.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Doing your fair share of chores at home.

Never	Once	Sometimes	Frequently	Choose not to answer
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Appendix 4: Stimuli used in Study 3A.

1. **Have you tried to gain access to someone else's (e.g., partner, friend, etc.) email account?**
2. **While in a relationship, have you flirted with somebody other than your partner?**
3. **Have you had sex with someone who was too drunk to know what they were doing?**
4. **Have you called in sick when you were not actually sick?**
5. **Have you had a fantasy of doing something terrible (e.g., torturing) to someone?**

Appendix 5: Stimuli used in Study 3C.

Revealer condition:

**Imagine someone answers the below question as follows:**

**What is the lowest grade you ever received on a final exam in school?**

---

A

B

C

D

F

Choose not to answer

Hider condition:

**Imagine someone answers the below question as follows:**

**What is the lowest grade you ever received on a final exam in school?**

---

A

B

C

D

F

Choose not to answer