

People imitate others' dishonesty but do not intentionally search information about it

Authors	Leib, Margarita
Published in	Journal of Behavioral Decision Making
DOI	10.1002/bdm.2296
Publication Date	2023
Document Version	publishersversion
Link	https://research.tilburguniversity.edu/en/publications/e35d5ca7-d06d-446e-af48-fc8a0912e0bd
Citation	Leib, M 2023, 'People imitate others' dishonesty but do not intentionally search information about it', Journal of Behavioral Decision Making, vol. 36, no. 2, e2296. https://doi.org/10.1002/bdm.2296
Download Date	2026-05-17 11:41:59
Rights	<p>General rights</p> <p>Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.</p> <ul style="list-style-type: none"> - Users may download and print one copy of any publication from the public portal for the purpose of private study or research. - You may not further distribute the material or use it for any profit-making activity or commercial gain - You may freely distribute the URL identifying the publication in the public portal" <p>Take down policy</p> <p>If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.</p>

RESEARCH ARTICLE

WILEY

People imitate others' dishonesty but do not intentionally search information about it

Margarita Leib 

Amsterdam School of Economics, University of Amsterdam, Amsterdam, The Netherlands

Correspondence

Margarita Leib, Amsterdam School of Economics, University of Amsterdam, Roetersstraat 11, 1018WB, Amsterdam, The Netherlands.
Email: m.leib@uva.nl

Funding information

The research was funded by the European Research Council (ERC-StG-637915 and ERC-CoG-865931), and the Wharton Behavioral Lab. I am grateful to Maurice Schweitzer for his insightful and valuable feedback throughout the work on this manuscript and to the Wharton Behavioral Lab for their assistance and funding. Further, I would like to thank Shaul Shalvi, Ivan Soraperra, and Nils Köbis for their valuable comments on the manuscript.

Abstract

When people see that others lie for financial profit, they are more likely to lie themselves. But do people search for information about others' behavior in ethically tempting situations? And among those who search, what type of information do they search for? Specifically, do people search for information about others' *dishonesty in particular*, to justify their future transgressions, or do they search for information about others' *behavior in general* to learn about the descriptive social norm? Across four financially incentivized experiments ($N_{\text{total}} = 2642$), participants engaged in a task in which they could lie for profit. Before starting their task, participants could search for information about others' behavior in the same task. Results reveal that when people search for information, they do so in order to learn about the descriptive norm, not to intentionally learn about others' dishonesty. When the decision to search for information results in observing more dishonest others, participants become more dishonest themselves. Testing a boundary condition revealed that when information search is costly (vs. free), people search for less information, observe less dishonest others, and subsequently are less dishonest themselves. Findings suggest that in settings where people may act dishonestly, information about others behavior should be costly to obtain.

KEYWORDS

behavioral ethics, descriptive norms, dishonesty, information search

1 | INTRODUCTION

People routinely face tempting situations in which they can bend ethical rules and lie for financial profit. For instance, when filling out an expense report from a business trip, people can either honestly submit the costs associated with the trip or be tempted to submit an additional personal expense that should not be submitted. One important factor that influence people's decision in such situations is the descriptive norm – information about how others act. Learning that a colleague submitted personal expenses likely to push an employee to submit theirs, whereas learning that a colleague did not submit such

expenses likely to hinder an employee from submitting theirs. Indeed, when people learn that others violated ethical rules or lied, they are more likely to do the same (Gino et al., 2009; Köbis et al., 2015; O'Fallon & Butterfield, 2012). But do people search for information about others' behavior in such tempting situations? And what is the motivation underlying this search? That is, do people search for information about others' *dishonesty in particular*, to justify their future transgressions, or alternatively do they search for information about others' *behavior in general* to learn about the descriptive norm?

Here I test competing hypotheses regarding the way in which people search for information about others' behavior. One possibility

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2022 The Author. *Journal of Behavioral Decision Making* published by John Wiley & Sons Ltd.

is that people seek information about others' dishonest (but not honest) behavior. As people are tempted to lie for financial profits, and learning that others lied frees them to lie as well (Gino et al., 2009), they may purposefully seek information about others' dishonesty to justify their future lies. This possibility may occur if people plan to lie when facing a tempting situation (Chowdhury et al., 2021; Cohn et al., 2022), and seek a way to justify their future behavior (Leib & Shalvi, 2020; Shalvi et al., 2015). A second possibility is that people search for information out of curiosity (Barkan et al., 2016; Berlyne, 1954) to learn about the descriptive norm. As behavior is shaped by social norms (March & Olsen, 2004), individuals may especially seek information about the descriptive norm in tempting settings, where such norms are ambiguous. Across four financially incentivized experiments, participants engage in a task in which they can lie to increase their financial profits. Before completing the task, participants can search for information about others' behavior, in a sequential manner, one behavior at a time. Here, I test which type of information – specifically about others' dishonesty or general information about others' behavior – participants search for, and how costly (vs. free) information shapes information search likelihood and strategy. Further, I examine how the ability and decision to search for information, combined with the information obtained during the search, are associated with participants' own subsequent dishonesty.

1.1 | Seeking information to see dishonesty or to learn about descriptive norms?

Various factors shape dishonesty. For instance, people are more likely to lie when they can lose rather than gain money (Leib et al., 2019; Schindler & Pfattheicher, 2017), when they feel entitled (Schurr & Ritov, 2016), when their lies benefit others (Gino et al., 2013; Hochman et al., 2021; Wiltermuth, 2011), and when they collaborate in a group (Leib et al., 2021; Weisel & Shalvi, 2015). One key factor that affects dishonesty is information about how others behaved – the descriptive norm. When people learn that others violated ethical rules, they are more likely to violate ethical rules themselves (Dimant, 2019; Gächter & Schulz, 2016; Gino et al., 2009; Keizer et al., 2008; Köbis et al., 2015, 2019; O'Fallon & Butterfield, 2012).

While people are clearly affected by information about others' behavior, we know surprisingly little about whether, and why, people search for such information. Quite possibly, some individuals may prefer to avoid learning about others' behavior entirely, as they rather make an independent decision without any input of how others behaved. Others, on the other hand, would search for information as they find such information valuable. But among those who search for information, which type of information do they search for?

One possibility is that when facing a temptation to lie, people purposefully search for information about others' dishonesty. People rely on self-serving justifications to lie (Leib & Shalvi, 2020; Mazar et al., 2008; Schweitzer & Hsee, 2002; Shalvi et al., 2015) and

learning that others lied serves as such justification (e.g., Gino et al., 2009). Because people access, construct, and evaluate information in ways that helps them to arrive at their desired conclusions (Kunda, 1990), they may search for information that helps them to view dishonesty as common or even acceptable. This can be the case if in tempting situations, dishonest behavior is premeditated. That is, if individuals plan to lie, and because of that they systematically seek information about others' dishonest (but not honest) behavior in order to alleviate their anticipated guilt from lying. Supporting this possibility, in some settings people indeed plan and anticipate their dishonest acts (Chowdhury et al., 2021; Cohn et al., 2022). Further, individuals selectively seek information that is consistent with their underlying interests (Fischer et al., 2008, 2011; Olekalns et al., 2014), goals (Ambühl, 2017; Smith et al., 2017) and motivations (Kandul & Ritov, 2017). If indeed individuals plan to lie and thus seek information to justify their lies, they should search for information about others' dishonest (but not honest) behavior. Specifically, people should continue to search for information until they observe others' dishonesty. In a setting where information search is sequential, we should expect that, among those who search for information:

H1a. People will be less likely to continue searching for additional information after they observe others' dishonest compared to honest behavior.

The second possibility is that people search for information about the general descriptive norm and do not specifically seek one type of information over the other. Indeed, in ambiguous and uncertain settings, people seek information in order to alleviate the discomfort of not knowing, even when such information may confirm their negative suspicions (Shani et al., 2008; Shani & Zeelenberg, 2007) or when they advise others to do the opposite (Barkan et al., 2016). Further, in ambiguous settings, people wish to follow the social norm (March & Olsen, 2004; Weber et al., 2004). Thus, individuals might seek information about others' behavior, in general, in order to learn what is the social norm in ethically tempting situations (Berlyne, 1954; Loewenstein, 1994). Searching for information about the social norm might occur both when dishonesty is planned and when it is spontaneous. That is, people can either first decide whether to lie or tell the truth but still be curious about the social norm and thus seek information about it. Alternatively, people might be undecided about how to behave and search for information about the social norm in order to then follow it. If people indeed search information to learn about the descriptive social norm, their decision to keep or stop searching for additional information should not be affected by the type of information (others' honesty or dishonesty) they have already obtained. In a setting where information search is sequential, we should expect that, among those who search for information:

H1b. People will be equally likely to continue searching for additional information after they observe others' honest and dishonest behavior.

1.2 | Does acquired information shapes behavior?

Beyond examining which information people search for, this work further studies how the acquired information shapes subsequent behavior. Prior work revealed that learning that others were dishonest makes people more dishonest themselves (e.g., Gino et al., 2009; O'Fallon & Butterfield, 2012). However, work establishing this effect focused on setting in which participants were *extrinsically* exposed to information about others' behavior as an experimental manipulation. In many situations in life, however, people learn about others' behavior because they acquire this information by searching for it, instead of being exposed to it in an unsolicited manner. For instance, in order to learn whether a colleague submits personal expenses when filling out an expense report, one often has to proactively seek this information. Thus, it bears relevance to further examine how information people acquired during an *intrinsic, self-initiated* information search shapes their own behavior. Accordingly, the current work examines the association between people's decision to search for information, the type of information they acquire, and their own subsequent dishonest behavior.

2 | OVERVIEW OF EXPERIMENTS

Across four financially incentivized experiments, participants engaged in a task in which they could lie to increase their payment. Participants observed die roll outcomes and were asked to report the outcomes they observed, with higher reports corresponding to higher pay. This die rolling paradigm is a commonly used measure of dishonesty (see meta analyses; Abeler et al., 2019; Gerlach et al., 2019; Leib et al., 2021), and has good external validity, as lying in the task is associated with various dishonest behaviors outside of the lab (Cohn & Maréchal, 2017; Dai et al., 2018; Hanna & Wang, 2017; Potters & Stoop, 2016).

Before reporting their die roll outcomes, participants could search for information about how others had behaved in the same task, in a sequential manner. Specifically, participants who opt to search for information, received information about the behavior of one person, and then could either choose to learn about another person's behavior or stop information search and proceed to the die rolling task. Between participants, *information order* was manipulated, such that if participants searched for information, they either saw dishonest behavior early in the information search process or later in the search process. Participants who searched for all available information learned about the same prevalence of dishonesty in both conditions. In all experiments, participants' information search pattern is examined as a function of information order. Across experiments, information was either free (Experiments 1 and 4), costly (Experiment 2), or manipulated to be free versus costly (Experiment 3) to obtain. Such variation allowed to further investigate whether information search strategy and likelihood are affected by information cost.

Moreover, in all experiments, the association between acquired information and participants' own dishonesty is examined. To this end, the level of dishonesty among participants who did not search for information is compared to the level of dishonesty among those who searched for information in each of the information order conditions. In a pre-registered Experiment 3, an additional benchmark condition is added, in which participants could not search for information at all. Lastly, delving deeper into the patterns of dishonest behavior, a pre-registered Experiment 4 examines whether it is (i) the information order alone or (ii) the combination of the decision to search for informant together with information order that shapes dishonesty. Hence, Experiment 4 includes two additional benchmark conditions, in which participants were forced to obtain information. All measures, manipulations, and data exclusions are reported in the main text and the supplementary online materials (SOM). All data and materials appear on open science framework (OSF).

3 | PILOT

3.1 | Method

First, a pilot was conducted to collect actual honest and dishonest behaviors to be used as stimuli in Experiments 1–4. A total of 221 participants were recruited (77.37% females; $M_{\text{age}} = 19.96$, $SD_{\text{age}} = 1.52$) from a northeastern university in the United States to participate in a die rolling task in exchange for \$10 and the opportunity to earn additional payment. The task took about 5 min to complete and was the first in a series of unrelated tasks in an hour-long session. In the task, participants observed a die roll presented as a video segment on a computer screen and were then instructed to report the outcome they observed (see Gross et al., 2018; Kocher et al., 2018 for similar approach). Participants learned that the higher the outcome they report, the more they would earn: reporting 1 earns 10 cents, 2 = 20 cents, 3 = 30 cents, 4 = 40 cents, 5 = 50 cents, and 6 = 60 cents. Participants saw five die rolls, reported five outcomes, and were paid a bonus equals to the sum of their five reports.

3.2 | Results

3.2.1 | Prevalence of dishonesty

For each participant, for each round, the actual and reported die roll outcomes were recorded, allowing to identify whether a participant reported honestly or not. Out of 221 participants, 74.66% ($n = 165$) reported honestly – the sum of their reported die roll outcomes was equal to the sum of their observed die roll outcomes. A total of 23.98% ($n = 53$) misreported die rolls to increase their pay – the sum of their reported die roll outcomes was higher than the sum of their observed die roll outcomes. Finally, 1.35% ($n = 3$)

misreported to decrease their pay – the sum of their reported die roll outcomes was lower than the sum of their observed die roll outcomes.¹

4 | DISCUSSION

In the pilot, ~ 75% of participants were honest and ~ 24% lied to increase their pay. Participants were not explicitly informed that their behavior could (and would) be monitored by the experimenter. However, because die roll outcomes appeared on a computer screen, some participants might have inferred that their behavior would be monitored. Nevertheless, it seems that the level of dishonesty in the pilot is in line with previous work (23.4% in a meta-analysis aggregating data from 90 experiments; Abeler et al., 2019).

Reflecting the actual prevalence of dishonesty in the sample, in the information search task in Experiments 1–3, participants could search for the behavior of up to 12 individuals. Out of those, 3 (25%) were dishonest and 9 (75%) were honest. Allowing participants to search for up to 12 behaviors enabled to capture the information search process with few censored observations (see similarly, Dhimi & Harries, 2010). That is, few participants wanted to search for all (or maybe more than) 12 behaviors. At the same time, if participants keen to learn about the most accurate descriptive norm possible, they could do so by searching for all 12 behaviors, arguably without becoming bored or inattentive. In Experiment 4, which examines how the ability to search versus forced information shapes dishonesty, participants could search for (or were forced to obtain) a total of five behaviors, 2 (40%) dishonest and 3 (60%) honest.

5 | EXPERIMENT 1

5.1 | Method

A total of 183 participants (72.13% females, $M_{\text{age}} = 20.67$, $SD = 2.65$) from a northeastern university in the United States took part in the experiment. The predetermined data collection stopping rule was to collect as many participants as possible during the time allocated to the experiment in the lab. Sensitivity analyses at the end of the results section of Experiment 4 show that the sample sizes across all experiments were sufficient to detect medium effect sizes for information search.

First, participants were informed that they would engage in a die rolling task. Just as in the pilot, participants were told that they would see a die on a computer screen five times, report the outcomes they observed, and earn a bonus based on their reports. The incentive structure of the die rolling task was the same as in the pilot.

Before engaging in the die rolling task, participants could search information about others' behavior. If participants decided to search information, they learned about others' behavior sequentially. That is, each participant made a series of decisions to (1) learn about one behavior of another person or (2) to start the die rolling task. If a participant chose to learn about one behavior, they saw all five die roll outcomes that a former participant (from the pilot) had observed and reported. After learning about one behavior, the focal participant then chose again whether to learn about another behavior or to start their own die rolling task. Once the focal participant chose to start their own die rolling task, they proceeded to the task and could not search for additional information (see Figure 1a). Participants were informed that they could learn about the behavior of up to 12 people in this same, sequential way.

Between participants, the location of dishonest behavior in the information sequence was manipulated. In the *early dishonesty* condition, the sequence was D, D, H, D, H, H, H, H, H, H, H, H; “D” represents a dishonest behavior, and “H” represents an honest behavior, see Figure 1c. In the *late dishonesty* condition, the dishonest behavior appeared later in the sequence (in the fifth, sixth, and eighth positions): H, H, H, H, D, D, H, D, H, H, H, H. When participants observed honest behaviors, they saw the behavior of randomly selected participants from the pilot who reported all five die roll outcomes accurately. When participants observed dishonest behaviors, they observed participants from the pilot whose sum of reported die roll outcomes was higher by 13 compared to the sum of their observed die roll outcomes (e.g., observed outcomes: 2, 6, 2, 3, 4; reported outcomes: 6, 6, 6, 6, 6, respectively, see Figure 1b). Overall, the experimental design was a 2 (information order: early dishonesty vs. late dishonesty) between-subject design. To test between the competing hypotheses regarding information search, the analyses focus on participants who searched for information and compare the (i) likelihood to keep searching for additional information after observing dishonest versus honest behavior, and (ii) the number of behaviors participants searched for in the two information order conditions.

At the end of the task, for exploratory purposes, participants evaluated the extent to which they thought dishonesty is prevalent. Specifically, participants estimated the percentage of people (between 0 and 100) they thought lied in the die roll task (see results in the main text). Participants further evaluated the extent to which they thought dishonesty is justifiable and the extent to which the information they obtained changed their intended behavior (see SOM for results).

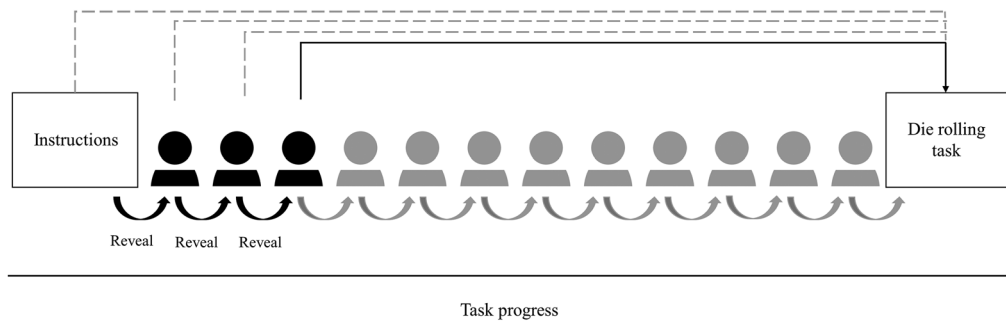
5.2 | Results

5.2.1 | Information search

Taking all the participants into account ($n = 183$), on average, participants searched for 2.55 behaviors ($SD = 3.12$, range: 0–12). Focusing on participants who searched for at least one behavior ($n = 120$;

¹All three participants, who misreported to decrease their pay, did so by a total of 1 point (thus earning 10 cents less compared to how much they would have earned had they reported honestly).

(a) Task procedure



(b) Example of the information presented to participants

Honest		○	Dishonest		◐
Observed	Reported		Observed	Reported	
5	5	○	2	6	◐
2	2		6	6	
6	6		2	6	
5	5		3	6	
3	3		4	6	

(c) Order of information presented in the early and late dishonesty conditions



FIGURE 1 Overview of the procedure in Experiments 1–3. (a) After reading the instructions, participants sequentially chose between learning about one person's behavior and starting the die rolling task. In this illustration, a participant chose to learn about the behavior of three people (in black) and then proceeded to the die rolling task. This participant did not observe the behavior of the remaining nine people (in gray). (b) An example of the information presented to participants who observed an honest (open shaded figure) and dishonest report (shaded figure). If a participant chose to see information about others' behavior, they saw all five observed and reported die roll outcomes from participants in the pilot. The behaviors were not labeled as “honest” or “dishonest” (see SOM for a version where information was labeled, leading to the same results). (c) Information order was manipulated such that dishonest behaviors were presented either early or late (in the middle) of the information sequence

65.57% of the sample), on average, participants searched for 3.89 behaviors ($SD = 3.11$, range: 1–12).²

To assess whether participants were less (H1a) or equally (H1b) likely to keep searching for information after they observed a dishonest, compared to honest, behavior, the following analyses focus on the participants who searched for information. Among the 120 participants who searched for information and observed one behavior, those in the early dishonesty condition ($n = 60$) saw a dishonest behavior, whereas those in the late dishonesty condition saw an honest behavior ($n = 60$). If participants search information to learn about others' dishonest (but not honest) behavior, we should find that (H1a) the proportion of participants who keep searching for information is

higher after they saw honest behavior (in the late dishonesty condition) than dishonest behavior (in the early dishonesty condition). If participants search information to learn about the general social norm and are not sensitive to the type of information they already obtained, we should find that (H1b) the proportion of participants who keep searching for information is similar among those who saw honest behavior (in the late dishonesty condition) and dishonest behavior (in the early dishonesty condition).

Chi-square analysis support H1b. Namely, there was no difference between the proportion of participants who searched for a second behavior after seeing dishonest behavior (i.e., in the early dishonesty condition; 73.33%) and honest behavior (i.e., in the late dishonesty condition; 70.00%), $\chi^2(1) = .16$, $p = .685$, $\phi = .037$; see Figure 2. Bayesian analysis comparing a model with no predictors to a model including information order (early vs. late dishonesty) as a

²The proportion of participants who searched for information did not differ between the early (65.21%) and the late dishonesty conditions (65.93%), $\chi^2(1) = .01$, $p = .919$, $\phi = .008$.

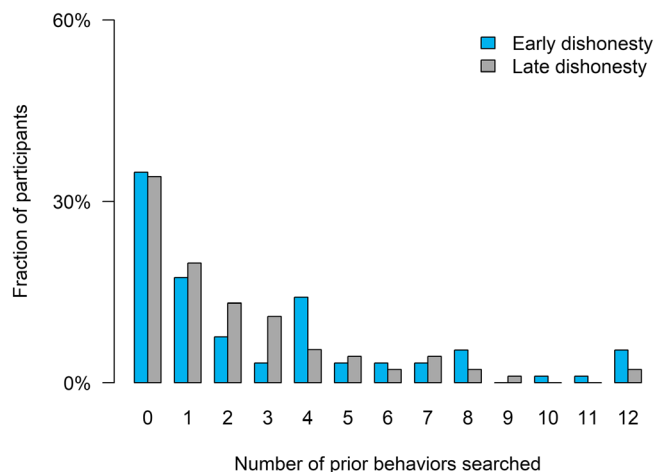


FIGURE 2 The fraction of participants as a function of information order (early dishonesty vs. late dishonesty) and the number of behaviors participants searched for in Experiment 1 [Colour figure can be viewed at wileyonlinelibrary.com]

predictor for searching a second behavior revealed a $BF_{10} = 0.22$, supporting the model with no predictors. The data were 4.55 times more likely to occur when information order did not predict the decision to search for a second behavior, compared to when it did.

Similarly, among the 86 participants who searched for a second behavior, those in the early dishonesty condition ($n = 44$) saw two dishonest behaviors in a row, whereas those in the late dishonesty condition ($n = 42$) saw two honest behaviors in a row. Chi-square analysis revealed no difference between the proportion of participants who searched for a third behavior after seeing two dishonest behaviors (i.e., in the early dishonesty condition; 84.09%) and two honest behaviors (i.e., in the late dishonesty condition; 71.42%), $\chi^2(1) = 2.00$, $p = .157$, $\phi = .152$. Bayesian analysis comparing a model with no predictors to a model including information order as a predictor for searching a third behavior revealed a $BF_{10} = 0.57$, supporting the model with no predictors. The data were 1.72 times more likely to occur when information order did not predict the decision to search for a third behavior, compared to when it did.

Participants who searched for information about a third behavior saw honesty in both the early and late dishonesty conditions (D, D, H in the early dishonesty condition, and H, H, H in the late dishonesty condition; see Figure 1c for full information sequences). Thus, it is no longer possible to assess the effect of the unique information participants saw (strictly honesty or strictly dishonesty) on their subsequent decision to search information, beyond their decisions to seek information about the first two behaviors.

Similarly, focusing on participants who searched for information, there was no significant difference between the number of behaviors participants searched for in the early dishonesty ($M = 4.43$, $SD = 3.42$, $n = 60$) and late dishonesty condition ($M = 3.35$, $SD = 2.69$, $n = 60$), $F(1, 118) = 3.71$, $p = .056$, $\eta^2 = .031$. Comparing the distributions of the two conditions led to the same results (see SOM).

Taken together, the findings suggest that most participants are interested to learn about at least some (limited) amount of others' behavior. The participants who search for information do not seem to be affected by the type of information they have already obtained when deciding whether to keep or stop information search. It thus seems like participants are searching for information in order to learn about the general social norm and do not particularly seek information about others' dishonesty.

5.2.2 | Association between acquired information and dishonesty

As a measure of dishonesty, the amount participants overclaimed was calculated by subtracting the sum of the observed die roll outcomes from the sum of the reported die roll outcomes. The gap was then multiplied by 10 to represent the amount of cents the participants overclaimed in the die rolling task.

On average, participants overclaimed 34.37 cents ($SD = 56.06$, range: -10 – 210 ³). Analysis of variance (ANOVA) analysis examined whether there was a difference in the amount overclaimed between the participants who (i) did not search for information, (ii) searched for information in the early dishonesty condition, and (iii) searched for information in the late dishonesty condition. The results revealed a difference between the three groups, $F(2, 180) = 7.55$, $p < .001$, $\eta^2 = .077$. Post hoc comparisons revealed that, compared to participants who did not search for information ($M = 21.42$ cents, $SD = 47.75$, $n = 63$), those who searched for information in the early dishonesty condition overclaimed more ($M = 56.50$ cents, $SD = 65.22$, $n = 60$; mean difference = 35.07, $p = .001$, 95%CI = [11.47, 58.68]). Those who searched for information in the late dishonesty condition overclaimed similar amounts ($M = 25.83$ cents, $SD = 47.91$, $n = 60$; mean difference = -4.40 , $p = .999$, 95%CI = [-28.01 , 19.20]) to those who did not search for information. Those who searched for information in the early dishonesty condition overclaimed more than those who searched for information in the late dishonesty condition (mean difference = 30.67, $p = .007$, 95%CI = [6.78, 54.56]; see Figure 3).

5.2.3 | Perceived prevalence of dishonesty

On average, participants evaluated that 48.14% of the sample ($SD = 30.02$, range: 0–100) were dishonest. The higher the prevalence of dishonesty the participants evaluated, the more they overclaimed themselves, $r(181) = .558$, $p < .001$. ANOVA analysis examined differences in the perceived prevalence of dishonesty between the participants who (i) did not search for information, (ii) searched for information in the early dishonesty condition, and (iii) searched for information in the late dishonesty condition. The

³Only one participant misreported to decrease their pay by 1 point, thus earning 10 cents less compared to how much they would have earned had they reported honestly.

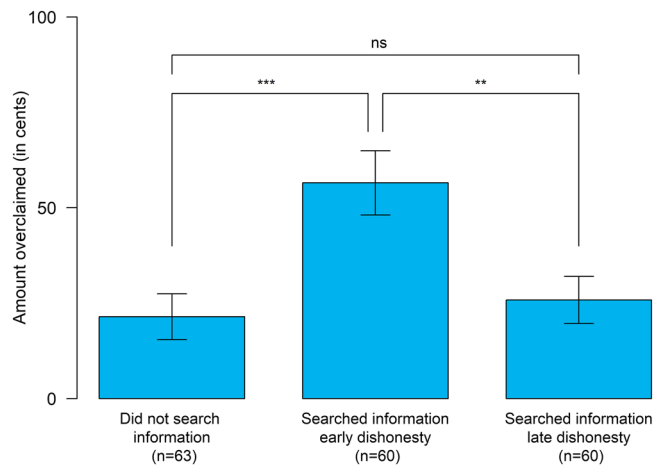


FIGURE 3 The amount overclaimed among participants who (i) did not search for information, (ii) searched for information in the early dishonesty condition, and (iii) searched for information in the late dishonesty condition, in Experiment 1. * $p < .05$, ** $p < .01$, *** $p \leq .001$ [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1002/beh.2296)]

results revealed a significant difference among the three groups, $F(2, 180) = 28.55, p < .001, \eta^2 = .241$. Post hoc comparisons revealed that compared to participants who did not search for information ($M = 41.68\%$, $SD = 26.57, n = 63$), those who searched for information in the early dishonesty condition perceived dishonesty as more prevalent ($M = 68.73\%$, $SD = 24.74, n = 60$; mean difference = $-27.05, p < .001, 95\%CI = [-38.52, -15.59]$). Those who searched for information in the late dishonesty condition perceived dishonesty as common ($M = 34.33\%$, $SD = 27.49, n = 60$; mean difference = $7.35, p = .369, 95\%CI = [-4.12, 18.81]$) as those who did not search for information. Those who searched for information in the early dishonesty condition perceived dishonesty as more common than those who searched for information in the late dishonesty condition (mean difference = $34.40, p < .001, 95\%CI = [22.80, 46.00]$).

6 | DISCUSSION

Reflecting curiosity about how others behave, the majority of the participants in Experiment 1 searched for some information about others' behavior. Participants searched for information similarly across the two information order conditions. This result is consistent with the idea that participants searched for information to learn about the general descriptive norm, not to learn about others' dishonesty in particular. Interestingly, when participants searched for information, they were curious to learn about a rather limited number (3.89 on average) of others' behavior instead of learning about all information available to them. The finding is in line with previous work showing that people rely on (Fiedler, 2000; Kareev, 2000), and search for (Teodorescu & Erev, 2014) a limited amount of information when making decisions. Thus, while participants searched for information to learn about the general norm, they were not

interested to learn about the most accurate norm they could learn about.

Examining dishonesty, participants who searched for information in the early dishonesty condition overclaimed the highest amount in the die rolling task. Because participants searched for a similar number of others' behavior in both information order conditions, those who searched for information in the early dishonesty condition saw more instances and a higher proportion of dishonest behavior than those who searched for information in the late dishonesty condition (see SOM). The exposure to more liars (due to the combination of the decision to search for information, and being experimentally assigned to the early dishonesty condition) in turn resulted in participants being more dishonest and perceiving dishonesty as more common. Indeed, the more liars participants saw, (i) the more they overclaimed in the die rolling task ($r = .324, p < .001$) and (ii) the more prevalent they perceived dishonesty to be ($r = .378, p < .001$). Similarly, the higher the proportion of liars the participants saw (N of liars observed/ N of behaviors observed), the more they overclaimed in the die rolling task ($r = .305, p < .001$) and (ii) the more prevalent they perceived dishonesty to be ($r = .574, p < .001$).⁴ All in all, when the decision to search for information resulted in observing more dishonest others, participants' own dishonesty and perception of its prevalence increased.

7 | EXPERIMENT 2

In Experiment 1, information was free to obtain. In some situations, however, gathering information requires time, effort, or money. Costly information might force people to consider the amount of information they want to obtain and their information search strategy more carefully. This is because people wish to spend as little money as they can for acquiring information and at the same time obtain information they truly value. Thus, compared to free information, costly information might be less likely to be searched and might reflect people's preferences for information more accurately. In other words, costly information may reduce some of the potential noise associated with information search strategies. Therefore, Experiment 2 extends the investigation and explores how individuals search for information when it is costly.

Compared to settings in which information is free, when information is costly, people might be more tempted to lie, as they wish to "earn back" any money they spend on acquiring information. The potentially higher motivation to lie may lead people to engage in a different information search strategy: namely, to search information about others' dishonesty (to justify their future lies) rather than to search information about others' behavior in general (to learn about the social norm). Thus, the predicted pattern of results was that when information is costly, participants may seek information about others' dishonest (but not honest) behavior.

⁴The correlations with the proportion of liars observed are calculated only for participants who searched for information ($n = 123$). It is not possible to calculate the proportion of liars observed for those who did not search for information.

7.1 | Method

A total of 213 participants (68.07% females, $M_{\text{age}} = 20.94$, $SD = 4.95$) from a northeastern university in the United States took part in this experiment in exchange for \$10 and an opportunity to earn additional pay. The task took about 5 min to complete and was the first in a series of unrelated tasks in an hour-long session. As in Experiment 1, the plan was to collect as many participants as possible during the time allocated to the study in the lab.

Participants engaged in the same task as in Experiment 1. The key difference was that participants had to pay 10 cents for each behavior they searched for. If a participant opted to search for information about all 12 possible behaviors, it would cost them \$1.20. Notably, this cost was lower than the expected bonus payment for an honest participant (an honest participant would expect to earn \$1.75 from the die rolling task: 3.5 [expected value of a die roll] $\times 5$ [rounds] $\times 10$ [cents]).

As in Experiment 1, between participants information order was manipulated, such that participants saw dishonesty early (first, second, and fourth position) or later (fifth, sixth, and eighth position) in the information search process. As in Experiment 1, after completing the task, participants evaluated how prevalent dishonesty is (see main text), as well as how justifiable dishonesty is, and the extent to which the information they saw changed their behavior (see SOM).

7.2 | Results

7.2.1 | Information search

Taking all the participants into account ($n = 213$), on average, participants searched for 0.35 behaviors ($SD = 1.01$, range: 0–12). Focusing on the participants who searched for at least one behavior ($n = 47$; 22.07% of the sample), on average, participants searched for 1.60 behaviors ($SD = 1.65$, range: 1–12).⁵

As in Experiment 1, the following analyses focus on participants who searched for information and examine whether the information participants saw (honest vs. dishonest behavior) affected their decision to search for additional information. Among the 47 participants who searched for the first behavior, those in the early dishonesty condition ($n = 22$) saw a dishonest behavior, whereas those in the late dishonesty condition saw an honest behavior ($n = 25$). Consistent with H1b and the results of Experiment 1, there was no difference between the proportion of participants who searched for a second behavior after observing dishonest behavior (i.e., in the early dishonesty condition; 31.81%) and honest behavior (i.e., in the late dishonesty condition; 36.00%), $\chi^2(1) = .09$, $p = .763$, $\phi = .044$; see Figure 4. Bayesian analysis comparing a model with no predictors to a model that includes information order as a predictor for searching a second

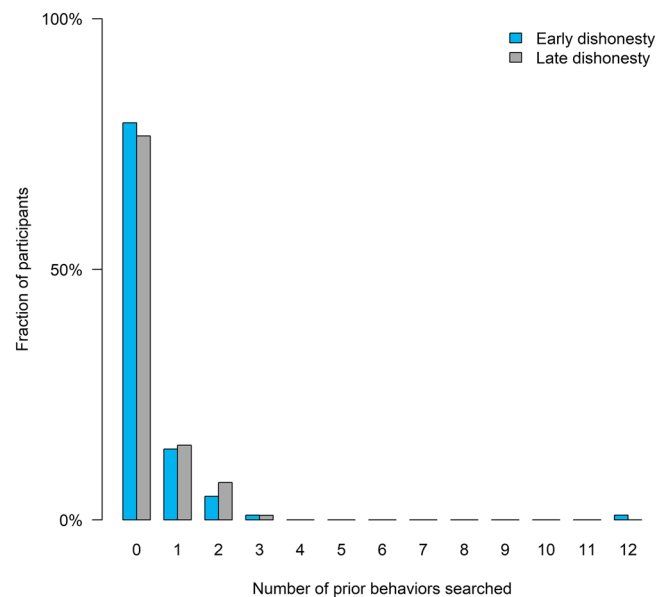


FIGURE 4 The fraction of participants as a function of information order (early dishonesty vs. late dishonesty) and the number of behaviors participants searched for in Experiment 2 [Colour figure can be viewed at wileyonlinelibrary.com]

behavior revealed a $BF_{10} = 0.34$, supporting the model with no predictors. The data were 2.88 times more likely to occur when information order did not predict participants' decision to search for a second behavior, compared to when it did.

Examining the second stage of information search, the sample of participants who searched for a minimum of two behaviors was 16. This is lower than the conventional sample required for a Chi-square analysis (5 per cell, 20 in total); thus, the result should be interpreted with caution. Nevertheless, in the second stage of information search, participants in the early dishonesty condition ($n = 7$) saw two dishonest behaviors in a row, whereas those in the late dishonesty condition ($n = 9$) saw two honest behaviors in a row. There was no difference between the proportion of participants who searched for a third behavior after observing two dishonest behaviors (i.e., in the early dishonesty condition; 28.57%) and two honest behaviors (i.e., in the late dishonesty condition; 11.11%), $\chi^2(1) = .78$, $p = .375$, $\phi = .222$. Bayesian analysis comparing a model with no predictors to a model that includes information order as a predictor for searching a third behavior revealed a $BF_{10} = 0.63$, supporting the model with no predictors. The data were 1.58 times more likely to occur when information order did not predict the decision to search for a third behavior, compared to when it did.

Similarly, as in Experiment 1, among participants who searched for information, there was no difference between the number of behaviors participants searched for in the early dishonesty ($M = 1.82$, $SD = 2.34$, $n = 22$) and late dishonesty ($M = 1.40$, $SD = 0.57$, $n = 25$) conditions, $F(1, 45) = .747$, $p = .392$, $\eta^2 = .016$. Comparing the distributions of the two conditions led to the same results (see SOM).

Overall, the results of Experiment 2 corroborate the findings of Experiment 1. Namely, also when information is costly to obtain,

⁵The proportion of participants who searched for information did not differ between the early (20.75%) and late dishonesty conditions (23.36%), $\chi^2(1) = .21$, $p = .646$, $\phi = .031$.

participants' decision to keep searching information was not affected by the type of information (honesty vs. dishonesty) they already acquired. The results are thus consistent with the idea that people search for information to learn about the general social norm. Costly information, however, did curb information search overall. In contrast to Experiment 1, only a minority of participants in Experiment 2 searched for any information at all.

7.2.2 | Association between acquired information and dishonesty

On average, participants overclaimed 29.43 cents ($SD = 53.16$, range: 0–210). ANOVA analysis examined whether there was a difference in overclaims between the participants who (i) did not search for information, (ii) searched for information in the early dishonesty condition, and (iii) searched for information in the late dishonesty condition. The results revealed a difference among the three groups, $F(2, 210) = 15.03$, $p < .001$, $\eta^2 = .125$. Post hoc comparisons revealed that compared to participants who did not search for information ($M = 25.06$ cents, $SD = 50.08$, $n = 166$), those who searched for information in the early dishonesty condition overclaimed more ($M = 83.18$ cents, $SD = 67.49$, $n = 22$; mean difference = 58.12, $p < .001$, 95%CI = [30.76, 85.47]). Further, those who searched for information in the late dishonesty condition overclaimed amounts that did not differ ($M = 11.20$ cents, $SD = 24.54$, $n = 25$) than those who did not search for information (mean difference = -13.86 , $p = .592$, 95%CI = [-39.72 , 12.00]). Those who searched for information in the early dishonesty condition overclaimed more than those who searched for information in the late dishonesty condition (mean difference = 71.98, $p < .001$, 95%CI = [36.78, 107.22]).

7.2.3 | Perceived prevalence of dishonesty

On average, participants evaluated that 46.84% of the sample ($SD = 29.23$, range: 0–100) were dishonest. The higher the prevalence of dishonesty participants evaluated, the more they overclaimed themselves, $r(211) = .527$, $p < .001$. ANOVA analysis examining differences in the perceived prevalence of dishonesty among the participants who (i) did not search for information, (ii) searched for information in the early dishonesty condition, and (iii) searched for information in the late dishonesty condition revealed a significant difference between the three groups, $F(2, 210) = 16.42$, $p < .001$, $\eta^2 = .135$. Post hoc comparisons reveal that, compared to participants who did not search for information ($M = 44.89\%$, $SD = 27.98$, $n = 166$), those who searched for information in the early dishonesty condition evaluated dishonesty as more prevalent ($M = 76.59\%$, $SD = 20.94$, $n = 22$; mean difference = -31.70 , $p < .001$, 95%CI = [-46.66 , -16.74]). Those who searched for information in the late dishonesty condition evaluated dishonesty as common ($M = 33.56\%$, $SD = 27.65$, $n = 25$; mean difference = 11.33, $p = .164$, 95%CI = [-2.81 , 25.48]) as those who did not search for information. Those

who searched for information in the early dishonesty condition evaluated dishonesty as more common than those who searched for information in the late dishonesty condition (mean difference = 43.03, $p < .001$, 95%CI = [23.76, 62.30]).

8 | DISCUSSION

The results of Experiment 2 reveal that also when information is costly, participants' decision to keep searching for additional information does not depend on the type of information (dishonest or honest behavior) they have already obtained. This pattern suggests that participants search for information to learn about the general social norm, not to learn about others' dishonesty. The similar patterns of information search in Experiment 1 (when information was free) and 2 (when information was costly) suggest that information search *strategy* is robust to information cost. However, the willingness to search for information and amount of information searched seem to be sensitive to information cost. While the majority of the participants (65.57%) searched for information in Experiment 1, only a minority searched for it in Experiment 2 (22.07%). Further, among the participants who searched for information, more information was obtained when it was free (3.89 on average) than when it was costly (1.60 on average).

As in Experiment 1, the participants who searched for information in the early dishonesty condition overclaimed the highest amount in the die rolling task. It seems that the similar amount of information searched in both information order condition led to participants seeing more dishonest acts of others in the early dishonesty condition (see SOM). The higher exposure to dishonest others in turn led participants to lie more themselves and perceive dishonesty as more common. As in Experiment 1, also in Experiment 2, the more liars participants saw, (i) the more they overclaimed in the die rolling task ($r = .290$, $p < .001$), and (ii) the more common they perceived dishonesty to be ($r = .295$, $p < .001$). Similarly, the higher the proportion of liars participants saw, the more they overclaimed in the die rolling task ($r = .550$, $p < .001$), and (ii) the more prevalent they perceived dishonesty to be ($r = .645$, $p < .001$).⁶

9 | EXPERIMENT 3

Experiment 3 aims to (i) gain further insight into how information cost and order shape information search, and (ii) examine whether information cost can serve as a boundary condition for information search and subsequent dishonesty. Thus, in the third, [pre-registered](#) experiment, information search patterns were examined under different information order (early vs. late dishonesty) and cost (free vs. 1 cent per behavior vs. 10 cents per behavior) conditions. Further, participants' own dishonesty and perception of its prevalence were

⁶The correlations with the proportion of liars observed are calculated only for participants who searched for information ($n = 47$). It is not possible to calculate the proportion of liars observed for those who did not search for information.

assessed. As a benchmark, a control condition in which participants cannot search for information was included.

Informed by the results obtained in Experiments 1–2, in Experiment 3, I expected that participants will exhibit similar information search patterns in the early and late dishonesty conditions. That is, participants' decision to keep searching for information would not depend on the information they obtained. Further, information search patterns should be robust to the information cost condition. Informed by the higher likelihood and amount of information search in Experiment 1 (when information was free) than Experiment 2 (when information was costly), I expected that:

H2. Participants will search for more information when information is free than when it costs 10 cents.

Although the “1 cent per behavior” condition was expected to fall between the “free information” and “10 cents per behavior” conditions, there was no specific a priori prediction on where exactly in between the two conditions it will fall. Further, I expected that among participants who searched for information, those in the early (vs. late) dishonesty condition will observe more dishonest behaviors and subsequently be more dishonest themselves. That is:

H3. Among participants who search for information, those in the early dishonesty condition will be more dishonest than those in the late dishonesty condition.

9.1 | Method

The experiment was conducted on Amazon Mechanical Turk (MTurk) and took approximately 5 min to complete. Participants were paid \$0.5 for participation and could earn additional money based on their reports. To determine the sample size, an a priori power calculation using G*Power software was implemented, with an ANOVA test with .05 criterion of statistical significance and 80% power to detect a medium-small size effect of $f = .15$ (for the difference in the sum of five die roll reports between the three information costs conditions). The calculation indicated that a sample of 144 participants per cell is sufficient. To stay on the conservative side, the aim was to recruit a sample of 200 participants per cell (1400 in total). Overall, 1417 participants (44.24% females, $M_{\text{age}} = 39.58$, $SD = 11.65$) completed the comprehension questions and attention check correctly (see details below) and thus took part in Experiment 3.

The information search task and procedure were identical to the ones implemented in Experiments 1–2 with one exception. While in Experiments 1–2, participants observed five die roll outcomes on the computer screen and reported them, and in Experiment 3, participants were asked to roll a die in private five times and report the outcomes. Specifically, participants could either find a playing die at home and

roll it or type in “roll a die” in Google and report the outcome they observed. The private version of the die rolling task allowed participants to engage in the task without reputation concerns or fear of detection. The incentive structure of the die rolling task was the same as in Experiments 1–2.

Between participants, information order: 2 (early vs. late dishonesty) and information cost: 3 (free vs. 1 cent per behavior vs. 10 cents per behavior) were manipulated. A control condition, in which participants could not search for information was included, leading to a total of seven between-subject cells.

To assure that participants understood the task and were attentive, after reading the instructions, participants completed three multiple choice comprehension questions and an attention check. Participants who answered the comprehension question incorrectly could try to answer the question a second time. Participants who answered a question incorrectly twice were disqualified from the experiment and could not continue the task. Further, participants who answered to the attention check incorrectly were also disqualified from taking part in the experiment. Finally, as in Experiments 1–2, after completing the task, participants evaluated how prevalent (see main text) and justifiable (see SOM) dishonesty is.

9.2 | Results

9.2.1 | Information search

Taking all participants who could search for information into account ($n = 1,146$), on average, participants searched for 0.44 behaviors ($SD = 1.53$, range: 0–12). Focusing on the participants who searched for at least one behavior ($n = 192$; 16.75% of those who could search for information), on average, participants searched for 2.64 behaviors ($SD = 2.88$, range: 1–12).⁷

In line with H2, the cost of information affected the decision to search for information, $\chi^2(2) = 58.50$, $p < .001$, Cramer's $V = .226$. More participants searched for information when it was free (29.49%) than when it was costly (11.40%; collapsing 1 and 10 cents), $\chi^2(1) = 56.06$, $p < .001$, $\phi = .221$. The difference between the proportion of participants who search for information in the 1 cent (13.46%) and 10 cents (9.35%) conditions was not significant, $\chi^2(1) = 3.36$, $p = .066$, $\phi = .065$.

As in Experiments 1–2, the following analyses focus on participants who searched for information and assess whether the information they saw (honest vs. dishonest behavior) affected their subsequent decision to search for additional information. Among the 192 participants who searched for the first behavior, those in the early dishonesty condition ($n = 105$) saw a dishonest behavior, but those in the late dishonesty condition ($n = 87$) saw an honest behavior. Consistent with Experiments 1–2 and H1b, there was no difference between the proportion of participants who searched for a

⁷The proportion of participants who searched for information did not differ between the early (18.81%) and late dishonesty conditions (14.79%), $\chi^2(1) = 3.32$, $p = .068$, $\phi = .054$.

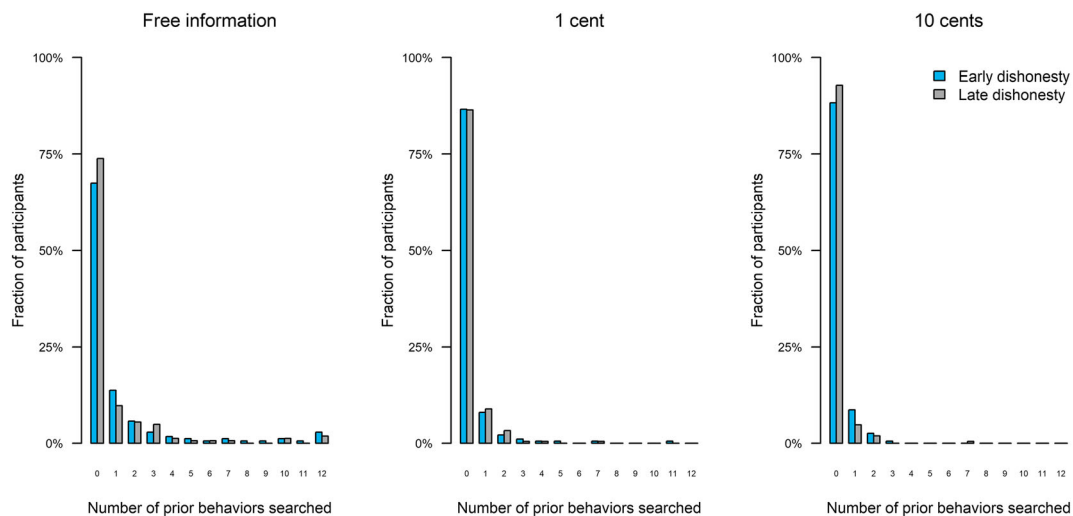


FIGURE 5 The fraction of participants as a function of information order (early dishonesty vs. late dishonesty), information cost (free vs. 1 cent vs. 10 cents), and the number of behaviors participants searched for in Experiment 3 [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

second behavior after seeing dishonest behavior (i.e., in the early dishonesty condition; 46.66%) and honest behavior (i.e., in the late dishonesty condition; 48.27%), $\chi^2(1) = .049$, $p = .824$, $\phi = .016$; see Figure 5. Bayesian analysis comparing a model with no predictors to a model that includes information order as a predictor for searching a second behavior revealed a $BF_{10} = 0.18$, supporting the model with no predictors. The data were 5.44 times more likely to occur when information order did not predict the decision to search for a second behavior, compared to when it did.

Similarly, among the 91 participants who searched for the second behavior, those in the early dishonesty condition ($n = 49$) saw two dishonest behaviors in a row, but those in the late dishonesty condition ($n = 42$) saw two honest behaviors in a row. There was no difference between the proportion of participants who searched for a third behavior after seeing two dishonest behaviors (i.e., in the early dishonesty condition; 61.22%) and two honest behaviors (i.e., in the late dishonesty condition; 52.38%), $\chi^2(1) = .722$, $p = .395$, $\phi = .089$. Bayesian analysis comparing a model with no predictors to a model that includes information order as a predictor for searching a third behavior revealed a $BF_{10} = 0.36$, supporting the model with no predictors. The data were 2.75 times more likely to occur when information order did not predict the decision to search for third behavior, compared to when it did.

Similarly, ANOVA analysis focusing on the participants who searched for information ($n = 192$), predicting the number of behaviors participants searched for from information order (early vs. late dishonesty) and cost (free vs. 1 cent vs. 10 cents), revealed a main effect for information cost, $F(2, 186) = 9.25$, $p < .001$, $\eta^2 = .096$. Supporting H2, participants searched for more information when information was free ($M = 3.49$, $SD = 3.49$, $n = 100$) than costly ($M = 1.72$, $SD = 1.59$, 1 and 10 cents combined, $n = 92$, $p < .001$, contrast estimate = 1.75, 95%CI = [.94, 2.55]). There was no difference between the number of behaviors participants searched for in the

1 cent ($M = 1.91$, $SD = 1.86$, $n = 54$) and 10 cents conditions ($M = 1.45$, $SD = 1.05$, $n = 38$, $p = .455$, contrast estimate = .445, 95%CI = [−.72, 1.61]). Consistent with Experiments 1–2, there was no main effect for information order. The number of behaviors participants searched for did not differ between the early dishonesty ($M = 2.81$, $SD = 3.10$, $n = 105$) and late dishonesty ($M = 2.44$, $SD = 2.59$, $n = 87$) conditions, $F(1, 186) = .259$, $p = .612$, $\eta^2 = .003$. Lastly, the interaction between information order and cost was not significant, $F(2, 186) = .368$, $p = .692$, $\eta^2 = .004$. Thus, in line with expectations, participants exhibited similar information search strategies regardless of information cost. The results were the same when comparing the distributions (see SOM).

9.2.2 | Association between acquired information and dishonesty

In Experiment 3, participants' actual die roll outcomes were not recorded to assure their behavior is not affected by reputation concerns toward the experimenter. Thus, the total amount participants earned in the die rolling task serves as a proxy for dishonesty. In line with the custom in the literature (e.g., Abeler et al., 2019; Gerlach et al., 2019), higher earnings indicate higher levels of dishonesty. On average, participants earned 198.60 cents ($SD = 48.03$, range: 50–300) in the die rolling task, which was significantly higher than the 175 cents expected from honest participants, $t(1416) = 18.49$, $p < .001$; mean difference = 23.60, 95%CI = [21.09, 26.10].

The results reveal that the decision to search information in the early dishonesty condition was associated with higher levels of dishonesty, but only when information was free. First, examining H3, the analysis focus on participants who searched for information ($n = 192$). Predicting the amount participants earned from information order

(early vs. late dishonesty) *alone* revealed that the mean earnings were in line with the direction predicted by H3, namely that participants earned higher amounts in the early dishonesty ($M = 206.66$ cents, $SD = 55.51$) than late dishonesty condition ($M = 197.12$ cents, $SD = 48.77$). However, this difference was not statistically significant, $F(1, 190) = 1.56, p = .212, \eta^2 = .008$.

Second, examining the *combination* of information order and cost revealed that searching for free information in the early dishonesty condition resulted in highest levels of dishonesty. Specifically, the next analysis examine whether there was a difference in the amount participants earned from the die rolling task between participants who (i) could not search for information, (ii) could, but chose not to search for information, (iii) searched for information in the early dishonesty condition when it was free and (iv) costly, (v) searched for information in the late dishonesty condition when it was free, and (vi) costly. Regression analysis predicting the amount earned with the distinct six groups as predictors reveals that compared to participants who could not search for information ($M = 197.04$ cents, $SD = 45.86, n = 271$), those who could, but choose not to, earned similar amounts ($M = 198.29$ cents, $SD = 47.67, n = 954$), $b = 1.24, p = .707, 95\%CI = [-5.24, 7.73]$. Thus, it seems that participants who chose to not seek information when they could are not more or less honest than others. Moreover, compared to participants who could not search for information, those who searched for information in the early dishonesty condition when information was free earned higher amounts ($M = 211.05$ cents, $SD = 58.33, n = 57$), $b = 14.00, p = .045, 95\%CI = [.27, 27.73]$. All other groups who searched for information (in the early dishonesty condition when information was costly, and in the late dishonesty condition when information was free and costly) earned similar amounts to those who could not search for information, $ps > .557$ (see SOM for detailed comparison).

9.2.3 | Perceived prevalence of dishonesty

On average, participants evaluated that 56.12% of the sample ($SD = 26.36$, range: 0–100) were dishonest. The higher the prevalence of dishonesty participants evaluated, the more money they earned in the die roll task, $r(1413) = .185, p < .001$. Similar to Experiments 1–2, searching for information in the early dishonesty condition was associated with perceiving dishonesty as common. Regression analysis revealed that compared to participants who could not search for information ($M = 59.18\%$, $SD = 25.62, n = 271$), those who searched for information in the early dishonesty condition evaluated dishonesty as more prevalent ($M = 65.85\%$, $SD = 24.48, n = 105$), $b = 6.67, p = .026$. Further, compared to participants who could not search for information, those who searched for information in the late dishonesty condition ($M = 46.33\%$, $SD = 27.13, n = 87$) or did not search for information at all ($M = 55.07\%$, $SD = 26.29, n = 952$) evaluated dishonesty as less common ($b = -4.11, p = .022$ and $b = -12.85, p < .001$, respectively). Lastly, both participants

who searched for information when it was free ($n = 100$) and when it was costly (1 cent and 10 cent combined, $n = 92$) evaluated dishonesty as more prevalent when they were in the early dishonesty than late dishonesty condition ($b = -21.64, p < .001$ in the free information condition, and $b = -18.45, p < .001$ in the costly information conditions).

10 | DISCUSSION

In line with results of Experiments 1–2, participants in Experiment 3 searched for information similarly in both information order conditions. This was the case in all information cost conditions, revealing that the cost of information did not affect information search strategy. Taken together, the findings across Experiments 1–3 suggest that in tempting situations, participants search for information to learn about the general social norm.

While costly information did not affect information search strategy, it did serve as a boundary condition for information search altogether and subsequently reduced dishonesty. Because participants searched for less information when it was costly, they were exposed to less instances of dishonest others, and in turn, were less dishonest themselves. Indeed, it is participants who searched for *free* information in the early dishonesty condition, who were exposed to the most amount of dishonest others (see SOM), and subsequently earned the highest amount in the die rolling task. In line with Experiments 1–2, also in Experiment 3, the correlations between the number of liars (and proportion of liars) participants saw and their own behavior and perception were positive. While not all correlations reached significance in Experiment 3 (number of liars observed and earnings in the die rolling task: $r = .045, p = .131$; number of liars observed and perception of the prevalence of dishonesty: $r = .057, p = .055$; proportion of liars observed and earnings in the die rolling task: $r = .127, p = .078$; proportions of liars observed and perception of the prevalence of dishonesty: $r = .400, p < .001$),⁸ in the Discussion of Experiment 4, I report four mini meta-analyses aggregating the results of Experiments 1–4, revealing overall significant positive correlations.

11 | EXPERIMENT 4

The [pre-registered](#) Experiment 4 aims to (i) gain further insight into the reasons that underlie information search and (ii) examine further why it is the participants who searched for information in the early dishonesty condition who exhibited the highest level of dishonesty.

Analyzing information search patterns across Experiments 1–3 suggests that participants search for information to learn about the social norm, not to learn about others' dishonesty in particular. Regardless of the type of information participants search for, their

⁸The correlations with the number of liars observed are calculated on all the conditions in which participants had the opportunity to search for information ($n = 1146$). The correlations with the proportion of liars observed are calculated only for participants who searched for information ($n = 192$).

search can be motivated by the desire to avoid feeling negatively about themselves and/or the desire to avoid being negatively judged by others. Because people want to maintain an honest self (Mazar et al., 2008) and public image (Abeler et al., 2019), they rely on justifications to lie without spoiling their image (Abeler et al., 2019; Leib & Shalvi, 2020; Shalvi et al., 2015). Information about others' dishonesty can serve as a justification (e.g., Gino et al., 2009), guarding people from spoiling their self and public image while lying. In other words, searching for information about others' dishonesty can be driven by the desire to avoid feeling negatively about oneself (e.g., "If I learn that others lie, I can lie without feeling like a bad person") and/or the desire to avoid being negatively judged by others (e.g., "If I learn that others lie, I can lie and people will not judge me negatively"). At the same time, people follow social norms because they internalize them and following the norms makes them feel like good people (Bicchieri & Muldoon, 2014; Gächter & Schulz, 2016), as well as because they wish to avoid being sanctioned and negatively judged by others (Axelrod, 1986; Coleman, 1989). Thus, searching for information about the social norm can be driven by the desire to avoid feeling negatively about oneself (e.g., "If I learn about the social norm and follow it, I will do 'the right thing' and not feel bad about myself") and/or the desire to avoid being negatively judged by others (e.g., "If I learn about the social norm and follow it, people will not judge me negatively"). Information search patterns in Experiments 1–3 suggest that people search for information to learn about the social norm. In Experiment 4, participants are asked directly about the reasons for their search. Specifically, participants indicate (i) the extent to which they are motivated to learn about social norm, and (ii) the extent to which they search for information to avoid feeling negatively about themselves vs. being negatively judged by others.

In Experiments 1–3, participants who searched for information in the early dishonesty condition lied the most. This pattern of results might be driven by (i) the *mere* order of information or (ii) the *combination* of the decision to search for information and information order. To examine what drives dishonesty, in Experiment 4, participants could either search for information (in the early or late dishonesty conditions, like in Experiments 1–3) or were forced to obtain it.

The first possibility is that the *mere* order in which information is presented drives the results of Experiments 1–3. This can be the case if in Experiments 1–3 dishonesty is driven by a primacy effect (Asch, 1946) – the tendency for information encountered early (vs. late) to have more weight on memory and decision making. Supporting this possibility, prior work showed that primacy effect plays a role in evaluating people's morality (Luchins & Luchins, 1986) and credibility (Nahari & Ben-Shakhar, 2013). If indeed primacy effect drives the results obtained in Experiments 1–3, we should expect that (i) participants in the early dishonesty condition lie more than the participants in the late dishonesty condition, (ii) both when participants can search for information and when they are forced to obtain it.

The second possibility is that it is the *combination* of the decision to search for information together with information order that shapes dishonesty. Specifically, consistent with the interpretation presented

in the discussion sections of Experiments 1–3, the decision to search for information in the early dishonesty condition results in exposure to more instances of dishonest behavior, in turn pushing participants to lie more themselves. Supporting this possibility, in Experiments 1–3, participants who search for information in the early (vs. late) dishonesty condition saw more dishonest others (see SOM), and the correlations between the number of liars participants saw and their own dishonesty were positive ($r = .324; .290; .045$; in Experiments 1–3, respectively). Similarly, the correlations between the proportion of liars participants saw and their own dishonesty were positive as well ($r = .305; .550; .127$; in Experiments 1–3, respectively). If indeed the *combination* of the decision to search information with information order (and not primacy effect) drives the results obtained in Experiments 1–3, we should expect that (i) participants who are forced to obtain information exhibit similar levels of dishonesty in the early and late dishonesty conditions. Further, when participants can search for information, we should expect a similar pattern of results as in Experiments 1–3. Namely, that (ii) participants who searched for information in the early dishonesty condition exhibit the highest level of dishonesty.

11.1 | Method

The experiment was conducted on Amazon Mechanical Turk (MTurk) and took approximately 4 min to complete. Participants were paid \$0.4 for participation and could earn additional money based upon their reports. The experiment entailed a 2 (early vs. late dishonesty) by 2 (choose to search vs. forced information) between subject design.

Determining the sample size assumed a small effect size of $f = 0.12$ for the 2 by 2 interaction. Using G*Power software with .05 criterion of statistical significance and 80% power to detect an effect reveals that a sample size of $N = 547$ should be sufficient ($n = \sim 137$ per cell). In Experiment 3, $\sim 30\%$ of participants searched for information when it was free. Thus, to obtain ~ 137 participants who searched for information in each of the two "choose to search information" conditions, I multiplied $n = 137$ by 3, leading to a sample of 411 participants in each of the "choose to search information" conditions. All together the aim was to collect 1100 participants [411×2 (who can choose to search information) + 137×2 (who are forced to obtain information) = 1096, rounding to 1100], with one of every four participants assigned to one of the two "forced information" conditions, and the remaining three assigned to one of the "choose to search information" conditions. Overall, 1110 participants (48.64% females, $M_{\text{age}} = 41.01$, $SD = 12.44$) completed two comprehension questions and attention check correctly and thus took part in Experiment 4.

All participants learned that they will engage in a die rolling task. As in Experiments 1–3, before the die rolling task, participants in the "choose to search information" conditions could learn about the behavior of others in a sequential manner, one behavior at a time. Participants could learn about the behavior of up to five people, and once they chose to start their own die rolling task, they proceeded to the

task and could not search for additional information. In the early dishonesty condition, the sequence of information was D, D, H, H, H, H; and in the late dishonesty condition, the sequence of information was H, H, H, D, D (“D” represents a dishonest behavior, and “H” represents an honest behavior). Participants in the “forced information” conditions observed all five behaviors, either in the early dishonesty or late dishonesty information sequence, and then engaged in the die rolling task.

As in Experiment 3, the die rolling task was private: participants were asked to roll a playing die at home or google “roll a die” and report the die roll outcome five times. Participants earned the sum of all five die roll reports, such that reporting 1 = \$0.1; 2 = \$0.2; 3 = \$0.3; 4 = \$0.4; 5 = \$0.5; 6 = \$0.6. Before completing the task, participants learned that 10% will be randomly selected and get paid for the die rolling task.

After completing the task, participants evaluated how prevalent (see main text) and justifiable (see SOM) dishonesty is. Finally, to obtain additional insights into the reasons for information search, participants who searched for information in the “choose to search information” conditions answered two self-report items: (i) “To what extent your decision to search for information about others’ behavior was driven by the desire to learn about how others behaved (i.e., to learn about the social norm)?” (1 = not at all to 7 = very much so); (ii) “To what extent your decision to search for information about others’ behavior was driven by a desire to:” (1 = avoid feeling bad about yourself to 10 = avoid being negatively judged by others; participants could report their reason on the 1 to 10 scale, but the scale itself was not labeled by the numbers 1–10).

11.2 | Results

First, I focus on the information search pattern and dishonest behavior among participants in “choose to search information” conditions ($n = 849$). Then, I move to examine dishonesty among participants in the two “forced information” conditions ($n = 261$), comparing them to one another. Lastly, I compare dishonest behavior among participants in the “choose to search information” and “forced information” conditions.

11.2.1 | Information search

Taking all participants in the “choose to search information” conditions into account ($n = 849$), on average, participants searched for 0.72 behaviors ($SD = 1.42$, range: 0–5). Focusing on participants who searched for at least one behavior ($n = 250$; 29.44% of the sample), on average, participants searched for 2.44 behaviors ($SD = 1.63$, range: 1–5).⁹

⁹The proportion of participants who searched for information did not differ between the early (30.64%) and late dishonesty conditions (28.19%), $\chi^2(1) = 0.61$, $p = .433$, $\phi = .026$.

The following analyses focus on the participants who searched for information and assesses whether the information participants saw (honest vs. dishonest behavior) affected their subsequent decision to search for additional information. Among the 250 participants who searched for the first behavior, those in the early dishonesty condition ($n = 133$) saw a dishonest behavior, but those in the late dishonesty condition ($n = 117$) saw an honest behavior. Consistent with Experiments 1–3 and H1b, there was no difference between the proportion of participants who searched for a second behavior after seeing dishonest behavior (i.e., in the early dishonesty condition; 55.64%) and honest behavior (i.e., in the late dishonesty condition; 56.41%), $\chi^2(1) = .015$, $p = .902$, $\phi = .007$; see Figure 6. Bayesian analysis comparing a model with no predictors to a model that includes information order as a predictor for searching a second behavior revealed a $BF_{10} = 0.15$, supporting the model with no predictors. The data were 6.35 times more likely to occur when information order did not predict the decision to search for a second behavior, compared to when it did.

Similarly, among the 140 participants who searched for the second behavior, those in the early dishonesty condition ($n = 74$) saw two dishonest behaviors in a row, but those in the late dishonesty condition ($n = 66$) saw two honest behaviors in a row. There was no difference between the proportion of participants who searched for a third behavior after seeing two dishonest behaviors (i.e., in the early dishonesty condition; 62.16%) and two honest behaviors (i.e., in the late dishonesty condition; 66.66%), $\chi^2(1) = .308$, $p = .578$, $\phi = .046$. Bayesian analysis comparing a model with no predictors to a model that includes information order as a predictor for searching a third behavior revealed a

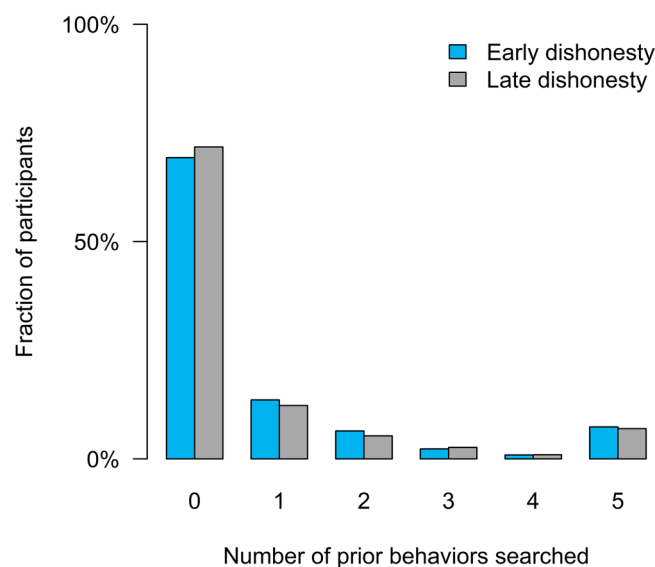


FIGURE 6 The fraction of participants as a function of information order (early dishonesty vs. late dishonesty), and the number of behaviors participants searched for (among the participants in the “choose to search information” conditions, $n = 849$) in Experiment 4 [Colour figure can be viewed at wileyonlinelibrary.com]

$BF_{10} = .23$, supporting the model with no predictors. The data were 4.29 times more likely to occur when information order did not predict the decision to search for a third behavior, compared to when it did.

Consistent with Experiments 1–3, focusing on participants who searched for information ($n = 250$), there was no difference between the number of behaviors participants searched for in the early dishonesty ($M = 2.41$, $SD = 1.62$, $n = 133$) and late dishonesty ($M = 2.47$, $SD = 1.64$, $n = 117$) conditions, $F(1, 248) = .074$, $p = .785$, $\eta^2 = .001$. The results were the same comparing the distributions of the conditions (see SOM).

11.2.2 | Reasons for information search

Learn about social norm

Participants who searched for information ($n = 250$) indicated on a scale from 1 (not at all) to 7 (very much so) the extent to which they searched for information to learn about the social norm. Participants' self-report indicated that they had quite high motivation to learn about the social norm ($M = 5.04$, $SD = 1.73$, $Mdn = 5$, range: 1–7).

Avoid feeling bad about self versus being negatively judged by others

Participants who searched for information ($n = 250$) indicated on a scale from 1 (avoid feeling bad about yourself) to 10 (avoid being negatively judged by others) the relative strength of these two motivations when they searched for information. Most participants ($n = 72$; 28.80%) reported the value 5, indicating that both motivations had a similar weight during their information search process. The average, 4.86 ($SD = 2.16$, range: 1–10), did not significantly differ from 5 ($p = .322$), further demonstrating that both the motivation to avoid feeling bad about oneself and the motivation to avoid being negatively judged by others had equal weight in the decision to search for information.

11.2.3 | Association between acquired information and dishonesty

On average, participants in the “choose to search information” conditions earned 192.13 cents ($SD = 43.00$, range: 90–300) in the die rolling task, which was significantly higher than the 175 cents expected from honest participants, $t(848) = 11.60$, $p < .001$; mean difference = 17.13, 95%CI = [14.23, 20.02].

In line with Experiments 1–3, regression analysis revealed that participants who searched for information in the early dishonesty condition exhibited the highest level of lying. Compared to the participants who did not search for information ($M = 190.35$, $SD = 42.41$, $n = 599$), those who searched for information in the early dishonesty condition earned more in the die rolling task ($M = 200.00$, $SD = 47.35$, $n = 133$), $b = 9.64$, $p = .019$, 95%CI = [1.57, 17.72]. There was no difference between those who did not search for information and those who searched for information in the late dishonesty condition ($M = 192.30$, $SD = 40.05$, $n = 117$), $b = 1.95$, $p = .652$, 95%CI = [−6.55, 10.47]; see Figure 7.

11.2.4 | Perceived prevalence of dishonesty

On average, participants in the “choose to search information” conditions evaluated that 47.44% of the samples ($SD = 27.61$, range: 0–100) were dishonest. The higher the prevalence of dishonesty participants evaluated, the more they earned in the die rolling task, $r(847) = .227$, $p < .001$. In line with Experiments 1–3, participants who searched for information in the early dishonesty condition evaluated the highest prevalence of dishonesty. Compared to participants who did not search for information ($M = 46.71\%$, $SD = 27.43$, $n = 599$), those who searched for information in the early dishonesty condition evaluated that dishonesty was more prevalent ($M = 60.00$, $SD = 27.36$, $n = 133$), $b = 13.28$, $p < .001$,

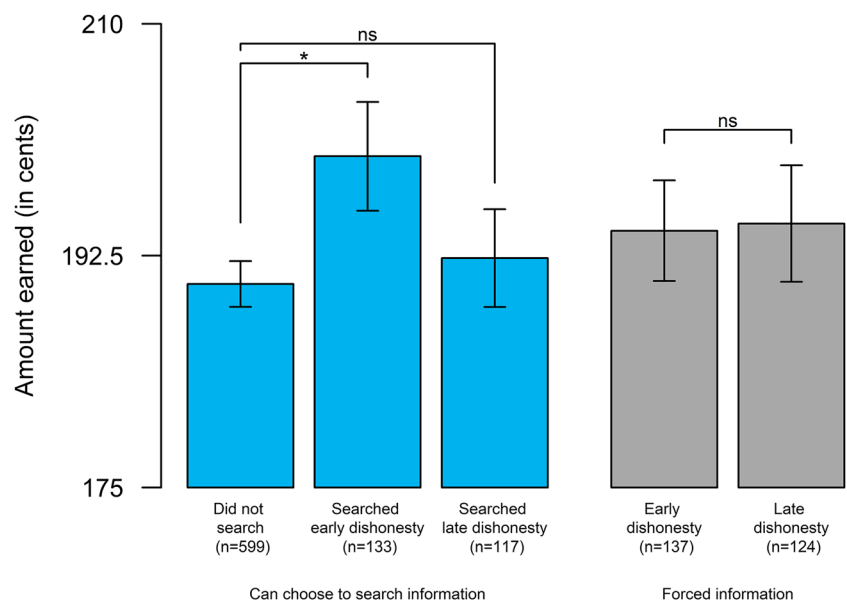


FIGURE 7 The amount earned in the die rolling task among participants who (i) could search for information but chose not to (ii) searched for information in the early dishonesty and (iii) late dishonesty condition (in blue), and (iv) were forced to obtain information in the early dishonesty and (v) late dishonesty condition (in gray) in Experiment 4. The Y axis starts from 175 cents – the amount earned assuming honesty. * $p < .05$, ** $p < .01$, *** $p \leq .001$ [Colour figure can be viewed at wileyonlinelibrary.com]

95%CI = [8.22, 18.34]. Compared to participants who did not search for information, those who searched for information in the late dishonesty condition evaluated dishonesty as less common ($M = 36.88$, $SD = 23.37$, $n = 117$), $b = -9.82$, $p < .001$, 95%CI = [-15.16, -4.48].

11.2.5 | Dishonesty in “forced information” conditions

On average, participants in the “forced information” conditions ($n = 261$) earned 194.63 cents ($SD = 46.52$, range: 90–300) in the die rolling task, which was significantly higher than the 175 cents expected from honest participants, $t(260) = 6.81$, $p < .001$; mean difference = 19.63, 95%CI = [13.96, 25.30]. Further, there was no difference between the earnings among participants who were forced to see information in the early dishonesty ($M = 194.37$, $SD = 44.42$, $n = 137$) and late dishonesty conditions ($M = 194.91$, $SD = 48.93$, $n = 124$), $b = .539$, $p = .926$, 95%CI = [-10.83, 11.91],¹⁰ see Figure 7.

11.2.6 | Dishonesty in searched versus forced information conditions

Finally, regression analysis comparing earnings in the die rolling task among participants who (i) could, but chose not to search for information, (ii) searched for information in the early dishonesty, and (iii) late dishonesty condition, (iv) were forced to obtain information in the early dishonesty and (v) late dishonesty condition, revealed that the *combination* of the decision to search for information together with information order shaped dishonesty. Specifically, compared to (i) participants who did not search for information, (ii) those who searched for information in the early dishonesty condition earned more in the die rolling task, $b = 9.64$, $p = .021$, 95%CI = [1.40, 17.88]. All other groups earned amounts that did not differ from participants who did not search for information, $ps > .290$ (see SOM for detailed comparisons).

Sensitivity analyses for experiments 1–4

Sensitivity analyses were conducted to make sure the experiments had sufficient power to detect an effect of information order (early dishonesty vs. late dishonesty) on the information search patterns. Sensitivity analyses for Chi-square with 80% power and significance level of .05 revealed that if all participants would search for information, the sample sizes (Exp 1: $n = 183$, Exp 2: $n = 213$, Exp 3: $n_{\text{who could search information}} = 1146$, Exp 4: $n_{\text{who could search information}} = 849$) would have been sufficient to detect small to medium effect sizes ($w = .207, .192, .082, .096$ for Experiments 1–4, respectively). For the

sample sizes that actually searched for information (Exp 1: $n = 120$, Exp 2: $n = 47$, Exp 3: $n = 192$, Exp 4: $n = 250$), there was power to detect medium to large effect sizes ($w = .255, .408, .202, .177$, for Experiments 1–4, respectively).

12 | DISCUSSION

The results of Experiment 4 replicated the information search pattern obtained in Experiments 1–3, suggesting that participants search for information to learn about the general social norm. Participants' self-reports corroborate this finding, revealing that when searching for information, the motivation to learn about the social norm was rather high. Further, the decision to search for information was equally driven by a desire to avoid feeling bad about oneself and avoid being negatively judged by others. Thus, it seems that participants search for information to learn about the social norm both because they internalized the norm and because they wish to avoid being sanctioned by others.

Examining dishonest behavior, participants who searched for information in the early dishonesty condition lied the most. The order of information *alone* did not affect participants' dishonesty. When participants were forced to obtain information, they observed two dishonest and three honest behaviors, and the order in which this information was presented did not affect their lies. It is the *combination* of the decision to search for information, together with being assigned to the “dishonesty early” condition that resulted in participants observing more (and a higher proportion of) dishonest others (see SOM), and in turn lie more themselves. Also in Experiment 4, the correlation between the number of liars participants saw and their own earnings was positive (yet did not reach significance, $r = .053$, $p = .118$), so was the correlation between the number of liars participants saw and their perception of the prevalence of dishonesty ($r = .120$, $p < .001$). Similarly, the correlations between the proportion of liars participants saw and (i) their own earnings ($r = .162$, $p = .010$), and (ii) perception of the prevalence of dishonesty ($r = .491$, $p < .001$) were positive.¹¹ Mini-meta analyses aggregating correlations across Experiments 1–4 revealed overall positive, significant correlations ($r_{N \text{ observed liars and own dishonesty}} = .166$, $p = .009$, 95%CI [.04, .29]; $r_{N \text{ observed liars and prevalence of dishonesty}} = .204$, $p = .002$, 95%CI [.07, .33]; $r_{\text{Proportion of observed liars and own dishonesty}} = .265$, $p = .001$, 95%CI [.10, .42]; $r_{\text{proportion of observed liars and prevalence of dishonesty}} = .561$, $p < .001$, 95%CI [.43, .68]; random effect models).

13 | GENERAL DISCUSSION

While prior work examined how information about others' behavior shapes dishonesty, this work is the first to examine what kind of

¹⁰There was no difference between the perceived prevalence of dishonesty among participants who were forced to see information in the early dishonesty ($M = 44.21\%$, $SD = 19.80$, $n = 137$) and late dishonesty conditions ($M = 44.49$, $SD = 22.20$, $n = 124$), $b = .280$, $p = .914$.

¹¹The correlations with the number of liars observed are calculated on all the conditions in which participants had the opportunity to search for information ($n = 847$). The correlations with the proportion of liars observed are calculated only for participants who searched for information ($n = 250$).

information about others' behavior people search for. Across four financially incentivized experiments, a robust pattern of results emerged: when participants search for information, their decision to keep searching for additional information is not influenced by the type of information (honesty or dishonesty) they had already observed. The pattern of results is in line with the idea that in ethically ambiguous settings, people are interested to learn about the social norm (Berlyne, 1954; Loewenstein, 1994) and search for information out of curiosity (Barkan et al., 2016; Shani et al., 2008; Shani & Zeelenberg, 2007) to learn about the norm. In the particular setting of this research, information about norms seems to be more important than considerations of justification of potential future transgressions. Directly asking participants about their reasons to search for information demonstrated that the motivation to learn about the social norm is rather high.

Across all four experiments, participants who searched for information in the early dishonesty condition exhibited the highest levels of dishonesty. It is the *combination* of the decision to search for information and information order that drove this effect. Because the amount of information search was similar across both information order conditions, when participants searched for information in the early dishonesty condition they saw more (and a higher proportion of) dishonest others. In turn, they were more dishonest themselves and perceived dishonesty as more common. The results of Experiment 4 support this interpretation, as when participants were forced to obtain information, the information order *alone* did not affect dishonesty. All in all, the decision to search for information in and by itself is not associated with higher levels of dishonesty. It is the type of information participants acquired while searching for information that shaped their behavior. The same decision to search for information leads to different level of dishonesty, depending upon the random information participants obtain (others' dishonest or honest behavior).

Experiment 3 examined a boundary condition for information search and subsequent dishonesty – the cost of information. While information search *pattern* – searching to learn about the social norm – was robust to different information costs, the *likelihood* to search for information, and *the amount of information* participants searched for, was affected by its cost. When information was costly, participants searched for less information, which subsequently reduced their dishonesty.

The results of Experiment 3 provide two main insights. First, the preference to not search for information is unrelated to levels of dishonesty. Participants who could not search for information and those who chose not to search for information lie to similar extents. This suggests that those who avoid information about others do so because they wish to make an independent decision, not because they are inherently more (or less) honest than the general population.

Second, making information costly can reduce dishonesty. Participants who searched for free information and were assigned to the early dishonesty condition earned the highest amount from the die rolling task. Costly information discouraged information search, in turn limiting participants' exposure to others' dishonesty, and subsequently

their own lies. Free information, coupled with dishonesty appearing early in the information search process, poses the highest risk for honesty. This finding challenges the famous quote: “sunlight is the best disinfectant; electric light the most efficient policeman” (Louis Brandeis, a United States Supreme Court Justice, 1914). Prior work has asserted that greater access to information and greater transparency are promising tools for curbing unethical behavior (Brunetti & Weder, 2003; Halter et al., 2009; Starke et al., 2016). In contrast, the results obtained here show that when it comes to information about others' dishonest behavior, providing access to free information can promote, rather than deter, dishonesty. Thus, when descriptive norms involve unethical behavior, managers and policy makers may be able to curb unethical behavior by curtailing access to information about others' behavior.

14 | LIMITATIONS AND FUTURE DIRECTIONS

Here, participants searched for information to learn about the general norm, not to justify their future lies. Another way in which participants might search information to justify future lies is by searching information that showcases that “everyone lies”. The results obtained in Experiments 1–4, however, suggest that participants do not search information using such strategy. If participants would search for information to discover that “everyone lies” (or that majority of people lie), we should expect participants to search for all (or most) of the information available to them. However, in all experiments, participants searched for a rather limited number of others' behaviors (between 1.60 and 3.89 on average). This result is consistent with prior work showing that people often search for limited amount of information (Cohen & Teodorescu, 2021; Teodorescu & Erev, 2014), as well as make decisions based on limited information (Fiedler, 2000; Fiedler & Kareev, 2006; Kareev, 2000). While participants were interested to learn about how others behaved in general, they were not interested to learn about how *everyone* behaved.

The findings reveal an association between information search in the early dishonesty condition and participants' own dishonesty. But do participants first plan whether to lie or not and then search for information? Or alternatively, do they first decide to search for information and then based on the information they obtain decide whether or not to lie? While in some settings people plan their dishonesty (Chowdhury et al., 2021; Cohn et al., 2022), in the current setting it seems like participants first decide whether to search for information and then whether or not to lie. If participants first decide whether to lie, and then search for information, we should expect similar levels of dishonesty among those who searched for information in the early and late dishonesty conditions (due to random assignment to information order conditions). However, if participants first decide to search for information and then whether to lie based on the information they obtained, we should expect exposure to different information during the information search process to affect dishonesty. Indeed, across all

four experiments, it is those who search for information in the early dishonesty condition (and thus observe more dishonest others) that lie more. Future work can explore a more direct causal link between information search and dishonesty by disentangling the decision to search for information and actually obtaining it. For instance, comparing the levels of dishonesty among those who decide to search for information but do not receive it and those who decide to search for information and do receive it, is a first promising step to achieve this goal.

In Experiments 1–2, participants were asked to report die roll outcomes that appeared on the computer screen (see Kocher et al., 2018; Gross et al., 2018 for a similar approach). Although participants were not explicitly told that their (dis)honest behavior can be monitored, they might have inferred that from the experimental setting. In Experiments 3–4, however, participants were asked to find a playing die at home or google “roll a die”, making the die rolling task private. While monitored versus private settings may affect people’s behavior, the results reported here were robust to this variation. Both when the die rolling task was monitored (Experiments 1–2) and when it was private (Experiments 3–4), participants searched information to learn about the social norm. Further, in both private and monitored settings, (i) participants lied to increase their pay, but not to the full extent (in line with previous work, see Abeler et al., 2019; Gerlach et al., 2019; Mazar et al., 2008), and (ii) those who searched for information in the early dishonesty condition exhibited the highest level of dishonesty themselves. An interesting avenue for future work is to examine how observability, reputational concerns, and risk of detection shape information search and subsequent dishonesty. Such work could explore how people balance the tension between their desire to learn about others’ behavior, their reputation concerns, and their desire to avoid future detection. Quite possibly, some people do not search for information about others’ dishonesty, not because they are not curious, but because they are concerned about the downstream consequences for their reputation.

15 | CONCLUSIONS

Knowing that others lied pushes people to lie as well. But what type of information about others’ behavior do people search for in ethically tempting situations? Across four experiments, results show that when people search for information, they do so in order to learn about the social norm. When the decision to search for information results in observing more dishonest others, people become more dishonest themselves. While costly information does not affect information search strategy, it does reduce information search altogether. The lower willingness to search for costly (compared to free) information results in less exposure to dishonest others, subsequently reducing dishonest behavior. Taken together, in contexts in which people are likely to see others’ dishonest behavior, making information costly to obtain may curb dishonesty and foster ethical behavior.

DATA AVAILABILITY STATEMENT

All data and materials appear on OSF https://osf.io/a8np5/?view_only=690d0f7238bd473da29dd388ebed970c

ORCID

Margarita Leib  <https://orcid.org/0000-0003-1447-3186>

REFERENCES

- Abeler, J., Nosenzo, D., & Raymond, C. (2019). Preferences for truth telling. *Econometrica*, 87(4), 1115–1153. <https://doi.org/10.3982/ECTA14673>
- Ambühl, S. (2017). *An offer you can't refuse? Incentives change how we inform ourselves and what we believe* (Vol. 6296). CESifo Working Papers.
- Asch, S. E. (1946). Forming impressions of personality. *The Journal of Abnormal and Social Psychology*, 41(3), 258–290. <https://doi.org/10.1037/h0055756>
- Axelrod, R. (1986). An evolutionary approach to norms. *American Political Science Review*, 80(4), 1095–1111. <https://doi.org/10.2307/1960858>
- Barkan, R., Danziger, S., & Shani, Y. (2016). Do as I say, not as I do: Choice–advice differences in decisions to learn information. *Journal of Economic Behavior & Organization*, 125, 57–66. <https://doi.org/10.1016/j.jebo.2016.02.005>
- Berlyne, D. E. (1954). A theory of human curiosity. *Nom de l'éditeur non disponible*, 45, 180–191. <https://doi.org/10.1111/j.2044-8295.1954.tb01243.x>
- Bicchieri, C., & Muldoon, R. (2014). Social norms. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy Spring* (2014 th ed.). Metaphysics Research Lab, Stanford University.
- Brandeis, L. (1914). “What publicity can do”, in *other people's money and how the bankers use it*. Frederick A. Stokes.
- Brunetti, A., & Weder, B. (2003). A free press is bad news for corruption. *Journal of Public Economics*, 87, 1801–1824. [https://doi.org/10.1016/S0047-2727\(01\)00186-4](https://doi.org/10.1016/S0047-2727(01)00186-4)
- Chowdhury, S. M., Kim, C., & Kim, S. H. (2021). Pre-planning and its effects on repeated dishonest behavior: An experiment. *Bulletin of Economic Research*, 73(2), 143–153. <https://doi.org/10.1111/boer.12238>
- Cohen, D., & Teodorescu, K. (2021). On the effect of practice on exploration and exploitation of options and strategies. *Frontiers in Psychology*, 5172. <https://doi.org/10.3389/fpsyg.2021.725690>
- Cohn, A., Gesche, T., & Maréchal, M. A. (2022). Honesty in the digital age. *Management Science*, 68(2), 827–845. <https://doi.org/10.1287/mnsc.2021.3985>
- Cohn, A., & Maréchal, M. A. (2017). Laboratory measure of cheating predicts misbehavior at school. CESifo Working Paper, No. 5613, Center for Economic Studies and ifo Institute (CESifo), Munich. <https://doi.org/10.2139/ssrn.2706473>
- Coleman, J. (1989). The rational choice approach to legal rules. *Chicago-Kent Law Review*, 65, 177–191.
- Dai, Z., Galeotti, F., & Villeval, M. C. (2018). Cheating in the lab predicts fraud in the field: An experiment in public transportation. *Management Science*, 64(3), 1081–1100. <https://doi.org/10.1287/mnsc.2016.2616>
- Dhami, M. K., & Harries, C. (2010). Information search in heuristic decision making. *Applied Cognitive Psychology*, 24, 571–586.
- Dimant, E. (2019). Contagion of pro-and anti-social behavior among peers and the role of social proximity. *Journal of Economic Psychology*, 73, 66–88. <https://doi.org/10.1016/j.joep.2019.04.009>
- Fiedler, K. (2000). Beware of samples! A cognitive-ecological sampling approach to judgment biases. *Psychological Review*, 107(4), 659–676. <https://doi.org/10.1037/0033-295X.107.4.659>

- Fiedler, K., & Kareev, Y. (2006). Does decision quality (always) increase with the size of information samples? Some vicissitudes in applying the law of large numbers. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 32(4), 883–903.
- Fischer, P., Jonas, E., Frey, D., & Kastenmüller, A. (2008). Selective exposure and decision framing: The impact of gain and loss framing on confirmatory information search after decisions. *Journal of Experimental Social Psychology*, 44(2), 312–320. <https://doi.org/10.1016/j.jesp.2007.06.001>
- Fischer, P., Kastenmüller, A., Greitemeyer, T., Fischer, J., Frey, D., & Crelley, D. (2011). Threat and selective exposure: The moderating role of threat and decision context on confirmatory information search after decisions. *Journal of Experimental Psychology: General*, 140(1), 51–62. <https://doi.org/10.1037/a0021595>
- Gächter, S., & Schulz, J. F. (2016). Intrinsic honesty and the prevalence of rule violations across societies. *Nature*, 531(7595), 496–499. <https://doi.org/10.1038/nature17160>
- Gerlach, P., Teodorescu, K., & Hertwig, R. (2019). The truth about lies: A meta-analysis on dishonest behavior. *Psychological Bulletin*, 145(1), 1–44. <https://doi.org/10.1037/bul0000174>
- Gino, F., Ayal, S., & Ariely, D. (2009). Contagion and differentiation in unethical behavior: The effect of one bad apple on the barrel. *Psychological Science*, 20(3), 393–398. <https://doi.org/10.1111/j.1467-9280.2009.02306.x>
- Gino, F., Ayal, S., & Ariely, D. (2013). Self-serving altruism? The lure of unethical actions that benefit others. *Journal of Economic Behavior & Organization*, 93, 285–292. <https://doi.org/10.1016/j.jebo.2013.04.005>
- Gross, J., Leib, M., Offerman, T., & Shalvi, S. (2018). Ethical free riding: When honest people find dishonest partners. *Psychological Science*, 29(12), 1956–1968. <https://doi.org/10.1177/0956797618796480>
- Halter, M. V., De Arruda, M. C. C., & Halter, R. B. (2009). Transparency to reduce corruption? *Journal of Business Ethics*, 84(3), 373–385. <https://doi.org/10.1007/s10551-009-0198-6>
- Hanna, R., & Wang, S. Y. (2017). Dishonesty and selection into public service: Evidence from India. *American Economic Journal: Economic Policy*, 9(3), 262–290. <https://doi.org/10.1257/pol.20150029>
- Hochman, G., Peleg, D., Ariely, D., & Ayal, S. (2021). Robin Hood meets Pinocchio: Justifications increase cheating behavior but decrease physiological tension. *Journal of Behavioral and Experimental Economics*, 92, 101699. <https://doi.org/10.1016/j.jsocec.2021.101699>
- Kandul, S., & Ritov, I. (2017). Close your eyes and be nice: Deliberate ignorance behind pro-social choices. *Economics Letters*, 153, 54–56. <https://doi.org/10.1016/j.econlet.2017.02.010>
- Kareev, Y. (2000). Seven (indeed, plus or minus two) and the detection of correlations. *Psychological Review*, 107(2), 397–402. <https://doi.org/10.1037/0033-295X.107.2.397>
- Keizer, K., Lindenberg, S., & Steg, L. (2008). The spreading of disorder. *Science*, 322(5908), 1681–1685. <https://doi.org/10.1126/science.1161405>
- Köbis, N. C., Troost, M., Brandt, C. O., & Soraperra, I. (2019). Social norms of corruption in the field: Social nudges on posters can help to reduce bribery. *Behavioural Public Policy*, 1–28. <https://doi.org/10.1017/bpp.2019.37>
- Köbis, N. C., Van Prooijen, J. W., Righetti, F., & Van Lange, P. A. (2015). “Who doesn’t?”—The impact of descriptive norms on corruption. *PLoS ONE*, 10(6), e0131830. <https://doi.org/10.1371/journal.pone.0131830>
- Kocher, M. G., Schudy, S., & Spantig, L. (2018). I lie? We lie! Why? Experimental evidence on a dishonesty shift in groups. *Management Science*, 64(9), 3995–4008. <https://doi.org/10.1287/mnsc.2017.2800>
- Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin*, 108(3), 480–498. <https://doi.org/10.1037/0033-2909.108.3.480>
- Leib, M., Köbis, N., Soraperra, I., Weisel, O., & Shalvi, S. (2021). Collaborative dishonesty: A meta-analytic review. *Psychological Bulletin*, 147(12), 1241–1268. <https://doi.org/10.1037/bul0000349>
- Leib, M., Pittarello, A., Gordon-Hecker, T., Shalvi, S., & Roskes, M. (2019). Loss framing increases self-serving mistakes (but does not alter attention). *Journal of Experimental Social Psychology*, 85, 103880. <https://doi.org/10.1016/j.jesp.2019.103880>
- Leib, M., & Shalvi, S. (2020). Justifications as a threat for honesty: A behavioral ethics approach. In C. B. Miller & R. West (Eds.), *Integrity, honesty, and truth-seeking*. Oxford University Press. <https://doi.org/10.1093/oso/9780190666026.003.0006>
- Loewenstein, G. (1994). The psychology of curiosity: A review and reinterpretation. *Psychological Bulletin*, 116(1), 75–98. <https://doi.org/10.1037/0033-2909.116.1.75>
- Luchins, A. S., & Luchins, E. H. (1986). Primacy and recency effects with descriptions of moral and immoral behavior. *The Journal of General Psychology*, 113(2), 159–177. <https://doi.org/10.1080/00221309.1986.9710553>
- March, J. G., & Olsen, J. P. (2004). The logic of appropriateness. In *The Oxford handbook of political science*. University of Oslo Centre for European Studies.
- Mazar, N., Amir, O., & Ariely, D. (2008). The dishonesty of honest people: A theory of self-concept maintenance. *Journal of Marketing Research*, 45(6), 633–644. <https://doi.org/10.1509/jmkr.45.6.633>
- Nahari, G., & Ben-Shakhar, G. (2013). Primacy effect in credibility judgments: The vulnerability of verbal cues to biased interpretations. *Applied Cognitive Psychology*, 27(2), 247–255. <https://doi.org/10.1002/acp.2901>
- O’Fallon, M. J., & Butterfield, K. D. (2012). The influence of unethical peer behavior on observers’ unethical behavior: A social cognitive perspective. *Journal of Business Ethics*, 109(2), 117–131. <https://doi.org/10.1007/s10551-011-1111-7>
- Olekals, M., Horan, C. J., & Smith, P. L. (2014). Maybe it’s right, maybe it’s wrong: Structural and social determinants of deception in negotiation. *Journal of Business Ethics*, 122(1), 89–102. <https://doi.org/10.1007/s10551-013-1754-7>
- Potters, J., & Stoop, J. (2016). Do cheaters in the lab also cheat in the field? *European Economic Review*, 87, 26–33. <https://doi.org/10.1016/j.eurocorev.2016.03.004>
- Schindler, S., & Pfattheicher, S. (2017). The frame of the game: Loss-framing increases dishonest behavior. *Journal of Experimental Social Psychology*, 69, 172–177. <https://doi.org/10.1016/j.jesp.2016.09.009>
- Schurr, A., & Ritov, I. (2016). Winning a competition predicts dishonest behavior. *Proceedings of the National Academy of Sciences*, 113(7), 1754–1759. <https://doi.org/10.1073/pnas.1515102113>
- Schweitzer, M. E., & Hsee, C. K. (2002). Stretching the truth: Elastic justification and motivated communication of uncertain information. *Journal of Risk and Uncertainty*, 25(2), 185–201. <https://doi.org/10.1023/A:1020647814263>
- Shalvi, S., Gino, F., Barkan, R., & Ayal, S. (2015). Self-serving justifications: Doing wrong and feeling moral. *Current Directions in Psychological Science*, 24(2), 125–130. <https://doi.org/10.1177/0963721414553264>
- Shani, Y., Tykocinski, O. E., & Zeelenberg, M. (2008). When ignorance is not bliss: How distressing uncertainty drives the search of negative information. *Journal of Economic Psychology*, 29, 643–653. <https://doi.org/10.1016/j.joep.2007.06.001>
- Shani, Y., & Zeelenberg, M. (2007). When and why do we want to know? How experienced regret promotes post-decision information search. *Journal of Behavioral Decision Making*, 20, 207–222.
- Smith, M. K., Trivers, R., & von Hippel, W. (2017). Self-deception facilitates interpersonal persuasion. *Journal of Economic Psychology*, 63, 93–101. <https://doi.org/10.1016/j.joep.2017.02.012>
- Starke, C., Naab, T. K., & Scherer, H. (2016). Free to expose corruption: The impact of media freedom, internet access and governmental

online service delivery on corruption. *International Journal of Communication*, 10, 4702–4722.

- Teodorescu, K., & Erev, I. (2014). On the decision to explore new alternatives: The coexistence of under- and over-exploration. *Journal of Behavioral Decision Making*, 27(2), 109–123. <https://doi.org/10.1002/bdm.1785>
- Weber, J. M., Kopelman, S., & Messick, D. M. (2004). A conceptual review of decision making in social dilemmas: Applying a logic of appropriateness. *Personality and Social Psychology Review*, 8(3), 281–307. https://doi.org/10.1207/s15327957pspr0803_4
- Weisel, O., & Shalvi, S. (2015). The collaborative roots of corruption. *Proceedings of the National Academy of Sciences*, 112(34), 10651–10656. <https://doi.org/10.1073/pnas.1423035112>
- Wiltermuth, S. S. (2011). Cheating more when the spoils are split. *Organizational Behavior and Human Decision Processes*, 115(2), 157–168. <https://doi.org/10.1016/j.obhdp.2010.10.001>

AUTHOR BIOGRAPHY

Margarita Leib is a postdoctoral researcher at the faculty of economics and business at the University of Amsterdam and a member of the Center for Research in Experimental Economics and Political Decision-Making (CREED). She studies ethical decision-making in individual and collaborative settings. In her current research she examines how people search information in ethically tempting situations.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Leib, M. (2022). People imitate others' dishonesty but do not intentionally search information about it. *Journal of Behavioral Decision Making*, e2296. <https://doi.org/10.1002/bdm.2296>