Information Avoidance and Image Concerns

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Abstract

A rich literature finds that individuals avoid information and suggests that avoidance is driven by image concerns. This paper provides the first direct test of whether individuals avoid information because of image concerns. We build off of a classic paradigm, introducing control conditions that make minimal changes to eliminate the role of image concerns while keeping other key features of the environment unchanged. Data from 6,421 experimental subjects shows that image concerns play a role in driving information avoidance, but a role that is substantially smaller than one might have expected.

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1 Introduction

Why do individuals avoid information that could be instrumental to their decisions? A number of lines of research suggest that individuals avoid information in order to maintain certain beliefs (e.g., about themselves as healthy, financially responsible, politically enlightened, kind) even while taking actions that could suggest the opposite. Such explanations, however, rely on the sophistication of agents to strategically avoid information in order to maintain certain beliefs or in order to construct plausible deniability about their actions. In this paper, we introduce a new experimental approach to directly test whether individuals strategically avoid information because of image concerns.

We deploy our new approach in a context that has been the focus of a rich literature building off of Dana, Weber and Kuang (2007). In that seminal paper, a decision maker must choose between two options, A and B. Decision makers know that they earn more from choosing A but do not know whether A or B is better for another participant. They can avoid information and choose A or B directly, or they can learn which is better for the other participant before choosing. A set of results from that paper have proven to be robust and influential. First, individuals frequently avoid information on whether A or B is better for another participant. Second, individuals make substantially more selfish decisions (i.e., choosing A more often) when they can avoid information than in an alternative treatment when they cannot avoid information. Third, the fraction of individuals who avoid information is higher than the fraction of individuals who might be expected to avoid information because they do not value it (i.e., those who behave selfishly when information cannot be avoided). These findings have been replicated many times (Larson and Capra, 2009; Matthey and Regner, 2011; Feiler, 2014; Grossman, 2014; Exley, 2016; Grossman and van der Weele, 2017) and have raised an important debate about what drives passive information avoidance. A leading explanation in this context is image concerns, in particular a desire to view oneself as more prosocial or less selfish. Individuals might strategically avoid information so they can benefit themselves at lower image costs than they would pay if they acted selfishly after learning that benefiting themselves harmed others.

The main contribution of this paper is our ability to directly test whether individuals strategically avoid information because of such image concerns. We compare the rates of (passive)
information avoidance in the classic Dana, Weber and Kuang (2007) setting to a new setting that makes minimal changes to remove image motives to avoid information; our new setting holds constant the structure of the decision, the content of the information, and the timing of information provision.\(^5\) We then attribute to image concerns any difference in information avoidance—by which we mean subjects failing to acquire easily accessible information—across the two settings.

In our new setting—our control condition—every aspect of the decision environment is the same as in the classic setting, except a different participant receives the payoff that would have gone to the decision maker. In this condition, image concerns cannot drive information avoidance. To see this, first note that image concerns about selfishness are clearly not relevant because the opportunity for selfishness is removed. Moreover, even other image concerns (e.g., a desire to appear fair) cannot drive information avoidance in our control condition. Individuals with such image concerns should instead acquire information and choose the option aligned with those image concerns, which they can do without suffering a financial cost. In our control condition, there is no chance that acquiring information will force a tradeoff between a choice motivated by image concerns and an option that benefits oneself, since no option benefits oneself.\(^6\)

To see why a control condition like ours is necessary to explore whether image concerns drive information avoidance, consider an alternative approach referenced in the prior literature for assessing the role of image concerns. It compares the rate of information avoidance when payoffs are unknown to the rate of selfishness when payoffs are known. The latter represents the fraction of subjects who may avoid information because they do not value it (since they will act selfishly regardless). But this difference, the “avoidance-selfishness gap,” does not identify the extent of information avoidance that is due to image concerns. First, selfish subjects could avoid information because they do not value it, or they could avoid information strategically to mitigate the image costs of their selfishness. Second, non-selfish subjects may avoid information for non-image reasons—such as laziness, inattention, or confusion—rather than image reasons. This is true even if these subjects end up acting selfishly when uninformed and even if they enjoy the decreased image costs of acting selfishly; they could have avoided information for a non-image reason and then been happily surprised by the opportunity to benefit themselves without knowing for certain they were being selfish.

Our approach—using a control condition to compare information avoidance across a setting where it can be driven by image concerns and a similar setting where it cannot—thus differs

\(^5\)We follow much of the prior literature in using the term “information avoidance,” regardless of whether this avoidance choice was actively made or instead made passively (e.g., because people simply made a payoff choice before acquiring information and did not actively think about whether they did or did not wish to first acquire the information).

\(^6\)See section 2.1 for further discussion.
from prior approaches relating to the avoidance-selfishness gap. As further detailed in Section 2.2, our approach also differs from a rich literature that examines how other features of the decision environment influence rates of information avoidance but does not isolate the role of image concerns. Given the prevalence of information avoidance across domains and the many lines of research exploring the motives of information avoidance, we see the use of a control condition like ours as an important methodological advance that could be applied more widely to this literature.

We deploy our control condition across six studies, including 6,421 experimental subjects. In each of these studies, we replicate the results of Dana, Weber and Kuang (2007). In each of these studies, we also find that a subset of subjects indeed avoid information due to image concerns. This evidence bolsters explanations of information avoidance as being due to image concerns in the extant literature, including prior evidence showing that individuals who act selfishly are judged more harshly when they have full information about the impact of their actions than when they avoid such information (Krupka and Weber, 2013; Grossman and van der Weele, 2017).

Across our studies, however, we find that a substantial and significant amount of information avoidance in the classic paradigm cannot be attributed to image concerns. As shown in Section 3.2, our direct test estimates the role of strategic image concerns to be less than half of what the avoidance-selfishness gap would suggest. Our results also prove robust to decisions involving higher stakes and to using an alternative control condition. The high levels of information avoidance that cannot be attributed to image concerns appear to arise for other reasons, potentially including a desire to avoid interpersonal tradeoffs, a desire to avoid learning bad news (e.g., that you cannot achieve your preferred payoffs), laziness, inattention, or confusion. We explore the empirical relevance of these motives in additional treatments, as detailed in Section 4.2.

We build off of the Dana, Weber and Kuang (2007) paradigm, and we replicate its findings and the findings of the literature that follows. That prior literature provides compelling evidence that the ability to act selfishly without knowing that an act was selfish facilitates more selfish behavior. To examine the extent to which the ability to avoid information influences selfish behavior, those prior studies have exactly the right set of treatments: one where information can be avoided and one where information cannot be avoided. We pursue a different identification approach because we are interested in a different question. We study why individuals avoid information, rather than the consequences of information avoidance. Better understanding the

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7See, for example, Grossman (2014); Grossman and van der Weele (2017); Serra-Garcia and Szech (2021).
8This approach is related to the approach developed in Exley (2016), which explored payoff decisions rather than information avoidance.
9For related evidence, see also Conrads and Irlenbusch (2013) and Bartling, Engl and Weber (2014). While this prior evidence narrows in on actual image costs (e.g., how third-party observers view the action of a decision-maker), our paper is concerned with the role of image concerns in driving the action of a decision-maker. These two considerations could be different for a number of reasons (e.g., a decision-making, when making a choice, may not consider image concerns to the same degree as a third-party observer who is explicitly asked to judge the action of a decision-maker).
causes of information avoidance, and recognizing the large role that factors beyond strategic image concerns have in driving information avoidance, can help policymakers develop better methods for encouraging information acquisition when information is instrumental.

2 Design

This section describes the design of our main treatment conditions. Additional conditions are introduced later.

A decision maker chooses between two options: Option A and Option B. The two options determine payoffs for two players, Player 1 and Player 2. The conditions under which a subject chooses between Option A and Option B vary according to the experimental treatment. In particular, in Study 1, subjects are randomly assigned to:

1. the Aligned or Unaligned state,

2. the Hidden Information or Known Information condition, and

3. the Self/Other or Other/Other condition.

How choices map to payoffs depends on the random assignment in (1). Table 1 shows payoffs by state. Our main treatments use the payoffs in the top panel, which we call the “Classic Payoffs,” since they have the same structure as in Dana, Weber and Kuang (2007). With the Classic Payoffs, Player 1 always earns more from Option A than from Option B, but Player 2 earns more from Option A in the Aligned state and earns more from Option B in the Unaligned state. Thus, in the Unaligned state (and only the Unaligned state), the decision maker faces a tradeoff in terms of benefiting Player 1 or benefiting Player 2.

How information on payoffs is presented depends on the random assignment in (2). In the Known Information condition, subjects are directly informed of the state and the associated payoffs and are asked to choose between Option A and Option B directly. In the Hidden Information condition, subjects are informed of how the payoffs depend on the state and that there is an equal chance of being assigned to either state. They are then asked whether they would like to: (i) choose Option A, (ii) choose Option B, or (iii) reveal which state they are in before choosing between Option A and Option B. We say subjects avoid information if they choose (i) or (ii) and acquire information if they choose (iii).

Whether the information avoidance in the Hidden Information condition may be driven by image concerns depends on the random assignment in (3). In the Self/Other condition, subjects know that they earn the Player 1 payoffs and another participant earns the Player 2 payoffs, implying that Option A always benefits themselves. This condition mirrors the classic paradigm.

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10 Given our online subject pool and study length, in most of our online studies, we divide their payoffs by 10. As detailed later, we replicate our results with the payoffs from Dana, Weber and Kuang (2007), both online and in a traditional on-campus experimental lab.
Table 1: Payoffs for (Player 1, Player 2)

<table>
<thead>
<tr>
<th>Classic Payoffs with Online Participants (used in Studies 1, 2, 3, and 5)</th>
<th>Classic Payoffs with Penn Undergraduates (used in Study 4) and High Stakes Payoffs with Online Participants (used in Study 6)</th>
<th>New Payoffs with Online Participants (used in Studies 2 and 3)</th>
<th>High Stakes New Payoffs with Online Participants (used in Study 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unaligned State</strong></td>
<td><strong>Unaligned State</strong></td>
<td><strong>Aligned State 1</strong></td>
<td><strong>Aligned State</strong></td>
</tr>
<tr>
<td>Option A</td>
<td>($0.60, $0.10)</td>
<td>($0.50, $0.10)</td>
<td>($5, $1)</td>
</tr>
<tr>
<td>Option B</td>
<td>($0.50, $0.50)</td>
<td>($0.50, $0.50)</td>
<td>($5, $5)</td>
</tr>
<tr>
<td><strong>Aligned State</strong></td>
<td><strong>Aligned State</strong></td>
<td><strong>Aligned State 2</strong></td>
<td></td>
</tr>
<tr>
<td>Option A</td>
<td>($0.60, $0.50)</td>
<td>($0.50, $0.50)</td>
<td>($5, $5)</td>
</tr>
<tr>
<td>Option B</td>
<td>($0.50, $0.10)</td>
<td>($0.50, $0.10)</td>
<td>($5, $1)</td>
</tr>
</tbody>
</table>

Each cell denotes the payoffs given to (Player 1, Player 2) according to whether Option A or Option B is chosen by the decision maker and according to the state. In the Self/Other condition, Player 1 is the decision maker and Player 2 is another participant. In the Other/Other condition, Players 1 and 2 are two other participants. In the Self/Self condition, the decision maker receives the sum of payoffs from Player 1 and Player 2.

In Dana, Weber and Kuang (2007); we call it the Self/Other condition to emphasise that the decision maker determines the payoff for themselves (i.e., Self) and for another participant (i.e., Other). In the Other/Other condition, subjects know that two other participants earn the Player 1 and Player 2 payoffs, implying that neither option benefits themselves. This is our new control condition in which image concerns can no longer drive information avoidance; we call it the Other/Other condition to emphasise that decisions only influence the payoffs of other participants.

2.1 Why does the Other/Other condition eliminate image concerns to avoid information?

In the Self/Other condition, participants may strategically avoid information in order to behave selfishly without knowing for certain that they were selfish and hence in order to incur lower image costs in terms of how selfish they appear to themselves. By contrast, the Other/Other condition eliminates image concerns because decision makers never interact with their recipients and only know that their recipients are some other anonymous Amazon Mechanical Turk participants. This means that the image concerns

\[\text{11}\] In our version of the game, decision makers never interact with their recipients and only know that their recipients are some other anonymous Amazon Mechanical Turk participants. This means that the image concerns
condition removes selfish motives from the decision environment, which means image concerns about selfishness cannot drive information avoidance. The removal of selfish motives also prevents image concerns unrelated to selfishness, such as a desire to appear fair, from driving information avoidance in the Other/Other condition. A participant in the Self/Other condition may avoid information to avoid facing a tradeoff between appearing fair and money for themselves. A participant in the Other/Other condition who values appearing fair does not face this tradeoff between financial incentives and image concerns. This participant can simply acquire the information and then choose the option aligned with their image concerns. Consequently, while image concerns may cause participants to acquire information and influence whether participants choose Option A or Option B in the Other/Other condition, image concerns cannot cause participants to avoid information in the Other/Other condition.

In addition, an important feature of our approach is that factors known to influence the rates of information avoidance—such as the choice architecture (Grossman, 2014), the content of the information (Serra-Garcia and Szech, 2021), and the timing of information provision (Grossman and van der Weele, 2017)—are all the same across the Self/Other and Other/Other conditions.

2.2 Why is the Other/Other condition necessary?

One may wonder whether we could have instead inferred the relevance of image concerns in driving information avoidance using data from the Hidden Information and Known Information conditions of the Self/Other condition only. Indeed, much of the literature that follows Dana, Weber and Kuang (2007)—although not the approach or focus in that seminal paper itself—reports on the “selfishness-avoidance gap,” which compares the rate of information avoidance in the Hidden Information condition to the rate of selfishness in the Unaligned state in the Known Information condition. This approach consistently reveals that information avoidance is more common than selfishness and, importantly, has raised the debate about the motives for information avoidance. However, there are two reasons why this difference does not identify the role of image concerns in driving information avoidance.

The first is that individuals may avoid information because of image concerns even in settings when the information would not affect their choice. For example, an agent who always makes the most selfish choice may avoid information in the Hidden Information condition to appear less selfish, even though it does not change her behavior. Assuming that the difference between information avoidance and selfishness is due to image concerns ignores this possibility and could underestimate the extent to which image concerns drive information avoidance.

The second is that individuals who avoid information—and behave more selfishly as a result—in the Hidden Information condition could have avoided information for non-image-related reasons that might drive information avoidance in our setting are primarily self-image concerns, although social-image concerns where the primary observer is the experimenter are also possible. In Dana, Weber and Kuang (2007), decision makers know their recipients are other participants in the same laboratory study, which may make them more concerned about how they appear to their recipients (even though they are still anonymous).
sons, such as inattention or confusion. Assuming that the difference between information avoidance and selfishness is due to image concerns ignores this possibility and could overestimate the extent to which image concerns drive information avoidance.

2.3 Implementation Details

For Studies 1–3 & 5–6, subjects were recruited on Amazon Mechanical Turk.\textsuperscript{12} For Study 1, we recruited 800 subjects in July 2019, and approximately 100 were randomly assigned to each of the eight treatment conditions (resulting from the $2 \times 2 \times 2$ design described above). We directly replicated the results from Study 1 three times by recruiting an additional 807 subjects in September 2019 (as part of Study 2), an additional 796 subjects in February 2020 (as part of Study 3), and an additional 600 subjects in May 2021 (as part of Study 5).\textsuperscript{13}

One may wonder whether our results are robust to higher stakes. Thus, we replicated the results in Study 1 by recruiting an additional 605 subjects in May 2021 (as part of Study 6). In Study 6, as shown in the middle panel of Table 1, the stakes involved are 10 times higher than the stakes used in Studies 1–3 and hence match the typical values used in this literature for undergraduate student subjects.\textsuperscript{14}

One may also wonder whether our results were driven by our subjects being recruited from Amazon Mechanical Turk. Thus, we also replicated the results in Study 1 by recruiting 222 undergraduates to participate in person at the Wharton Behavioral Lab at the University of Pennsylvania in November 2019 (as part of Study 4). There are two main differences with the design of Study 4 relative to the designs for Studies 1–3. First, as shown in the middle panel of Table 1, the stakes involved are 10 times higher than the stakes used in Studies 1–3. Second, given the limited subject pool size, all subjects were assigned to one of the Hidden Information conditions (i.e., we excluded the Known Information conditions).

Results from Studies 1–6 are detailed in Sections 3.1 and 3.2. In Section 4, we present additional design details and results, including treatment variations from Studies 2–3 & 5–6, involving another 2,597 subjects. These additional treatment variations explore the reasons for information avoidance beyond image concerns.

Prior to making any decision, subjects received detailed instructions and had to correctly answer understanding questions. See Appendix C for full experimental instructions and decision screens.

\textsuperscript{12}Studies 1–3 (5–6) were restricted to subjects with a 95% (99%) or better approval rating from at least 100 (500) HITs and a US IP address.

\textsuperscript{13}The slightly smaller sample in Study 5 reflects the fact that—to save on subject recruitment costs—no participants were recruited for the Known Information version of the Other/Other condition.

\textsuperscript{14}Also, like Study 5—to save on subject recruitment costs—no participants were recruited for the Known Information version of the Other/Other condition.
3 Results

In this section, we present results from Study 1 and the conditions of Studies 2–6 that replicate Study 1.

3.1 Replicating the original moral wiggle room findings

Consistent with prior literature, we find that a large fraction of subjects avoid information in the Self/Other condition and that this fraction exceeds the rate of selfishness when information is known. In the Hidden Information condition, across these studies, 0.67 (Study 1), 0.72 (Study 2), 0.65 (Study 3), 0.62 (Study 4), 0.65 (Study 5), and 0.73 (Study 6) of subjects avoid information. In the Known Information condition, across the studies—excluding Study 4 that omits this condition—0.33 (Study 1), 0.32 (Study 2), 0.33 (Study 3), 0.39 (Study 5), and 0.33 (Study 6) of subjects choose Option A—the selfish option—in the Unaligned state.

Also replicating prior literature, we find that the ability to avoid information leads to more selfish behavior. As shown in Appendix Table A.1, which focuses on results from the Unaligned state, the rates of choosing Option A increase by 23 percentage points (Study 1), 27 percentage points (Study 2), 20 percentage points (Study 3), 7 percentage points (Study 5), and 28 percentage points (Study 6) when information can be avoided. With the exception of Study 5, all of these increases are statistically significant ($p < 0.01$).

3.2 Do individuals avoid information because of image concerns?

The prior section shows that, when information can be avoided, individuals frequently avoid information and that more selfish behavior follows. To what extent can this be explained by subjects in the Self/Other condition avoiding information because of image concerns?

Table 2 shows results from all of our Hidden Information conditions. It presents a linear probability model of whether subjects avoid information on an indicator for whether subjects are randomly assigned to the Other/Other condition. The coefficient estimates on the constant show the rates of information avoidance in the Self/Other condition. As noted in the prior section, these rates of information avoidance are high.

The significant negative coefficient on the Other/Other indicator shows that we document significantly less information avoidance when image concerns cannot drive such avoidance. However, comparing the magnitude of these estimates to the constant implies that the minority of information avoidance in the Self/Other condition is due to image concerns. The percentage of information avoidance in the Self/Other condition that we estimate is due to image concerns is

<table>
<thead>
<tr>
<th>Study</th>
<th>Avoidance Due to Image Concerns (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$0.13 / 0.67 = 19%$</td>
</tr>
<tr>
<td>2</td>
<td>$0.17 / 0.72 = 24%$</td>
</tr>
<tr>
<td>3</td>
<td>$0.14 / 0.65 = 22%$</td>
</tr>
<tr>
<td>4</td>
<td>$0.09 / 0.65 = 14%$</td>
</tr>
<tr>
<td>5</td>
<td>$0.21 / 0.73 = 29%$</td>
</tr>
<tr>
<td>6</td>
<td>$0.14 / 0.65 = 22%$</td>
</tr>
</tbody>
</table>

Equivalently, we estimate that a large majority of the information avoidance observed in the Self/Other condition is not due to image concerns:

<table>
<thead>
<tr>
<th>Study</th>
<th>Avoidance Not Due to Image Concerns (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$0.54 / 0.67 = 81%$</td>
</tr>
<tr>
<td>2</td>
<td>$0.55 / 0.72 = 76%$</td>
</tr>
<tr>
<td>3</td>
<td>$0.51 / 0.65 = 78%$</td>
</tr>
<tr>
<td>4</td>
<td>$0.41 / 0.62 = 66%$</td>
</tr>
<tr>
<td>5</td>
<td>$0.41 / 0.62 = 66%$</td>
</tr>
<tr>
<td>6</td>
<td>$0.21 / 0.73 = 29%$</td>
</tr>
</tbody>
</table>
Study 4, $\frac{0.56}{0.65} = 86\%$ in Study 5, and $\frac{0.52}{0.73} = 71\%$ in Study 6. In light of this large residual, we consider additional drivers of information avoidance in Section 4.

Table 2: Linear probability model of the likelihood of avoiding information

<table>
<thead>
<tr>
<th></th>
<th>Study 1</th>
<th>Study 2</th>
<th>Study 3</th>
<th>Study 4</th>
<th>Study 5</th>
<th>Study 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other/Other</td>
<td>-0.13***</td>
<td>-0.17***</td>
<td>-0.14***</td>
<td>-0.21***</td>
<td>-0.09*</td>
<td>-0.21***</td>
</tr>
<tr>
<td></td>
<td>(0.05)</td>
<td>(0.05)</td>
<td>(0.05)</td>
<td>(0.07)</td>
<td>(0.05)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.67***</td>
<td>0.72***</td>
<td>0.65***</td>
<td>0.62***</td>
<td>0.65***</td>
<td>0.73***</td>
</tr>
<tr>
<td></td>
<td>(0.03)</td>
<td>(0.03)</td>
<td>(0.03)</td>
<td>(0.05)</td>
<td>(0.03)</td>
<td>(0.03)</td>
</tr>
<tr>
<td>N</td>
<td>397</td>
<td>399</td>
<td>386</td>
<td>222</td>
<td>395</td>
<td>401</td>
</tr>
</tbody>
</table>

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are robust and shown in parentheses. The results are from a linear probability model of avoiding information, where Other/Other is an indicator for being the Other/Other condition. In all columns, the data are restricted to the decisions made in the Unaligned or Aligned state of the Hidden Information condition. In columns 1–6, the data are restricted to the decisions made in Studies 1–6 respectively.

Our identification strategy suggests that a smaller fraction of information avoidance in the Self/Other condition is due to image concerns than we would have guessed if we had relied on avoidance-selfishness gap estimates instead. In the Self/Other condition, the fraction of participants who avoid information in the Hidden Information condition minus the fraction of participants who choose Option A in the Unaligned state of the Known Information condition is $0.67 - 0.33 = 0.34$ (Study 1), $0.72 - 0.32 = 0.40$ (Study 2), $0.65 - 0.32 = 0.33$ (Study 3), $0.65 - 0.39 = 0.26$ (Study 5), and $0.73 - 0.33 = 0.40$ (Study 6). Thus, if we had not run our control condition and had instead used avoidance-selfishness gap estimates, we would have inferred that the role of image concerns in driving information avoidance was about two times larger than what we attribute to image concerns using our control condition. In particular, we would have inferred that the percentage of information avoidance in the Self/Other condition due to image concerns was $\frac{0.34}{0.67} = 51\%$ (rather than 19\%) in Study 1, $\frac{0.40}{0.72} = 56\%$ (rather than 24\%) in Study 2, $\frac{0.33}{0.65} = 51\%$ (rather than 22\%) in Study 3, $\frac{0.36}{0.65} = 40\%$ (rather than 14\%) in Study 5, and $\frac{0.40}{0.73} = 55\%$ (rather than 29\%) in Study 6. Thus, not only is our comparison of the Self/Other condition to Other/Other condition conceptually different than this alternative approach, it is a difference that proves empirically important.15

15Two-sample tests of proportions reveals that the fraction of selfish participants in the Self/Other condition is significantly different than the fraction of participants avoiding information in the Other/Other in each of these studies ($p < 0.01$ for all tests). While we find it useful to report specific numbers in our paper for clarity, we emphasise caution in over-interpreting the precise quantitative estimates reported in a single paper. As discussed in Kessler and Vesterlund (2015), the main focus of many economics experiments—including our experiment here—is on qualitative effects. Specifically, our interest is in showing that the amount of information avoidance that we attribute to image concerns when comparing the Self/Other and Other/Other conditions is: (i) different from zero and (ii) different from what avoidance-selfishness gap estimates would suggest. This point is underscored by the fact that the specific percentages that we calculate fluctuate from study to study across payoff levels, subject populations, and replications of the same treatments. The key insight is that our qualitative findings about the role of image concerns do not change across the studies.
4 Additional Results and Discussion

Table 3 summarises the rates of information avoidance across all of our Hidden Information conditions in all of our studies (see Appendix Table A.2 for the rates of choosing Option A). The results shown in the first two columns were discussed in Section 3. In this section, we report on additional treatments from Studies 2, 3, 5, and 6 to examine the robustness of our results to concerns related to attention and to explore what—beyond image concerns—drives information avoidance.

Table 3: Fraction avoiding information in Hidden Information conditions

<table>
<thead>
<tr>
<th>Payoffs:</th>
<th>Classic</th>
<th>New</th>
<th>Active Choice</th>
<th>Classic</th>
<th>Active Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1</td>
<td>0.67</td>
<td>0.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study 2</td>
<td>0.72</td>
<td>0.55</td>
<td>0.44</td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td>Study 3</td>
<td>0.65</td>
<td>0.52</td>
<td>0.47</td>
<td>0.45</td>
<td>0.25</td>
</tr>
<tr>
<td>Study 4</td>
<td>0.62</td>
<td>0.41</td>
<td></td>
<td></td>
<td>0.21</td>
</tr>
<tr>
<td>Study 5</td>
<td>0.65</td>
<td>0.56</td>
<td>0.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study 6</td>
<td>0.72</td>
<td>0.51</td>
<td>0.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>1097</td>
<td>1103</td>
<td>192</td>
<td>600</td>
<td>391</td>
</tr>
</tbody>
</table>

The first and fourth set of columns involve the “Classic Payoffs” shown in the top two panels of Table 1. The second and third set of columns involve the “New Payoffs” shown in the bottom two panels of Table 1. The last two sets of columns involve treatments where participants must actively choose whether or not to acquire information before having the ability to choose Option A or Option B. Within each pair of columns, results are split according to whether participants were randomly assigned to one of the conditions involving payoffs for themselves and another participant (i.e., the Self/Other, Self/Other–New, or Self/Other–Active condition), one of the conditions involving payoffs for two other participants (i.e., the Other/Other, Other/Other–New, or Other/Other–Active condition), or the condition involving payoffs only for themselves (i.e., the Self/Self condition). Note that S/O, O/O, and S/S refer to the Self/Other, Other/Other, and Self/Self conditions, respectively.

4.1 Concerns with our identification approach

As detailed in Section 2.1, the only change we make from the Self/Other condition to the Other/Other condition is switching the Player 1 payoffs from the decision maker to another subject. This change keeps constant the choice architecture, the content of information (i.e., the state-dependent payoffs for Player 2), the timing of information provision, and the possibility of a tradeoff between payoffs for Player 1 and Player 2 (i.e., in the Unaligned state). We thus compare information avoidance across these conditions to isolate the role of image concerns.

Nonetheless, one concern may be that—even though the content of the information revealed is always the same across these two conditions—the removal of any payoffs for the decision maker in
the Other/Other treatment causes participants to pay less attention to the (same) information or value the (same) information less for non-image-related reasons, perhaps because it causes inattention to the decision environment more generally. To investigate the empirical relevance of this concern, we conducted two additional iterations of our design.

First, we examine whether similar results hold when the stakes involved are 10 times higher, and hence participants face larger financial incentives to pay attention. As already discussed in Section 3.2 and shown in the Study 6 column of Table 2, the answer is clearly yes.

Second, to consider how attention may influence our results, Appendix B presents a simple model of the decision to avoid information. This model shows that, if removing payoffs for the decision maker leads them to pay less attention, then we can bound the extent to which information avoidance occurs for image-related reasons by comparing the rate of information avoidance in the Self/Other condition to (i) the rate of information avoidance in the Other/Other condition and to (ii) the rate of information avoidance in a new condition called the Self/Self condition.

In the Self/Self condition, rather than the two payoffs being given to two participants (i.e., Player 1 and Player 2), the two payoffs that result from a given outcome are described as “Amount 1” and “Amount 2” and are always both given to the decision-maker (see Appendix Figure C.62 for details on how this is explained). Thus, in the Self/Self condition, image concerns cannot drive information avoidance, but the involved payoffs for the decision maker are now larger than they were in the Self/Other condition. Attributing image concerns to the difference in information avoidance rates between the Self/Other condition and Self/Self condition would suggest that the percentage of information avoidance due to image concerns is \( \frac{0.65 - 0.55}{0.65} = 15\% \) in Study 5, which is nearly identical to the percentage (14% in Study 5) suggested if we instead used the Other/Other condition as our control condition. This is not surprising, since the rates of information avoidance in the Self/Self and Other/Other conditions only differ by one percentage point (0.55 in Self/Self and 0.56 in Other/Other). The logic of the model and the results from Study 5 thus imply very tight bounds on the role of image concerns driving information avoidance, even accounting for possible differences in attention across treatments. This also implies that there is little empirical evidence for attention-related concerns related to the use of the Other/Other condition as a control.\(^{16}\)

We conclude this discussion of our identification approach by noting that the ideal control condition would change nothing about the decision environment, aside from removing image concerns. Absent a switch to directly turn off such image concerns in participants’ minds,

\(^{16}\)Additional results further support this conclusion. For instance, Table 3 reveals that—once image concerns to avoid information are absent—whether the decision maker or another subject receives the Player 1 payoffs has no impact on information avoidance. See the similar rates of information avoidance in the Self/Other-New and Other/Other-New conditions as well as in in the Self/Other-New, Active and Other/Other-New, Active conditions, conditions that are described in Section 4.2.
however, having such a perfect control treatment is impossible: one has to change something about the decision environment to turn off image concerns. Any such change could, theoretically, have impacts beyond eliminating the role of image concerns.

Our approach in this paper involves using two control conditions, which each turn off image concerns while making minimal changes to the decision environment. The Other/Other condition does this by keeping the information and payoff structures the same but by having the two payoffs go to other people. The Self/Self condition does this by keeping the information and payoff structures the same but by having the two payoffs go to the self.

Having two control conditions may be particularly valuable in this case, since they complement each other. For example, as discussed above, a possible theoretical concern with the Other/Other condition is that individuals might pay less attention since they do not have money at stake. The Self/Self condition avoids this concern (it has even more money at stake for the decision-maker and so may cause individuals to pay more attention, which is useful to establish bounds as shown in Appendix B). Relatedly, a possible theoretical concern with the Self/Self condition is that it gives two payoffs to a single participant while two payoffs go to different participants in the Other/Other condition. The Other/Other condition avoids this concern because it preserves giving the two payoffs to different participants. That both control conditions yield very similar predictions about the role of image concerns mitigates these theoretical concerns and gives us more confidence in our results. Of course, the Self/Self and Other/Other conditions could be different from the Self/Other condition in other important ways. We hope future work will continue to investigate other identification approaches, including those that may involve within-subject measures of altruism and attention.

4.2 Additional drivers of information avoidance

Image concerns cannot drive information avoidance in the Other/Other condition (or the Self/Self condition). So what does?

Aversion to interpersonal tradeoffs or to learning “bad news”

One possibility is that participants do not want to be put into a position (like in the Unaligned state) where they have to make a tradeoff between two participants, even if their own payoffs are not affected. Another possibility is that participants favour the payoffs they can achieve in one of the two states and so want to avoid learning for certain the “bad news” that they are in their less-preferred state (Golman, Hagmann and Loewenstein, 2017; Golman and Loewenstein, 2018).

To investigate whether these motives drive any residual information avoidance, we introduced new conditions in Studies 2 and 3. As shown in the third panel of Table 1, the “New Payoffs” are the same as the “Classic Payoffs” except that Option A gives $0.50, rather than $0.60, to Player 1. This change means the payoffs for the two players are always (weakly) aligned, eliminating
concerns about aversion to interpersonal tradeoffs, and the two states are identical in what payoffs can be achieved, eliminating concerns that individuals may prefer one state to the other.

Consistent with a small role for aversion to interpersonal tradeoffs or bad news driving avoidance, Table 3 shows that the rates of information avoidance are 7–12 percentage points lower with the new payoffs (compare rates in the O/O and O/O–New columns). These differences are statistically significant in Study 2 (0.55 vs. 0.43, p < 0.01) but only suggestive in Study 3 (0.52 vs. 0.45, p = 0.23). Combining data from Studies 2 and 3 yields a significant difference (0.54 vs. 0.44, p < 0.01).

These results reinforce the value of replacing a self-other tradeoff with a comparable other-other tradeoff to explore the role of image concerns, rather than eliminating—or substantially changing—the involved tradeoff.

Choice architecture

Results from the prior section suggest that substantial information avoidance cannot be attributed to image concerns, an aversion to making interpersonal tradeoffs, or the prospect of learning bad news. To explore this remaining information avoidance, we introduced an Active Choice version of the Hidden Information condition in Study 3. In this version, subjects again face the “New Payoffs,” but prior to choosing Option A or B, subjects first have to actively choose whether to reveal or not reveal the state (see screenshot in Appendix Figure C.37).

As compared to the standard Hidden Information condition, the Active Choice version may reduce information avoidance for reasons surrounding confusion, inattention, or laziness. The Active Choice version makes the information avoidance decision simpler—by separating it from the choice of Option A or B—so confused subjects might better understand the value of revealing information. Inattentive subjects, such as those who choose somewhat randomly, should be less likely to avoid information in the Active Choice version where 1 of 2 options reveal information, rather than 1 of 3 in the standard version. Lazy subjects who avoided information in the standard version—by choosing Option A or B directly—to avoid having to click to a new screen and otherwise think more about the decision should be less likely to avoid information in the Active Choice version since they cannot skip the subsequent decision screen.

This change in the choice architecture proves powerful. As seen by comparing the “New” and “New, Active Choice” columns of Study 3 in Table 3, information avoidance is substantially lower when an active choice is required (0.25 vs. 0.47, p < 0.01, in the Self/Other condition; and 0.20 vs. 0.45, p < 0.01, in the Other/Other condition). These results echo those in Grossman (2014), which finds a similar effect of choice architecture in the classic paradigm when image concerns may also be relevant.\(^{17}\) Our results complement the findings in that paper by demonstrating that choice architecture affects behavior, even independently of how it might affect image costs.

\(^{17}\)For recent field evidence on how such small changes to the choice architecture can have a large effect on giving consistent with self image concerns, see Adena and Huck (2020).
In addition, in Study 5, we more closely replicate the findings in Grossman (2014) by showing similar results when considering the impact of active choice when image concerns are relevant because the classic payoffs are used. As seen by comparing the S/O and S/O-Active columns of Study 5 in Table 3, information avoidance is substantially lower when an active choice is required (0.21 vs. 0.65, \( p < 0.01 \)).

The results reinforce the value of holding constant the choice architecture—and the related confusion, inattention, and laziness channels—in our control treatment that replaces a self-other tradeoff with a comparable other-other tradeoff.

**Indifference**

While the prior section posits a possible role of inattention, confusion, and laziness in driving information avoidance, results from our Known Information conditions suggest a limit to the empirical relevance of such explanations and—more broadly—to subjects being indifferent about others’ payoffs.

As shown in Appendix Table A.2 (top panel, column 4), in the Aligned state of the Known Information condition, 97% of subjects (across all studies and conditions) choose Option A. That is, nearly all subjects choose the option that delivers higher payoffs to both players when they are directly informed of the payoff information, regardless of whether they are in the Self/Other or Other/Other condition.

Results with the new payoffs tell a similar story. Appendix Table A.2 (bottom panel, columns 2 and 4) shows that 92% of subjects (pooling across studies and conditions) choose the option that delivers higher payoffs to Player 2 (Option A in Aligned State 1 or Option B in Aligned State 2) in the Known Information condition. That is, when asked directly, over 90% of subjects choose the option that benefits other participants.

Thus, while the information avoidance decision may be more cognitively difficult than the choice of Option A or B in the Known Information conditions, it is clear from these Known Information choices that subjects are indeed paying attention to the payoff consequences of the decisions in both the Self/Other and Other/Other conditions.

**5 Conclusion**

Our experiment explores the extent to which information avoidance is driven by image concerns. We focus on the classic Dana, Weber and Kuang (2007) paradigm. We provide evidence of more information avoidance when image concerns could motivate information avoidance, highlighting that some subjects indeed avoid information because of image concerns. But, we also show how prior approaches relating to the avoidance-selfishness gap estimates would overestimate the role of image concerns in driving information avoidance. Central to our contribution is our ability—by replacing a self-other tradeoff with a comparable other-other tradeoff—to consider an environment where image concerns cannot drive information avoidance but where other factors
that could drive information avoidance are held constant. Potential concerns about differential attention across our experimental conditions are mitigated by results from our Self/Self condition, in which subjects have additional payoffs for themselves at stake and the rate of information avoidance is nearly identical to the rate in the Other/Other condition.

Our exploration of information avoidance opens up additional questions for future work, three of which we note here. First, our results highlight the potential insights gleaned by having a comparable “benchmark” level of information avoidance when assessing a particular driver of information avoidance. In the literature related to selfish motives, replacing a self-other tradeoff with a comparable other-other tradeoff allows for such a benchmark. In the broader information avoidance literature, even if a comparable benchmark is not attainable, some benchmark level of information avoidance will likely be informative. We find that significant information avoidance can arise due to choice architecture—perhaps related to inattention, confusion, or laziness—rather than image concerns or payoff preferences.

Second, our results suggest that it might be worthwhile to revisit the relevance of both image-driven and non-image-driven motives in a range of other contexts in which information avoidance is prevalent (see Golman, Hagmann and Loewenstein (2017) for an excellent review of information avoidance across contexts). While we were surprised by the extent of information avoidance that could not be attributed to image concerns in our setting, we suspect there are many contexts where one may be surprised by the extent to which image concerns drive information avoidance, particularly those in which social image concerns (e.g., when behavior is publicly known to others) are relevant. We hope future work jointly considers reasons related to image concerns and not related to image concerns to bolster our understanding of information avoidance and other avoidance decisions.

For instance, when individuals put forth effort to avoid being asked to give (Andreoni, Rao and Trachtman, 2016), how much of this avoidance is because individuals want to avoid social pressure to give and how much of this avoidance is because individuals want to avoid other factors (e.g., thinking costs, time costs, or nuisance costs)? As a thought interesting questions also remain about how individuals seek information (see, e.g., Spiekermann and Weiss (2016)) for image and non-image reasons.

An interesting related question is whether the extent to which individuals avoid information because of image concerns aligns with how much they “should” avoid information because of image concerns. That is, when information avoidance proves beneficial to how others view them (Bartling, Engl and Weber, 2014; Grossman and van der Weele, 2017), do individuals avoid information because of these expected image benefits? One could also ask whether their information avoidance decisions would differ according to the accuracy of their expectations about the associated image benefits of avoiding information.

The usefulness of such control conditions is also apparent in contexts in which individuals may seek out (rather than avoid) information, see, e.g., Chen and Heese (2021). Indeed, like in the paradigms that focus more on how motives influence information avoidance, it is important to construct control conditions that vary the relevance of self-serving motives to avoid information while still holding as many factors constant as possible, such as the existence of tradeoffs between payment options.

For work related to how people avoid opportunities to be generous, see also Dana, Cain and Dawes (2006); Broberg, Ellingsen and Johannesson (2007); Jacobsen et al. (2011); Dellavigna, List and Malmendier (2012); Lazear, Malmendier and Weber (2012); Trachtman et al. (2015); Lin, Schauberg and Reich (2016).
experiment, to what extent would individuals be similarly reluctant to avoid the ask if they are only asked to give someone else’s money rather than their own money? More generally, may a desire to avoid non-image-related costs—such as a desire to avoid thinking or time costs—prove relevant even to situations where individuals pay to avoid information (Grossman and van der Weele, 2017; Serra-Garcia and Szech, 2021)?

Third, and related, our work suggests gains from further exploring inattention, laziness, and confusion as potentially important drivers of information avoidance across a number of domains. It is possible that people rationally avoid information in response to problem complexity as in models of rational inattention and sparsity (Sims, 2003; Gabaix, 2014, 2017), that they avoid information because they look at problems the wrong way (see Handel and Schwartzstein (2018) for an excellent review), or even that the ability to avoid information provides individuals with an “excuse” not to fully think through decisions. While we have shown that image concerns can explain part of the information avoidance in a classic paradigm, much information avoidance remains. We see great promise in exploring the other drivers of information avoidance across domains.22

6 Supplementary data

The data and codes for this paper are available on the Journal repository. They were checked for their ability to reproduce the results presented in the paper. The replication package for this paper is available at the following address: https://doi.org/10.5281/zenodo.8169530.

22 Indeed, many interesting questions remain about the conditions under which image concerns prove relevant, particularly given the findings in van der Weele et al. (2014).
References


