

# When being wasteful appears better than feeling wasteful

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## Abstract

“Waste not want not” expresses our culture’s aversion to waste. “I could have gotten the same thing for less” is a sentiment that can diminish pleasure in a transaction. We study people’s willingness to “pay” to avoid this spoiler. In one scenario, participants imagined they were looking for a rental apartment, and had bought a subscription to an apartment listing. If a cheaper subscription had been declined, respondents preferred not to discover post hoc that it would have sufficed. Specifically, they preferred ending their quest for the ideal apartment after seeing more, rather than fewer, apartments, so that the length of the search exceeds that available within the cheaper subscription. Other scenarios produced similar results. We conclude that people may sometimes prefer to *be* wasteful in order to avoid *feeling* wasteful.

Keywords: waste aversion; mental accounting; violation of dominance; counterfactual; regret

## 1 Introduction

Recently, one of our friends was upset. She had just rented a perfect little apartment, advertised on a campus bulletin board. “But”, she said, “I had just paid a non-refundable fee for an apartments listing. Now I feel like a freier” (a Yiddish word, roughly meaning patsy, sucker, or pushover).

Spending more money than necessary is regarded as wasteful. When not intentional, and easily avoidable, it can make one feel like a freier. Admittedly, sometimes people overspend deliberately. People show off their wealth by shopping in wildly expensive places. Others flaunt their disregard for money by lighting up cigars with \$20 bills. People also choose to be generous, giving expensive gifts, throwing elaborate parties, tipping ostentatiously, etc. Extravagance is not to be equated with waste. But when actions are self-defined as wasteful, the feeling of wastefulness can be as aversive, if not more, than the waste itself.

Mental accounting (Thaler, 1999) provides a useful framework for understanding waste. If you want a new pair of jeans, \$500 is wasteful. But if you want Prada jeans, \$500 may be a bargain. To please your hosts, a \$30 wine may be adequate. But to impress them, you should

lay out more. When you open a mental account, and enter a debit, you can judge for yourself whether the resulting outcome was “worth it”. But mental accounting does not explain why the *feeling* of waste is so aversive.

Arkes, an expert on the psychology of waste (Arkes, 1996; Arkes & Blumer, 1985; Arkes & Ayton, 1999; Arkes & Hutzel, 1997), has defined waste in two ways. First, as mentioned above, a person is said to be wasteful if she “spends more money on an item than is necessary”. Second, the other side of waste is to “utilize the item that has been purchased” insufficiently (Arkes, 1996, p. 214). Arkes identified several behaviors driven by waste aversion.

1. Students who had received an unexpected discount when purchasing their theater subscription ultimately attended fewer plays; “waste” is greater when the play forgone is more expensive (Arkes & Blumer, 1985).
2. Respondents predicted that after buying 2 movie tickets for \$5 each, one would be less inclined to pay \$5 for a third movie if one had earlier rejected a \$12 deal for a 3-pack. Paying \$5 for what could have cost \$2 feels wasteful (Arkes, 1996, Experiment 1).
3. Respondents indicated they would be more likely to buy a new upgraded \$80 item if their old one could be traded at purchase for a \$30 rebate, than if the new item were simply reduced from \$80 to \$50. The old item seems “wasted” in the sale case, but “put to good use” in the rebate case (Arkes, 1996, Experiment 2).

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Waste is contrary to one's economic self-interest, and oftentimes even considered immoral, so trying to avoid it is natural. Arkes showed, moreover, that even "to avoid the *appearance* of wastefulness [italics ours] people may be motivated to make choices that compromise their own self-interest (1996, p. 213)". Spending too much hurts the pocket. Appearing to have spent too much hurts the ego. People may willingly overpay in economic currencies to reduce psychological costs. However, losses that are not one's "own fault" (due, e.g., to theft, accident, or market behavior) are not accompanied by this second-order pain. Thus, people may also prefer to tolerate additional expenditures (of time, effort, pain, discomfort, etc.), if only to avoid the psychological costs of feeling that they wasted their money.

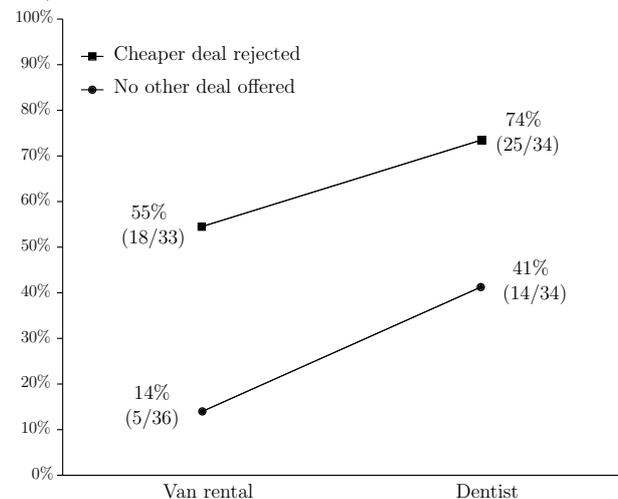
The present study extends waste aversion to scenarios where not only self-interest is violated, but dominance is violated as well — provided that can save one from feeling like a freier. Study 1 establishes the phenomenon, namely that, in order to avoid feeling that money was wasted people prefer an outcome that delivers the same result, but requires greater expenditure of effort, time or discomfort, and is therefore dominated.

Study 2 extends the results by introducing new dependent variables and manipulating the proximity of the protagonist. Study 3 replicates the results with a new population of participants and examines the relations between the preferences for a dominated outcome established in the previous studies and reported feelings of waste and regret.

## 2 Study 1

Two scenarios were created, describing a protagonist who had chosen to pay a fixed amount for the successful completion of some goal over paying according to the actual amount of service needed to reach the goal. In each scenario, we offered two possible outcomes, differing with regard to whether the fixed amount turned out, after the fact, to be less or more expensive than the pay-per-use. The services were van hire for house moving and dental treatment, chosen specifically because both involve some unpleasant investment of time and effort. Having to spend more time and effort in order to achieve some desired outcome justifies the prior decision to pay a fixed sum. Contrarily, the swift completion of the task might create the feeling of wastefulness, as the protagonist feels like a freier for not having paid according to post-hoc actual use of the service. However, when a cheaper deal was never available, there is no feeling of wastefulness, so that wasting time and effort does not help to alleviate the feeling of wasted money.

Figure 1: Percent of respondents predicting preference for the wasteful outcome in Study 1 (N's are in parentheses).



### 2.1 Method

**Participants and procedure.** 137 students, 37% women, mean age 25. 86 students in 2 classrooms were asked to answer a short questionnaire just before exiting. 51 others were approached individually. Two prizes of 250NIS were promised, to be awarded by lottery.

**Design and materials.** We showed respondents the two scenarios presented in Table 1. The manipulated variable within each scenario was whether it did or did not mention a cheaper, albeit rejected, deal, italicized in Table 1. Respondents were assigned at random to a scenario and to an experimental condition.

The compared outcomes were deliberately close, both in terms of difference (consecutive integers, half an hour) and in terms of ratios (e.g., 7.5 hours is only 7% longer than 7 hours). We clearly stated that the goals were fully achieved (the teeth were "sparkling white", and the mover has "finished the job"). Yet, it was absolutely transparent which choice accomplishes the desired outcome faster. Thus, the longer outcome is dominated by the quicker outcome.

### 2.2 Results and discussion

Results appear in Figure 1. A 3-way log-linear analysis yields significant results with regard to the main independent variable. Overall, 64.2% of the respondents chose the option that appears less "wasteful" — but involves a higher expenditure of resources! — when a cheaper deal had been rejected (partial  $\chi^2(1) = 20.1, p < .001$ ). The two scenarios differed (and why wouldn't they?), with

Table 1: The scenarios of Study 1.

**Dentist scenario**

Sharon decided to whiten his teeth. The dentist told him that the treatment is not painful, and that he cannot predict exactly how many appointments will be required to achieve the desired outcome. Most people require between 5 and 8 appointments of 30 minutes each (an identical treatment is administered in each appointment). *A single appointment costs 400NIS, and one can make them one after another, until attaining the desired outcome: permanently white sparkling teeth.*

The clinic *also* offers a package deal, where you prepay 2200NIS, for as many appointments as needed, until attaining the desired outcome. Payment is non-refundable.

*Sharon decided to choose the package deal.*

After paying 2200NIS, which outcome, in your opinion, would Sharon prefer?

- a. To find that he reached his desired goal after 5 treatments (*which, if he hadn't prepaid, would have cost him 200NIS less*).
- b. To find that he reached his desired goal after 6 treatments (*which, if he hadn't prepaid, would have cost him 200NIS more*).

**Van rental scenario**

Amit is moving to a new apartment. His car is too small to haul his apartment's contents, so he rented a small van, allowing him to move his belongings himself, thereby saving money. The owner charges *by the hour*. *The first 2 hours (the minimum) cost 120NIS, and every additional hour, or part thereof, costs 50NIS. An alternative deal is to pay 400NIS for an entire day (up to 12 hours).* This payment is in advance, and non-refundable.

*Amit decided to hire the van for an entire day.*

After he paid 400NIS, which of the following 2 outcomes, in your opinion, would Amit prefer?

- a. To find that he finished the job and managed to return the van within 7 hours (*which, without the deal, would have cost him 30NIS less*).
- b. To find that he finished the job and managed to return the van within 7.5 hours (*which, without the deal, would have cost him 20NIS more*)?

Note: Italicized text appeared in one condition, and was missing in the other condition. The original Hebrew questionnaire is available from the authors upon request.

the Dentist scenario eliciting a significantly higher proportion of preference for the dominated outcome (57.4%) than the Van rental (33.3%) (partial  $\chi^2(1) = 8.78, p < .005$ ). Yet, there is no interaction between the two variables (partial  $\chi^2(1) = .633, p = .426$ ), and the same conclusion can be drawn based on both scenarios: If only one subscription exists, its cost is just a cost. But a cheaper yet adequate alternative presents a concrete counterfactual ("If only I'd taken it!"), exacerbating waste aversion. It is worth noting that the non-negligible proportion of participants indicating preference for the dominated outcome even when there was no other option available can be explained by the second definition of waste described in the introduction. Namely, the longer outcome represents a more extensive or full utilization of what was purchased.

### 3 Study 2

In order to test the robustness of the results of Study 1, we administered new questionnaires to a different group of participants. We extended the design in three aspects. First, we introduced two new scenarios. Second, whereas in Study 1 we asked about a stranger, in the new study we manipulated the identity of the protagonist to be either the respondent or a friend. People are sometimes more willing to attribute non-normative behavior and attitudes to others than to themselves (Fisher, 1993), or even exaggerate non-normative behavior when attributed to others (Jo, 2000). On the other hand, when people are asked to predict decisions made by others, they underestimate the effect of emotions on the decision (Faro & Rottenstreich, 2006, cf. fMRI evidence obtained by Greene et al., 2001).

Therefore, the new scenarios test whether the effect is mitigated or enhanced due to proximity when brought “closer to home”. Finally, we introduced two new dependent variables, asking what the respondent “wishes for”, or what would make the protagonist “happy”, to test whether the effect depends on the specific framing used to elicit preferences. By manipulating the target person and by asking about emotions such as happiness, we are able to learn about the role of emotions in mediating the effect of wasteful feelings. Specifically, if the effect mainly depends on the emotional state, the effect observed for the existence of the previously rejected cheaper option would alter as the other two independent variables change.

### 3.1 Method

*Participants and procedure.* 302 Israeli students, 70% women, mean age 30, were recruited informally among our acquaintances. They volunteered a few minutes of their time to answer a short questionnaire. Participants, approached individually, were handed a questionnaire consisting of two questions, one from each scenario, and responded on the spot.

*Design and materials.* We showed respondents both scenarios presented in Table 2. As in Study 1, each either did or did not mention a cheaper, albeit rejected, deal. Two further manipulations, italicized in Table 2, were used to complete a 2 (whether or not a cheaper subscription was available) -by-2 (whether participants were asked which outcome would make one happier, or which outcome was wished for) -by-2 (whether the preference queried about was one’s own or a friend’s) design.

Respondents were assigned at random to one cell within the first scenario, and to its complementary cell (namely, the one with the complementary value on all three independent variables) in the second. Scenario order was randomized.

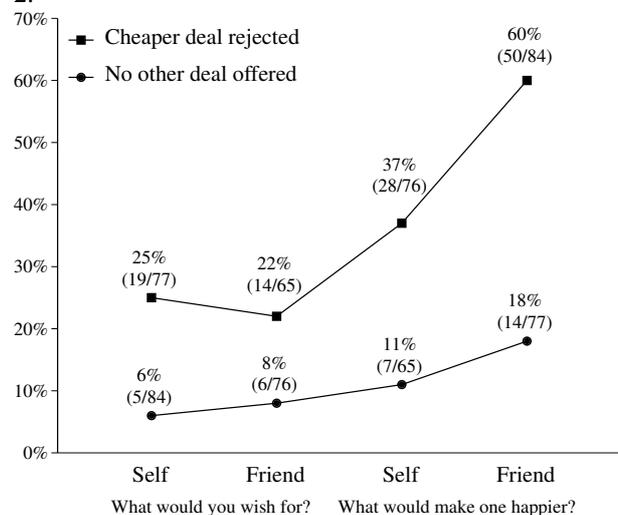
As in Study 1, The compared outcomes were deliberately close, while it was made clear that the goals were achieved without compromise (the apartment found was “perfect”, and the body was “hair-free forever”).

### 3.2 Results and discussion

Table 3 shows the results. A 4-way log-linear analysis tested the four main effects (three manipulated factors + scenario factor), the three 2-way interactions for the manipulated factors, and their 3-way interaction.<sup>1</sup>

<sup>1</sup>This analysis necessarily treats each response as independent, thus neglecting the subject identity, which may result in a loss of power. Similar analyses performed separately for the two scenarios provide essentially the same results as the analysis reported here, indicating that the dependency between the two scenarios did not affect the statistical tests.

Figure 2: Percent of respondents choosing the dominated outcome in the different experimental conditions of Study 2.



The scenario factor was not statistically significant, nor were its interactions with other factors (p-values between .242 and .933). Since the two scenarios yielded such similar results, Figure 2 combines them.

The data fully replicate the results of Study 1. The largest effect is whether a cheaper option had been rejected. Thirty-seven percent of respondents chose the dominated outcome after this rejection, but only 11% otherwise (partial  $\chi^2(1) = 58.7, p < .001$ ). Once again, the prior availability of a cheaper deal makes the outcome that is, in fact, less wasteful contribute to the feeling of wastefulness, and therefore less attractive.

Furthermore, the effect is robust to the manipulations of target variable and identity of the protagonist. While the two variables have significant effects on the option chosen by respondents, the interaction with the effect under study here is not significant (partial  $\chi^2(1) < 1, p > .400$  in all cases).

A significant main effect was found for whether respondents were asked what would make one happier, or what they would wish for. 33% chose the dominated outcome in the former case, but only 15% in the latter (partial  $\chi^2(1) = 24.7, p < .001$ ). Possibly, an emotion such as happiness tolerates violation of dominance better than an expressed desideratum. Whereas happiness doesn’t seem to require a normative justification, one feels more accountable, and held to higher standards, regarding what one endorses. However, the lack of significant interaction shows that the effect of the feeling of waste driven by the counterfactual comparison to the rejected option remain unaffected.

Table 2: The scenarios of Study 2, with either one deal or two deals offered.

**Rental-apartments scenario**

[Only one deal offered] *You are / Your friend is looking for a rental apartment. You know / Your friend knows exactly what you are / he is looking for. You have / he has decided to take out a subscription for an Internet rental-apartments listing. A subscription costs 180NIS for 20 sessions on the data base. What would make you / him happier / What would you wish for yourself / him?*

- a. To find the perfect apartment after 10 sessions (going out to see one apartment following each session).
- b. To find the perfect apartment after 11 sessions (going out to see one apartment following each session).

[Cheaper deal rejected] *You are / Your friend is looking for a rental apartment. You know / Your friend knows exactly what you are / he is looking for. You have / he has decided to take out a subscription for an Internet rental-apartments listing. A subscription costs 100NIS [then about \$25] for 10 sessions, or 180NIS for 20 sessions. After some deliberation, you / he opted to pay 180NIS for 20 sessions on the data base. What would make you / him happier / What would you wish for yourself / him?*

- a. To find the perfect apartment after 10 sessions (going out to see one apartment following each session).
- b. To find the perfect apartment after 11 sessions (going out to see one apartment following each session).

**Permanent depilation scenario**

[Only one deal offered] *Three months before the onset of summer, you / your friend decided to remove your / her body hair permanently by laser in a cosmetic center. You / She prepaid 1500NIS for 10 laser treatments at the center. What would make you / her happier / What would you wish for yourself / her?*

- a. A smooth hair-free body forever after 7 treatments.
- b. A smooth hair-free body forever after 8 treatments.

[Cheaper deal rejected] *Three months before the onset of summer, you / your friend decided to remove your / her body hair permanently by laser in a cosmetic center. The center offers two packages: either prepay 1500NIS for 10 treatments, or prepay 1200NIS for 7 treatments. After some deliberation, you / she prepaid 1500NIS for 10 laser treatments at the center. What would make you / her happier / What would you wish for yourself / her?*

- a. A smooth hair-free body forever after 7 treatments.
- b. A smooth hair-free body forever after 8 treatments.

Note: Italicized text was manipulated between conditions. The original Hebrew questionnaire is available from the authors upon request.

Whether the question was about oneself or a friend was also significant (20% chose the dominated outcome for themselves, versus 28% for their friend, partial  $\chi^2(1) = 5.39, p < .05$ ). Again, no significant interaction with our primary independent variable was found.

There was a significant interaction between the last two variables (partial  $\chi^2(1) = 3.94, p < .05$ ), whereby self versus friend mattered only with regard to predicting happiness, while regarding what one would wish for, responses are similar for oneself and for a friend. Perhaps two intuitions clash here. Inasmuch as participants are aware which choice is rational, social desirability might make them reluctant to openly admit the appeal of the dominated outcome. Asking about a friend could solicit less guarded responses. Indeed, 40% thought their friend would be happier with the dominated outcome, but only

25% admitted they themselves would be happier with it. On the other hand, if asked what they wish for, they might feel a moral obligation to wish “the right thing” for a friend, even if it wouldn’t necessarily make him/her happier — and a dominated outcome is hardly “the right thing”. Indeed, nearly the same proportion wished the dominating outcome for themselves (85%), and for their friend (86%). Thus, we find that our manipulations had a significant effect on choices made by respondents, and at the same time did not influence the effect of feeling of waste, which is our main interest in this study. We conclude that, although emotions do play a role in the type of scenarios that we investigate, the waste aversion manifested in the reduced attractiveness of the dominant outcome does not depend on the elicited emotions.

Table 3: Percent of respondents, among the total in that cell, choosing the dominated outcome in Study 2.

	“What would you wish for?”		“What would make one happier?”						
	Oneself	Friend	Oneself	Friend					
Seeking a rental apartment									
	%	N	%	N	%	N	%	N	
No other deal offered	5.3	38	6.5	46	11.4	35	14.6	41	
Cheaper deal rejected	25.0	36	16.7	30	46.7	30	60.9	46	
Removing body hair									
	%	N	%	N	%	N	%	N	
No other deal offered	6.5	46	10.0	30	10.0	30	22.2	36	
Cheaper deal rejected	24.4	41	25.7	35	30.4	46	57.9	38	

### 4 Study 3

Having rejected a cheaper deal makes the more efficient outcome appear to be wasteful and leads to a preference for the dominated outcome. As Arkes (1996) points out, wastefulness may include a component of regret. The dominated outcome triggers counterfactual comparison to “what would have happened had the other option been accepted,” which would have resulted in a better outcome. Conversely, without an alternative option, no counterfactual comparison arises. Thus, waste aversion is closely linked to the well-studied phenomenon of regret aversion (Bell, 1982; Loomes & Sugden, 1982; Ritov, 1996; Zeelenberg et al., 1996; Zeelenberg et al., 1997).

Study 3 was conducted to investigate the roles of subjective feelings of waste and regret in the observed effect. We repeated the design of Study 1 using the Van rental scenario, asking participants to estimate the feeling of wastefulness and feeling of regret associated with the more efficient outcome. This measurement serves multiple purposes: First, as a manipulation check, we test that feeling of waste is affected by our manipulation as hypothesized. Second, we test whether the preference for the dominated outcome is correlated with feeling of waste within conditions. Lastly, we look at whether reported feeling of regret mediates feeling of waste and outcome preferences.

#### 4.1 Method

*Participants and procedure.* Ninety four participants, 52% women, mean age 23 from the participant pool of the Max Planck Institute of Economics in Jena, Germany

were recruited by e-mail using ORSEE (Greiner, 2004). Six prizes of 50€ each were promised, to be awarded by lottery.<sup>2</sup>

*Design and materials.* The experiment was conducted online using LimeSurvey (Schmitz, 2010). Participants were given the second scenario of Table 1 with the following changes: The Israeli name Amit was changed to Christian. Hourly Van rental prices were 20€ for the first 2 hours and 8€ for each additional hour, or part thereof. Renting the van for a full day cost 65€. The possible outcomes were 7 or 8 hours, respectively. In line with the previous studies, respondents were asked which outcome would be preferred by the protagonist. Next, respondents were presented with the following questions on a separate screen: “If Christian finds that the job required 7 hours, would he feel that he wasted money?” and “If Christian finds that the job required 7 hours, would he regret having hired the van for the full day?” Both questions appeared simultaneously on the same screen, in this order, and responses were given on a 7-points Likert scale.<sup>3</sup> Respondents were randomly allocated to the two experimental conditions, namely whether a cheaper option was rejected or not.

#### 4.2 Results and discussion

The results of Study 1 were replicated with the German respondents. 72% (33/46) of the subjects chose the wasteful option in the presence of a rejected cheaper

<sup>2</sup>The lottery included 192 additional participants who participated in parallel studies.

<sup>3</sup>The original German questionnaire is available from the authors upon request.

Table 4: Logistic regression predicting preferred outcome based on “feeling of waste”, “feeling of regret” and condition in Study 3.

	B (SE)	p	95% CI for exp b		
			Lower	Exp b	Upper
Constant	−1.94 (0.64)	.003		0.14	
Rejected cheaper deal	1.25 (1.13)	.008	1.38	3.50	8.92
Feeling of waste	0.44 (0.18)	.012	1.10	1.56	2.20
Feeling of regret	−0.01 (0.17)	.935	0.70	0.99	1.38

$R^2 = .174$  (Hosmer & Lemeshow),  $.214$  (Cox & Snell),  $.286$  (Nagelkerke), Model  $\chi^2(1) = 22.65$ .

deal, compared to 35% (17/48) in the control condition (Fisher’s exact test,  $p < .001$ ). As hypothesized, having rejected a cheaper option enhanced the “feeling of waste” from 2.98 to 4.00, on average ( $t(92) = 2.95$ ,  $p < .005$ ). However, the “feeling of regret” did not differ between conditions (3.56 vs. 3.83,  $t(92) = .73$ ,  $p = .466$ ), although “waste” and “regret” are significantly correlated over conditions ( $r(94) = .57$ ,  $p < .001$ ).

We find that feeling of waste is more important than feeling of regret in inducing preference for the dominated outcome. In fact, regret does not predict outcome preference once feeling of waste is accounted for, as is evident in the logistic regression reported in Table 4. The probability of indicating preference for the dominated outcome increases with the “feeling of waste” that accompanies the more efficient outcome ( $Wald = 6.35$ ,  $p < .05$ ) and with the existence of the alternative option ( $Wald = 6.92$ ,  $p < .01$ ), but not the “feeling of regret” ( $Wald = .01$ ,  $p = .935$ ).<sup>4</sup>

This supports our earlier interpretation: the dominated outcome sometimes appears more attractive precisely because the alternative appears wasteful. When a previously rejected cheaper option exists, the feeling of waste and therefore the attractiveness of the dominated outcome both increase.

Regret, however, was not found to mediate the effect of feeling of waste on outcome preference in our data, although it indeed appears to be a component of waste, as hypothesized by Arkes (1996).

<sup>4</sup>The significant effect of the condition is not inconsistent with feeling of waste as a mediating variable, since the measurement of feeling of waste is on an arbitrary scale and may be sensitive to the condition.

## 5 General discussion

This paper adds a new type to “irrational” choices motivated by waste aversion. To avoid the feeling of wasted money (feeling! not real waste), people express willingness to expend extra resources — itself a waste. Specifically, after rejecting a cheaper deal, most respondents saw the appeal of an outcome that voids the regrettable “if only” counterfactual — even if it is wasteful. This paradoxical phenomenon is potentially relevant to customer satisfaction whenever a *prix-fixe* scheme is offered, and therefore is likely to be prevalent across many products and services.

How, one may ask, can a dominated outcome feel less wasteful? Perhaps because the currency in which people felt wasteful is money, whereas the currency paid to hide it is time and effort. Contrary to the common adage, time is not always like money. For various reasons, it is more ambiguous (Soman, 2001), and more flexibly priced (Okada & Hoch, 2004).

Thaler (1980) suggested that prepaying for a subscription (to a concert series, a gym, or cooking classes) encourages more use than if payment were per use. Thus subscriptions can be a self-control device that people adopt willingly, harnessing waste aversion to their advantage. The present findings cannot be applied similarly. Presumably nobody would actually make one more appointment (with the dentist, say) if they are convinced it is unnecessary (namely that their teeth will get no whiter). While many of our respondents acknowledged the appeal of a dominated outcome, we doubt they would actually choose a wasteful action just to affect it. It is one thing to wish to find oneself in some circumstance, and quite another to bring it about. The latter requires self-deception, in addition to waste aversion, so that the person wrongly believes the wasteful action not to be wasteful (see, e.g., Gur & Sackeim, 1979; Mele, 1997). People sometimes engage in what observers would call self-deception, but successful self-deception requires that the self not be aware of it (Quattrone & Tversky, 1984).

Our phenomenon is related to the sunk-cost fallacy. The prototypical sunk-cost effect involves a preference for A over B (e.g., driving to a ballgame versus watching it at home on TV) when one had made a non-refundable payment for A, even though circumstances have changed since payment was made (e.g., the weather is foul and traffic is impossible), so that B would have been preferred to A in the absence of the sunk cost (e.g., Thaler, 1980; Arkes & Blumer, 1985). Sunk-cost effects are weaker in one sense, and stronger in another, than the present effect.

Sunk-cost effects are weaker inasmuch as A is not dominated by B. In fact, at the time payment was made,

A had not only been preferred to B, but even worth paying for. It is the change in circumstance that changed the preference. In our scenarios, on the other hand, one option dominates another unequivocally, and only the prepayment shifts preference to the dominated outcome.

Sunk-cost effects are stronger than the present effect inasmuch as they relate directly to behavior, and therefore can be observed in the real world, such as when public projects whose costs exceed expectation are pursued beyond a point at which they would not have been undertaken had a prior investment not already been made.

In sunk-cost situations, people do not necessarily accept the economic perspective which urges them to ignore sunk costs and look ahead only. In that sense, it seems more like an error of reasoning. In our case, however, it is so transparent that one outcome dominates another that the irrational choice cannot be attributed to error. Hence, people may wish they didn't have to confront having been freiers, but would just live with it if they were, because self-deceit is nearly impossible. We ourselves were quite surprised that we could so easily lure a majority of respondents into preferring a dominated outcome.

Minimizing waste is economically and morally admirable, and not being a freier is good for the soul. What is remarkable is what people might sometimes prefer to endure rather than face up to occasional waste or the semblance thereof.

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