Judgment and Decision Making, Vol. 7, No. 6, November 2012, pp. 750–760

Delaying information search

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Abstract

In three studies, we examined factors that may temporarily attenuate information search. People are generally curious and dislike uncertainty, which typically encourages them to look for relevant information. Despite these strong forces that promote information search, people sometimes deliberately delay obtaining valuable information. We find they may do so when they are concerned that the information might interfere with future pleasurable activities. Interestingly, the decision to search or to postpone searching for information is influenced not only by the value and importance of the information itself but also by well-being maintenance goals related to possible detrimental effects that negative knowledge may have on unrelated future plans.

Keywords: information avoidance, well-being, uncertainty aversion, curiosity, affect regulation.

1 Introduction

> Yet ah! why should they know their fate?
> Since sorrow never comes too late,
> And happiness too swiftly flies.
> Thought would destroy their paradise.
> No more; where ignorance is bliss,
> 'Tis folly to be wise.
>
> —Thomas Gray (1891), Ode on a Distant Prospect of Eton College

Thomas Gray's Ode on a Distant Prospect of Eton suggests that because happy moments are rare and short lived, and because it is only a matter of time before we have to face the painful truth or experience rumination, we should sometimes prefer ignorance over knowledge. Consistent with this notion, we provide here three empirical demonstrations of people thinking and behaving in accordance with the belief that sometimes "'tis folly to be wise."

In the present research we examined factors influencing decisions to avoid valuable information. We hypothesized that, when potentially negative information could interfere with future pleasurable plans, people would temporarily avoid this information until after the event had ended. Specifically, we suggest the choice to avoid potentially negative information is (at least partly) determined by well-being maintenance goals (i.e., enjoyment of future events).

Consider, for instance, the case of receiving an envelope from the tax authority while getting ready to catch the plane for a weekend out in Las Vegas. Opening the envelope is wise, as knowing if the letter brings bad news can help one make well-informed financial decisions. Indeed, because of the importance of making well-informed decisions people generally exhibit strong curiosity and search for information (Berlyne, 1954; Loewenstein, 1994). However, we think that people are less likely to open the envelope when it arrives just before they head to Vegas, in order to avoid spoiling the trip. Importantly, putting off information search—leaving the envelope closed at home—is not a guarantee for a peaceful weekend either, as the uncertainty and associated rumination can also ruin the trip. In such cases, individuals might thus prefer to resolve uncertainty before the trip. What then determines whether people would search or avoid information?

We propose that, when deciding whether or not to expose themselves to information, people weigh the expected costs of knowing against those of ignorance. Thus individuals determine whether certainty or uncertainty is worse and hence search or avoid information. What is new about this perspective is the notion that decisions to search or temporarily postpone searching are influenced not only by the nature of the information itself (whether it is threatening or painful) but also by the effects that this information may have on unrelated future pleasurable plans.

1.1 When and why can we expect information search or avoidance?

The most straightforward reason people avoid information is that they fear it's painful. Learning your situation would have been better had you only chosen a different option is not pleasant (Zeelenberg & Pieters, 2007).

This research was supported by The Henry Crown Institute of Business Research in Israel.

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Learning your "lucky numbers" were drawn in the lottery on the day you failed to purchase a lottery ticket, that your partner is being unfaithful, or that you have a disease is painful news. However, prior research consistently demonstrated that decision makers often do look for information that is potentially unpleasant. For example, after making investment decisions, people tend to search for information regarding foregone alternatives in the hope of reassuring themselves their choices were wise. Consequently, they expose themselves to the possibility of finding out they made the wrong choice (Shani & Zeelenberg, 2007, 2012; Shani, Igou, & Zeelenberg, 2009). They search even when the information is likely to be painful (Shani, Tykocinski, & Zeelenberg, 2008; Turner, Riimal, Morrison, & Kim, 2006) and even when the information is not useful for a decision at hand (Bastardi & Shafir, 1998; Tykocinski & Ruffle, 2003).

Overall, people may have good reasons to engage in information search. They can learn from the information (Roese, 1994), use it to regulate negative emotions (Shani & Zeelenberg, 2007; Shani et al., 2009), avoid unpleasant uncertainty (Frey, 1986; Van den Bos & Lind, 2002), or satisfy curiosity (Loewenstein, 1994, 2006; Van de Ven, Zeelenberg, & Van Dijk, 2005; Van Dijk & Zeelenberg, 2007). Additionally, sometimes receiving painful information feels better than remaining uncertain. For example, knowing, rather than strongly suspecting, one is an HIV carrier feels relatively better (Sieff, Dawes, & Loewenstein, 1999) thanks to cognitive mechanisms that ameliorate the experience of negative affect (the psychological immune system: Gilbert, Pinel, Wilson, Blumberg & Wheatley, 1998) Thus, in general, people have a strong curiosity and look for information, even if it is likely to be negative.

As noted, people often *search* the potentially negative, non-instrumental information for well-being maintenance goals (regulate negative feelings associated with the possibility they made an inferior decision, to avoid rumination). The question we ask here is whether people also *avoid* information for the same reason—to regulate negative feelings stemming from receiving negative information at an inconvenient time (e.g., just before a pleasurable activity). To provide an initial answer, we asked 23 students from Tel Aviv University to recall and describe a situation in which they avoided news that could be either negative or positive, and to explain the reasons they avoided the information. Only one person indicated never having avoided and always searching for information. Of the remaining 22 participants, two preferred not knowing information regarding illegal activities in which their employees or coworkers engaged, and three mentioned avoiding of neutral information (e.g., not wanting a salesperson to contact them, or laziness in collecting information). Most participants (17 out of 23) discussed reasons that involved affect regulation when feelings and emotions might negatively *interact* with upcoming events. Specifically, six of these 17 participants discussed how obtaining information might negatively interfere with an *upcoming exam*; three discussed the possibility that *knowledge* might hinder *performance* during the exam; the other three discussed how *feelings* might hinder *performance* during the exam. The other 11 participants mentioned general mood regulation prior to a pleasurable activity (e.g., avoiding information about prices before spending, knowledge regarding acceptance to a university when a vacation is planned, information about the shaky marital status of a sister before spending an enjoyable time with friends, knowing one is paying more for a flight than others, and information that might indicate an item one is excited to purchase might not be so good after all).

Seemingly, a vast majority of the participants felt having definite knowledge might hinder their ability to enjoy future events. Consequently, they preferred to temporarily avoid information and remain uncertain. Thus information search or avoidance also relies on the circumstances under which the information will be obtained (e.g., should one learn the results of an HIV test before a vacation or after returning?). It focuses more on the *consequences* of having definite knowledge than on the expected painfulness of the knowledge. The decision should therefore depend on the type of anticipated event (e.g., pleasurable or not) and the expected impact people presume negative knowledge would have on that event.

1.2 Postponing or searching information: A matter of affect regulation

Our reasoning that people temporarily avoid information prior to pleasurable events is consistent with research by Linville and Fischer (1991) who found that individuals often prefer to separate the experiences of two positive events (to savor pleasure), to separate the experiences of negative events (to avoid multiple losses), and to combine a positive event with a small negative event (the loss-buffering hypothesis). We also draw on Thaler and Johnson's (1990) work about hedonic editing revealing individuals actively segregate gains and cancel out losses against larger gains. Our research adds to this literature by showing that individuals also evaluate the possible impact of potentially negative information on future events. Thus we propose here that information search or avoidance can also serve as an affect-regulation strategy. Specifically, we expect people to postpone information search when they do not yet know whether searching for information would mitigate or worsen one's current feelings. (Can one really handle the news while on a vacation? How would this knowledge influence one's activi-

Table 1: Students searching or postponing exam results depending on the day the exam was taken—Study 1.

Day of exam	Result checked		
	Within two days	After two days	Total
Friday	111 (75.5%)	36 (24.5%)	147
Tuesday	73 (91.2%)	7 (8.8%)	80

ties during vacation?) People postpone having the information because when unclear how the information would affect feelings, affect-regulation goals (e.g., alleviating the negative feeling about possible failure on an exam) may interfere with affective evaluation goals (e.g., enjoying the vacation, see Andrade 2005; Andrade & Cohen, 2007). These affect-regulation goals are thus expected to lead to (at least temporary) information avoidance, regardless of individuals' early expectations that they will encounter negative or positive information. (In Footnote 1 we describe a pilot study supporting this suggestion.)

1.3 Overview of the experiments

Study 1 provides initial evidence demonstrating students' reluctance to search information about exam results prior to a weekend (a relatively pleasant event one might wish to avoid mixing with "bad information"). Study 2 finds individuals evaluate the costs of having definite knowledge versus the costs of maintaining ignorance while considering an upcoming pleasurable event. Study 3 shows that information avoidance occurs when people expect it to interfere with pleasurable events, even if curiosity for the information is high. It also confirms wanting to protect the pleasure that is associated with an upcoming event mediates the decision to put off information search.

2 Study 1: Avoiding exam results before the weekend

This study investigated whether students are reluctant to check their exam results when these results may interfere with a pleasurable event (i.e., the upcoming weekend). Because students generally tend to like weekends better than weekdays, we expected them to be less likely to look for their exam results when the exam was on Friday than on a Tuesday in order to prevent ruining their weekend with a bad grade.

As part of the university service, students at Tilburg University can check the results of multiple choice exams by logging on to the university website a few hours after finishing the exam. We compared information search by psychology freshmen for the results of two exams, one that took place on a Tuesday (Social Psychology, 80 examinees) and one that took place on a Friday (Health Psychology, 147 examinees). We coded information search as the proportion of students that checked for the correct answers within two days of the exam. We collected data during the seven days after the exam.

The results are shown in Table 1. As expected, a larger proportion of students preferred to check the exam results during the first two days when the exam was taken on a Tuesday than when the exam was taken on a Friday, $\chi^2(1, N = 227) = 8.35$, $p = .004$, Eta = .19. A stronger indication of information avoidance was demonstrated by comparing the results for only the 49 students who took both the exam on Tuesday as well as Friday. Finding the same students that searched for their test results on a Tuesday would avoid the results on a Friday would further support our reasoning that an upcoming pleasurable event plays a large role in the decision to postpone information search. Indeed, the same students were more likely to enter the university website to check their results within the two days that followed the exam when the results were available on a Tuesday (47 out of 49) than when they were available on a Friday (41 out of 49); the difference consisted of 6 students, all of whom checked after Tuesday but not after Friday ($p = .016$, one-tailed binomial test). These results provide an initial demonstration of the power of circumstances on individuals' reluctance to search information.

Note that only 17 out of 147 participants (11.5%) who took the exam on Friday, and 5 out of 80 participants (6.2%) who took the exam on Tuesday, did not check the exam results within the 7-day time frame of the experiment. This finding indicated the difference is not a result of the lack of an interest in the information as almost all participants in both courses wanted to know their grade. Eventually, all participants learned their grades as they are entered into their academic record (typically four weeks after the exam). Importantly, our results are still significant when we exclude the 22 participants who did not check the exam results within the 7-day time frame of the experiment from the design (17 participants who took the exam on Friday plus the 5 participants who took the exam on Tuesday), $\chi^2(1, N = 205) = 7.38$, $p = .007$, Eta = .19. Hence, even if we leave out the participants that had shown no interest in their grade within a one-week period, we still find that the people are more likely to postpone finding out their grade until after a pleasurable event (such as a weekend).

The results of Study 1 should be interpreted with caution, as the two exams compared differed in topics (Social Psychology vs. Health Psychology) and thus perhaps also with respect to the degree of uncertainty students felt about the correct answers (i.e., expectations to pass or fail

the exam). We addressed these issues with a pilot study in which we controlled for the issue participants needed to provide their estimates for (whether or not search information about an exam results) as well by manipulating their expectations for either passing or failing the exam. (See Footnote 1 for further discussion on this matter.)

3 Study 2: The costs of knowledge versus ignorance

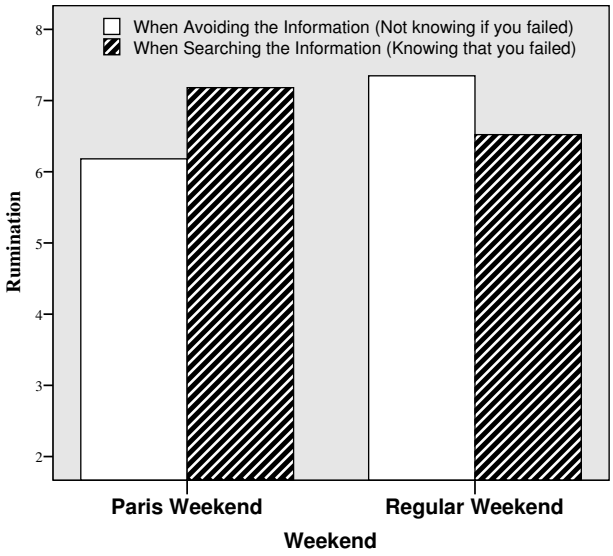
Earlier we hypothesized that people temporarily avoid information if they think it could interfere with a pleasurable event. They thus evaluate the costs of knowing versus not knowing this information for their well-being, and on the basis of this evaluation, they decide to search or delay searching the information. For example, if finding out one failed an exam causes rumination about the failure and therefore reduces one's ability to enjoy an upcoming vacation (thus interfering with the unrelated event), one might avoid checking the results of the exam. However, uncertainty (e.g., not knowing whether one has failed the exam) is also unpleasant and typically leads to rumination as well (Martin & Tesser, 1996). We predicted people would expect to be better off not knowing before a scheduled weekend in Paris that they failed an exam, because they would expect to ruminate more about that failed exam while in Paris than they would about the uncertainty of not yet knowing whether they indeed failed it. Before a neutral weekend, we expected the opposite, namely, that people would expect to ruminate less about a known failure than with uncertainty associated with potential failure (if one does not yet know the result). Such a pattern of results would point to the existence of an evaluation process, where people weigh the psychological costs of maintaining uncertainty versus those of having definite knowledge.

4 Method

We approached students (N = 45) individually at several locations on the Tilburg University campus and asked them to respond to a one-page questionnaire containing the following scenario (adapted from Tversky & Shafir, 1992a, b). The manipulation of the enjoyability of the weekend (a weekend in Paris vs. a Regular weekend) is shown in italics.

> Imagine that you have just taken a tough qualifying exam. It is the end of the fall quarter, you feel tired and run-down, and you are not sure whether you passed the exam. In case you failed, you have to take the exam again in a couple of months—after the Christmas holidays.
>
> This Friday, at 19:00h, you arrive home from the university. You are looking forward to the next morning since *you are supposed to fly to Paris for the weekend / it is when your weekend starts*. A few minutes after you enter your house, your friend calls and says that the exam results are now available online.

Figure 1: Expected rumination when finding out one has failed the exam versus when one is uncertain about whether one had failed the exam, depending on the type of the weekend planned in Study 2.



Next, participants indicated how much they expected they would think about the exam during the weekend (1) if they avoided the information (i.e., "Imagine that you decided not to find out your test results on Friday. How much do you expect to think about the exam results during the weekend?") and (2) if they checked the information and found out they had failed (i.e., "Imagine that you decided to find out on Friday night how you did on the test. Assume that you failed. How much do you expect to think of the results during the weekend?) (0 = not at all, 10 = very much)."

4.1 Results and discussion

The results are shown in Figure 1. A mixed factorial design with the type of weekend (Regular vs. Paris) as a between-subjects variable and the rumination questions (expected rumination about the uncertainty of having possibly failed an exam or the expected rumination about knowing they had failed the exam) as a within-subjects

variable revealed a significant crossover interaction effect, $F(1, 43) = 6.26$, $p = .016$, $\eta^2 = .12$. Replicating the findings by Shani and Zeelenberg (2007), the pattern in the Regular weekend indicated participants expected to ruminate more over a possible failure (when they *did not check* the exam results) than over a known failure (when they decided to check for the results and found out they had failed). This pattern was reversed when people had an enjoyable weekend planned: participants expected to ruminate relatively more if they decided to check and found out they failed than if they decided not to check.

These results suggest a constant reminder of a failure can attenuate the pleasure derived from a vacation in Paris, and therefore people would prefer to remain ignorant of their test results before a trip. This finding may explain why people might prefer to search for such information before a regular weekend but not before a pleasurable weekend.[1] Indeed, the results of Study 2 suggest people believe having definite negative knowledge would be worse during a vacation, whereas maintaining ignorance would be easier during an enjoyable weekend. Participants therefore preferred to delay searching information that would reveal the outcome of the exam until after the vacation was over.

Extending ignorance therefore serves as a sophisticated mechanism aimed at maintaining individuals' well-being by protecting the pleasurable event. Such avoidance should then exist even when individuals are highly curious about the information. To further establish the role of information avoidance as a mechanism aimed at maintaining well-being, we designed Study 3 to clarify whether individuals would still prefer to postpone the search of information, even when they are highly curious about the outcome of a health test, in order to protect an upcoming pleasurable activity.

5 Study 3: Avoiding information when curious

Study 3 provides further evidence of information avoidance prior to expected pleasurable events, as well as an examination of whether the desire for an event to be pleasurable can outweigh the desire to satisfy one's curiosity. Curiosity is stronger if the gap in knowledge is made more salient (Loewenstein, 1994). Past research has demonstrated smaller gaps in knowledge increase both curiosity and discomfort (Litman, Hutchins, & Russon, 2005; Van Dijk & Zeelenberg, 2007). The closer people are to "knowing" something, the more attention they give to what they do not know and the more curious they are. In the present study, we aimed to induce different levels of curiosity. Participants faced a scenario in which they imagined having taken an HIV test. We assumed taking an HIV test after touching a potentially infected syringe would elicit more curiosity than taking the test when donating blood, because the former clearly invites more attention due to the increased risk (Loewenstein, 1994). Despite this increase in curiosity and the enhanced desire to know, we did not expect this increased curiosity would make participants more likely to search for information when a pleasant weekend was coming up.

6 Method

Tilburg University students (N = 100) volunteered and were randomly assigned to one of the conditions of the 2 (Weekend: Wedding vs. Regular) × 2 (Reason for Testing: Junkie needle vs. Blood donation) design. Participants in the junkie-needle condition read the following scenario:

A few months ago, while you were sitting in the Vondelpark,[2] you accidentally touched and were stabbed by a

[1] To further test behavioral indications of information avoidance while controlling for whether the information is expected to be positive or negative, we conducted a pilot scenario study (N = 80). We manipulated whether participants read that they had planned a normal weekend or a very pleasurable weekend to Paris. Participants were uncertain about an exam result, and we manipulated whether they expected positive information (expecting to pass an exam; "...you are not sure but believe that you have passed the exam") or negative information (expecting to fail an exam; "..."...you are not sure but believe that you have failed the exam"). After this we assessed participants' information-avoidance tendencies; "You now have to decide whether you go immediately to the university (its Friday night and it takes 15 minutes by bicycle) and check the test results or wait until Monday when the university is open again?". Simply put, participants indicated whether they would check the results after the weekend or immediately (–5 = definitely wait for Monday, 5 = definitely check immediately). We expected that especially in an extra pleasurable weekend (a trip to Paris) participants would avoid learning the exam result before the weekend, regardless of whether they expected to pass or fail. We found participants in the Paris condition were more likely than those in the Regular condition to postpone information search regardless of their initial expectations of either passing ($M_{Paris} = 1.70$, $SD = 4.00$ vs. $M_{Normal} = 3.00$, $SD = 2.38$) or failing ($M_{\text{Paris}} = -0.30$, $SD = 3.94$ vs. $M_{Normal} = 2.95$ vs. $SD = 3.01$) the exam (as indicated by a main effect for the weekend condition) $F(1, 79) = 8.92$, $p = .004$, $\eta^2 = .105$. This pattern of results means that whether participants expected to have passed or failed the exam did not influence their tendency to postpone information search, $F(1, 79) = 1.81$, $p = .182$, $\eta^2 = .02$, nor was there an interaction effect, $F(1, 79) = 1.63$, $p = .204$, $\eta^2 = .02$. The study shows information avoidance occurs even when people expect positive information (although it could of course still be negative), emphasizing our assumption that individuals avoid information when they do not yet know whether searching for information would mitigate or worsen their current feelings). Regardless of their expectations on whether they passed or failed the exam, individuals preferred postponing having the information more for a pleasurable weekend than a normal one. The results are consistent with our belief that the decision to postpone the information search has more to do with a desire to "protect" an anticipated event (i.e., feelings associated with the activity) than with the expected outcome (i.e., passing or failing the exam).

[2] The Vondelpark is a large park in Amsterdam that drug addicts regularly visit.

Table 2: Means and standard deviations of the dependent variables according to manipulation of Weekend Type condition and Reason for Testing in Study 3.

Dependent variables		Type of weekend	
	Reason for testing	Wedding M SD	Regular M SD
Weekend justifies delaying appointment with clinic	Junkie Needle	5.36 (3.30)	3.16 (3.22)
	Blood Donation	4.80 (2.88)	3.60 (2.81)
It is important to have this weekend as pleasurable as possible	Junkie Needle	8.16 (1.67)	5.88 (3.03)
	Blood Donation	7.92 (1.68)	6.96 (2.92)
Curiosity	Junkie Needle	9.16 (1.28)	9.32 (0.94)
	Blood Donation	8.00 (1.82)	7.24 (2.57)
Information Avoidance	Junkie Needle	−0.28 (4.42)	−3.68 (2.79)
	Blood Donation	0.12 (4.07)	−2.56 (2.97)

Note: Values represent means on 11-point scales, the first three questions (0 = not at all, to 10 very much so), and the final question is about the timing of information search (-5 definitely before the weekend to +5 definitely after the weekend).

dirty injection needle that probably belonged to a junkie. Therefore, you decided to take an HIV test. Now you have to go to the clinic to obtain the test results (they never give these over the phone). The clinic is open from Monday to Friday and your appointment must take place within the next two weeks. Today is Wednesday. You are thinking about whether or not you will pick up the test results before this weekend.

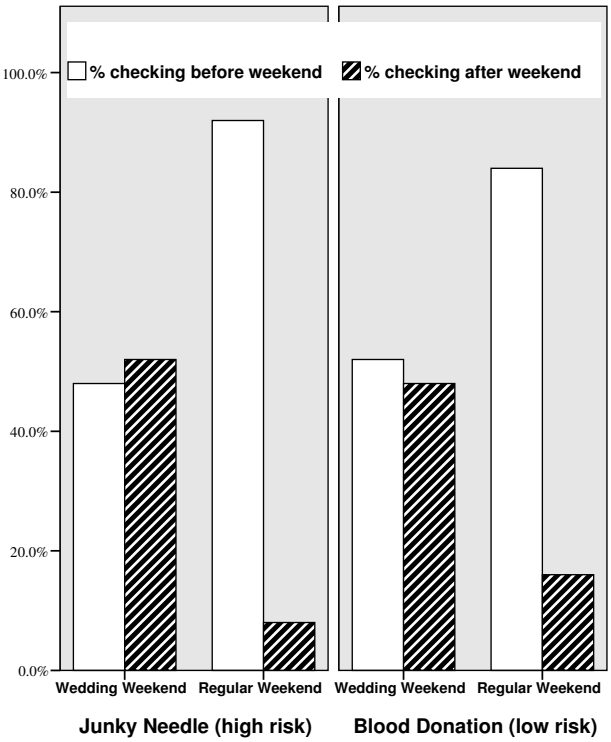
Participants in the blood-donation condition read they had volunteered to test themselves for HIV while donating blood. Participants in the wedding-weekend condition also read their brother was getting married on the upcoming Saturday. The rest of the scenario was identical. Next participants rated the extent to which they thought the upcoming weekend justified delaying the appointment with the clinic until after the weekend ("Do you think that the up-coming weekend justifies delaying the appointment to next week [until after the weekend]?"), and how important this weekend being as pleasurable as possible for them was ("How important is it for you to have this weekend as pleasurable as possible?") (0 = not at all, 10 = very much). With these questions, we intended to assess whether participants indeed evaluated a wedding weekend (compared to a normal weekend) as more important and therefore more worthy of protection from potential negative information. Participants also indicated how curious they were to learn their HIV status ("How curious would you be regarding your test results?") (0 = not at all curious, 10 = very curious) and their likelihood to seek information (i.e., "Would you prefer to know your HIV test results before or after the weekend?" –5 = definitely before to 5 = definitely after). Finally, participants indicated whether they would choose to check the test results before ("I would check my test results *before* the weekend") or after the weekend ("I would check my test results *after* the weekend").

6.1 Results and discussion

The results are shown in Table 2. We analyzed them using 2 (Weekend type) × 2 (Test reason) ANOVAs. Participants thought a wedding weekend was more likely to justify delaying information search compared with a regular weekend, $F(1, 96) = 7.69$, $p = .007$, $\eta^2 = .074$. We observed the same pattern for the importance of having a pleasurable weekend. Participants thought the wedding weekend being as pleasurable as possible was more important, compared with a regular weekend, $F(1, 96) = 11.23$, $p = .001$, $\eta^2 = .10$. For these variables, no other effects were significant.

We found a main effect of curiosity only for test reason. Participants were more curious to learn their HIV test results after touching a junkie's needle than after donating blood, $F(1, 96) = 21.04$, $p < .001$, $\eta^2 = .18$. Interestingly and consistent with the notion that psychological costs associated with future events can lead to information avoidance regardless of curiosity, we found a main effect of delaying information search for weekend type (but not for the reason of testing); participants in

Figure 2: Proportion of participants searching and postponing information search by the Type of the Weekend and Reason for Testing in Study 3.



Note. N = 25 per condition of the Weekend Type and Reason for Testing design.

the wedding-weekend condition showed a stronger preference for avoiding the test results than did participants in the regular-weekend condition, $F(1, 96) = 17.50$, $p < .001$, $\eta^2 = .15$ regardless the reasons that led them to test themselves. This shows that people are more likely to avoid information, when a positive event is upcoming.

The participants also chose between retrieving their test results before or after the weekend. A hierarchical log-linear analysis of these choices yielded a significant Weekend Type × Reason for Testing × Information Avoidance interaction, $G^2(4, N = 100) = 18.68$, $p < .001$. (See Figure 2 to view a graphical design indicating participants choices to search information Before or After the weekend, dependent on the manipulations of Weekend Type and Reason for Testing.) This interaction was unexpected, and communicates that the relative changes for the manipulation of weekend type depend to some extent on the manipulation of the reason for testing. We have no explanation for these minor differences (that are also not significant with subsequent testing). More interesting is the effect of the manipulation of Weekend Type, $G^2(4, N = 100) = 17.82$, $p < .001$: For a regular weekend 88% (44 out of 50) of the participants wanted to get the test results before the weekend and only 12% (6 out of 50) wanted to check it after the weekend. For a special weekend, in which a wedding is planned 50% (25 out of 50) wanted to check the test result before the weekend, the other 50% (25 out of 50) wanted to check it after the weekend. The effect of the risk level manipulation (Junkie Needle versus Blood Donation) was not significant, $\chi^2(1, N = 100) = 0.02$, $p = .888$. Although the reason for taking the HIV test elicited different levels of curiosity, it did not affect information seeking. This finding again demonstrates the power that situational factors can have on individuals' willingness to search for potentially painful information.

To examine which motivations influenced the decision to delay information search, we conducted a regression analysis using the different motivations (curiosity and wanting to have a pleasurable weekend) as predictors. Curiosity did not predict information avoidance significantly ($\beta = -.16$, $t(99) = -1.73$, $p = .08$), and we therefore abandoned further testing of curiosity as a potential mediator (Baron & Kenny, 1986). Note, though, that the effect of curiosity was almost significant, suggesting that being more curious led to less information avoidance. Wanting to have the weekend pleasurable was a significant predictor, $\beta = .40$, $t(99) = 4.34$, $p < .001$.

To test whether the importance of having the weekend pleasurable mediated the effects on information avoidance, a series of regression models were estimated (Baron & Kenny, 1986). The results are presented in Table 3. The predictor variables in the models were the two manipulated factors (Weekend Type and Reason for Testing). These factors were recoded using effect coding[3], with wanting to have the weekend pleasurable as the hypothesized mediator and the tendency to avoid information as the dependent variable. To examine mediation, we first regressed the dependent variable on the predictor variable (column 1). We then regressed the mediator on the predictor variable (column 2). Finally, we regressed the dependent variable on both the predictor and the mediator (column 3). The results show that information avoidance is affected by the importance of having the weekend pleasurable. The R^2 increases to .23. A Sobel test (1982) revealed that the effect of the weekend is mediated by wanting to have the weekend pleasurable, $Z = 2.60$, $p = .004$.

As predicted, ensuring the weekend was as pleasurable as possible mediated information avoidance: the more people wanted the weekend to be pleasurable as possible, the more they avoided the information. Study 3 supports our reasoning that when people expect negative information to interfere with an upcoming pleasurable event (e.g.,

[3]Weekend is coded with a Regular weekend as 0 and a Wedding weekend as 1. Reason for Testing (Risk) was coded with Junky Needle as 0 and Blood Donation as 1.

Table 3: Mediation results of Study 3.

	Dependent variable	*Mediator*	*Mediation test*
Predictor variables:	Information avoidance (without mediator)	It is important to have this weekend as pleasurable as possible	Information avoidance (with mediator)
Type of weekend	.39***	.32**	.29**
Reason for testing	.09	.08	.07
It is important to have this weekend as pleasurable as possible	--		.28**
R^2	.16***	.10**	.23***

Note. Standardized Beta coefficients are reported. * $p < .05$, ** $p < .01$, *** $p < .001$.

Weekend is coded with a Regular weekend as 0 and a Wedding weekend as 1. Reason for Testing (Risk) was coded with Junky Needle as 0 and Blood Donation as 1.

enjoying an upcoming wedding), they may strategically avoid or delay information search. Although curiosity is known for its strong association with information search, it did not predict information seeking in this study and therefore demonstrated participants' real conflict: a preference for avoiding information despite their strong curiosity.

7 General discussion

People are strongly curious and usually prefer to expose themselves even to painful information to alleviate curiosity, uncertainty, and associated negative feelings (Shani & Zeelenberg, 2007, 2012). The current research reveals that when information might negatively interfere with feelings and upcoming enjoyable events, people prefer to temporarily maintain a state of ignorance, regardless of their initial curiosity and desire to alleviate uncertainty. This preference could have serious consequences, given the potential costs of information avoidance (e.g., avoiding the outcome of an HIV test, not opening mail from the tax office).

Study 1, a field study, demonstrated students whose exam results were available on a Tuesday preferred to check their grades immediately. Yet when their exam results were available on a Friday (before a weekend starts), many preferred to check their grades only after the weekend, suspending information search. Study 2 provides an indication for an evaluation process regarding whether one should search for potentially painful information, suggesting individuals expect to ruminate more about uncertainty than about a failure when planning a neutral event, yet they expect to ruminate more about a failure than about uncertainty when considering an enjoyable future event (e.g., a vacation). Study 3 found this evaluation process leads to information avoidance: a desire to ensure the weekend would be pleasurable mediated the decision to postpone information search. This tendency existed even when people were highly curious about the information's value.

The current research contributes to our understanding of information avoidance. As noted, individuals often pursue "irrelevant" and "useless" information in the hope of regulating their negative feelings (Shani & Zeelenberg, 2007, 2012) or when they have difficulty to associate how the missing information might be relevant to a consequential decision (i.e., the disjunction effect, Tversky & Shafir, 1992a, b). Our research shows that when people do not need to make a consequential decision (e.g., the vacation was already booked and paid for), they may temporarily avoid information that might negatively interfere with the unrelated activity. In this case, although immediately searching for information could alleviate uncertainty and possibly lead to positive information—for example, when one finds out one did not fail the exam after all—our research shows that under some circumstances, people would postpone searching for this information because they expect it might interfere with their future plans.

Importantly, one may wonder why participants in our studies, particularly the one adopted from Tversky and Shafir (1992a,b), indicate information avoidance (individuals avoid information about the results of an exam taken before they leave for a vacation), whereas they report information search (before purchasing a ticket for a vacation, individuals await information that would indicate whether they failed the exam). As noted, their research suggests individuals uncertain about missing information relevant to a consequential decision (e.g., go-

ing on a vacation) violate Savage's sure-thing principle (Savage, 1954). Specifically, they proposed that, when people do not know with certainty that an event will occur (i.e., whether they would pass or fail the exam), and *if they have to make a decision based the occurrence of the event*, they may *postpone their decision* until they know with certainty whether the event has occurred. Our research differs in that the "consequential decision" in our studies is already *made* (the vacation was already booked) and the individual focus is on the missing information and how the information might affect the upcoming activity (rather than whether or not to act on the activity). Simply put, in their studies participants wait for information to be able to use it as input in their decision, whereas in our studies the decision is made and the information cannot alter the already chosen course of action. Our modification of the paradigm, in this sense, as well the data reported, compliments the past research.

Our research shows people not only balance the costs of resolving uncertainty versus having potential painful knowledge but also evaluate the timing of information search (before or after the upcoming event takes place) and its potential to negatively influence the event (e.g., reduce *pleasure* when a pleasurable activity is planned). Considering that people are known to overestimate the impact of future events on their emotional reactions (Sieff et al., 1999; Wilson & Gilbert, 2003) but anticipate painful and pleasurable experiences on a regular basis, the idea of having people self-regulate by exposing themselves only to the information that they are able to tolerate at a given point in time is both inspiring and distressing.

Evaluating the timing of the search for possible negative information is inspiring because it shows how sophisticated people are in their attempts to maintain a healthy and stable system that is capable of handling negative information. Thus people constantly try to evaluate their abilities to overcome negative life experiences and to carefully select the moments in which they look for potentially negative information. At the same time, they seem to remember that protecting and enjoying positive events is also important (Loewenstein, 1987).

Such self-regulation is also distressing, however, because people's attempts to maintain a healthy and stable system may be costly when the information they avoid is essential. People generally adjust better to dangers and are better able to learn when they are knowledgeable and not uncertain (Berlyne, 1954; Inglis, 2000; Wilson & Gilbert, 2003). Hence, they often need to respond quickly to handle the massive amount of threats they confront. Because people tend to overestimate the impact of future events on their emotional reactions, they view some circumstances as justifying information avoidance, and a conflict arises when such circumstances last long enough to prevent a quick and effective reaction to a given threat. For example, individuals might decide to test themselves for HIV only *after* they return from a long and wild trip in a distant and exotic country, or only *after* they have met the right partner. This delay may increase the costs that individuals pay for protecting their mood, for example, by increasing the risk of being infected or the possibility of infecting others.

Indeed, individuals generally believe that knowing their personal health status should decrease the likelihood that they will get infected. This notion is both rational and sensible because individuals who know that they are healthy should prefer to be more careful when interacting with random sex partners. Presumably, unlike those who do not know their health status, assured individuals have something to lose (i.e., the certainty of being healthy). It seems that the effect might be driven by those who know they are healthy, rather than those who do not know their health status. Indeed, we can assume virus carriers do not intentionally infect others with transmittable diseases, and can assume conscious individuals are less likely to act recklessly. Nevertheless, considering some diseases, particularly sexually transmitted ones, are more likely to follow holiday routes,[4] it is important to better understand the reasons and the circumstance under which individuals might avoid information (e.g., being carriers of transmittable diseases), even if the avoidance is temporary.

In this respect, people's tendency to search for or avoid information before encountering a positive event could be based in part on prior experiences that would allow them to strategically and effectively regulate their affect. Personality differences could also affect this behavior. For example, individuals high on neuroticism (Matthews & Deary, 1998) or need for cognitive closure (Kruglanski, 2004) might experience greater negative affect from not knowing and consequently be unable to enjoy the positive event, which would consequently encourage further information search. Follow-up research could further explore the relevance of individual differences to the process through which individuals evaluate the costs of definite knowledge versus the costs of continued ignorance, in conjunction with the effects of upcoming events.

Finally, future research could identify other factors that might motivate information avoidance. As the pretest indicated, some individuals avoided information that may have negatively interfered with their future performance, such as when they were about to take an exam or leave on a short business trip. In such situations in which the individual needs to perform, a similar mechanism may lead them to assess the costs of having definite knowledge and the costs of maintaining ignorance and associ-

[4] "Europe's HIV followed holiday routes," May 2009, http://www.newscientist.com/article/dn17170-europes-hiv-followed-holiday-routes.html?DCMP=OTC-rss\&nsref=hiv.

ated ruminations. Investigating other situations in which people avoid information may provide more insight into how people evaluate whether the costs of having definite knowledge will exceed the costs of ignorance in the light of future events.

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