

## **Effect of Future Choices on Current Preferences**

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## **Abstract**

Although consumers in the real world often make a number of similar choices, most consumer research has focused on preferences when each choice is made in isolation. Present research examines the effects of viewing a choice as one of a series of similar choices rather than as an isolated choice. I propose that viewing a choice in the context of similar future choices provides people with a guilt-reducing justification to exert less self-control in the present choice by allowing them to optimistically believe that they will be able to exercise more self-control in future choices. Specifically, the paper shows that (1) in a choice between a relative vice (e.g., a cookie) and a relative virtue (e.g., a plain fat-free yogurt) the choice share of the vice increases when the decision is presented as one of a series of similar future choices than if the same choice is viewed in isolation, and (2) the overall choice share of a vice increases when decisions are seen in connection with similar future choices. Several additional studies are conducted to validate the proposed role of optimistic beliefs and guilt about future choices as well as the mediating role of guilt in the effect of future choices on current preferences.

## 1. Introduction

Imagine a business traveler who is choosing between two breakfast offerings – a very tasty but unhealthy breakfast (a relative vice) and a very healthy but less tasty plain fat-free yogurt (a relative virtue). Is this person more or less likely to choose the tasty, less healthy breakfast on the first day if she views this decision as one of a series of breakfast choices that she will be making over the next few days? Although choices made in isolation are different from those that are made in connection with other choices (Read Loewenstein and Rabin 1999), most consumer research has focused on the decision process that underlies isolated choice among a set of alternatives (e.g., Huber, Payne and Puto 1982; Nowlis and Simonson 1997; Simonson and Tversky 1992). In contrast, consumers in the real world engage in choices that occur more than once (e.g., parties during the Christmas and New Year periods, dinners during an academic conference) such that an awareness of future choices can prompt consideration of factors that are not salient in isolated choices. Thus, an account of consumer behavior needs to address how consumers' beliefs about what they will choose later can affect their immediate decisions.

The current research explores how the present preference between two alternatives (a and b) is systematically different when it is viewed as an isolated choice (e.g., as  $[a\ b]_{t_1}$ ) than when the same choice ( $[a\ b]_{t_1}$ ) is viewed as one of a series of similar future choices (e.g.,  $[a\ b]_{t_1}$ ,  $[a\ b]_{t_2}$ , ...). I illustrate the effect of viewing a present choice as being part of similar future choices in the context of decisions that require exercising self-control and involve guilt (e.g., a choice between a vice and a virtue; Wertenbroch 1998). I propose that viewing a current choice in connection with a series of similar future choices decreases self-control in the immediate decision. Specifically, it is suggested that similar future choices reduce the guilt associated with not exercising self-control in the present choice by allowing people to optimistically believe that

they will exercise greater self-control in the future. As a result, in a decision between a vice and a virtue, relative share of a vice is greater in the current choice when the decision is seen as one of a series of similar future choices (referred to as “repeated-choice”) than if the same choice is viewed in isolation (referred to as “isolated-choice”).

The present research also examines the processes underlying the predicted pattern of preferences. I show that people predict that they will choose a more virtuous option in the future. Interestingly, the actual future choices are not consistent with their predicted virtuous choices. In direct support of my theoretical explanation, the level of guilt associated with the current choice mediates the proposed effect of future choices on the present preferences. The findings have important implications for the study of sequential choice, self-control and behavior involving inter-temporal considerations (e.g., procrastination).

The remainder of this paper is organized as follows. A brief review of prior research leads to the prediction of a systematic preference for a relative vice when the choice is seen in connection with similar future choices as compared to when the same choice is seen in isolation. Next, in several studies, I find the predicted pattern of preference for a vice. In later studies, I test for competing accounts and find support for my explanation based on guilt reducing role of optimistic beliefs about future choices. For example, I find that beliefs about the future influence choice of vice in the present. Also, share of vice in the current period is impacted by manipulating optimism about future choices. The findings suggest that the effect cannot be explained by positive mood or heightened preference for variety (or balance) in repeated choices. Finally, I discuss directions for future research, and theoretical and practical implications of the findings.

## 2. Literature Review

Much research in consumer choice has focused on the processes by which consumers arrive at their preferences for choices in isolation, such as the manner in which the choice task and context influences preferences (e.g., Bettman, Luce, and Payne 1998). In contrast to the previous work, the current paper focuses on how making a current choice in isolation is different from decisions when people are aware of having to make similar choices in the future.

Although past research has not directly addressed the question of how current decisions are influenced by an awareness of similar future choices, there is related research which suggests that choices made in isolation may not lead to the same outcomes as those where people are aware of having similar choices in the future. This research stream (c.f., Read, Loewenstein and Rabin 1999) shows that viewing choices collectively can highlight considerations that might not be apparent when considering each choice individually – such as those of variety (Simonson 1990) or for improving sequences (Loewenstein and Prelec 1993). For example, it has been shown that when choosing a single item just before each immediate consumption occasion, people tend to choose their most preferred option. However, when asked to choose multiple items at once for several consumption occasions, people tend to include less preferred options in their choice set for the sake of variety (Simonson 1990; Ratner, Kahn and Kahneman 1999).

The above line of research suggests that when people are aware of having to make similar choices in the future, they may be more likely to think integratively about their preferences for all consumption episodes. For example, they may want to have the less preferred option before the most preferred option (Loewenstein and Prelec 1993) or choose a more balanced consumption (Dhar and Simonson 1999). Hence, a business traveler ordering a dinner at a conference may order differently depending upon whether she takes into account what she will

order for dinner during the rest of her stay. Thus, it is possible that considering a current choice in the context of similar future choices highlights properties of sequences that are not apparent in isolated choices.

Another stream of literature, in the context of self control, suggests that seeing a single choice as part of a series of similar future choices is likely to shift the present period preferences by emphasizing cumulative costs and benefits (Read, Loewenstein and Rabin 1999; Kirby and Guastello 2001). That is, seemingly trivial costs of a single act viewed in isolation can look significant when several such acts are viewed cumulatively (termed as the *adding-up effect*). For example, if the choice to smoke is made one cigarette at a time, the expected pleasure from each cigarette can easily outweigh its health consequences but if the costs of smoking one pack a day for a year are combined, the health consequences of smoking might outweigh the pleasure derived from it. Thus, this area of research predicts that viewing a current choice involving self-control in the context of similar future choices will increase self-control in any single decision (Benabou and Tirole 2004; Loewenstein and Prelec 1991).

### **3. Optimism bias in prediction of future and immediate preference for a vice**

While past research helps to further the intuition that choices made in isolation might be different from those made in connection with similar future choices, it does not generate clear predictions about how the immediate choice is influenced by viewing it in connection with similar future choices. For example, while variety-seeking might suggest an increase in the preference for variety when choices are seen in conjunction with similar future choices, it does not predict how this preference for variety impacts the choice of the specific option in the immediate decision. Similarly, while the adding-up effect predicts that self-control increases

when a current decision is viewed in conjunction with similar future choices, it requires people to believe that their immediate choice is predictive of their future choices. Although, this may indeed be the case in certain consumption situations, such as in addictive consumption or other habituated behavior, there are other situations where people may believe in their ability to choose different items on different occasions (e.g., have a low fat dinner on one occasion and steak-and-fries on another occasion).

A large body of research suggests that people are often overly optimistic about their future behavior (Taylor and Brown 1988; Buehler, Griffin and Ross 1994; O'Connor et al. 2002; Sherman 1980). Empirical evidence of such unrealistic optimism has been reported in several domains, such as in people's estimates of task completion times (Buehler et al. 1994), realized earnings (Barefield and Comiskey 1975), charity donations (Epley and Dunning 2000), and exam scores (Shepperd, Ouellette and Fernandez 1996). It follows from this research that often people optimistically believe that, unlike the present, in the future they will face less or no self-control difficulties. In the current context, this line of reasoning suggests that when people are aware of future choices they are likely to optimistically believe that in future choices they will exercise greater self-control.

Building on an optimistic bias in the prediction of future choices, it is predicted that viewing the current choice as part of a series of similar future decisions can decrease self-control in the immediate choice by allowing people to optimistically believe that they will exercise greater self-control in the future. Specifically, I propose that an optimistic belief in one's ability to exercise self-control in the future makes people feel less guilty about not exercising self-control now. The notion that beliefs about choosing a virtue later increase the preference for a vice now is related to past research showing that people often maintain a balance between

conflicting but simultaneously held goals by alternating their pursuit towards them (Dhar and Simonson 1999). Recent work by Fishbach and Dhar (2004) has shown that when individuals simultaneously hold multiple goals, the pursuit or the intention to pursue the initial higher order goal (e.g., exercise) can liberate them to pursue lower order tempting goals (e.g., eating high-fat snacks). This implies that the order between initially and subsequently selected actions does not matter for balancing considerations. That is, people are as likely to balance against their future actions as they are to balance against their past actions. In the current context, this reasoning suggests that thinking of choosing a virtue later should allow people to choose a vice now as the future virtue can be perceived as balancing the present indulgence.

The current article illustrates the effect of viewing an immediate choice as being followed by similar future choices in the context of decisions that require self-control and involve guilt. Past research has identified several types of choices that require self-control (e.g., *vice-virtue* by Wertenbroch 1998, *hedonic-utilitarian* by Dhar and Wertenbroch 2000, *luxury-necessity* by Kivetz and Simonson 2002, *heart-mind* by Shiv and Fedorikhin's 1999 and *want-should* by Bazerman, Tenbrunsel and Wade-Benzoni 1998). This article examines how considering similar future choices can influence current decisions in the context of choosing between a relative vice (e.g., a tasty but unhealthy dessert) and a relative virtue (e.g., a less tasty but healthy dessert) as an example of guilt-related choice. Generally, a vice can be conceptualized as motivated by short-term affective impulses, while a virtue can be seen as more beneficial in the long-term (Read, Loewenstein and Kalyanaraman 1999; Wertenbroch 1998). Therefore, choosing a virtue over a vice requires greater self-control as it entails forfeiting immediate pleasure for long-term gains.

An important feature of choices that require self-control is that people often feel guilty if



they fail to exert self-control. A vice is thus at a natural disadvantage in isolated choices as it is often more difficult to rationalize (e.g., Okada 2004; Wertenbroch 1998) and is associated with greater feelings of responsibility and guilt (Lascu 1991). In this regard, guilt can act as a behavior control mechanism by restraining one from giving in to temptation. The notion that guilt relates directly to self-control and to virtuous behavior is evidenced by the findings that self-control failures represent a major category of guilt episodes (Baumeister, Stillwell and Heatherton 1995; Baumeister and Exline 1999; Dahl, Honea and Manchanda 2003).

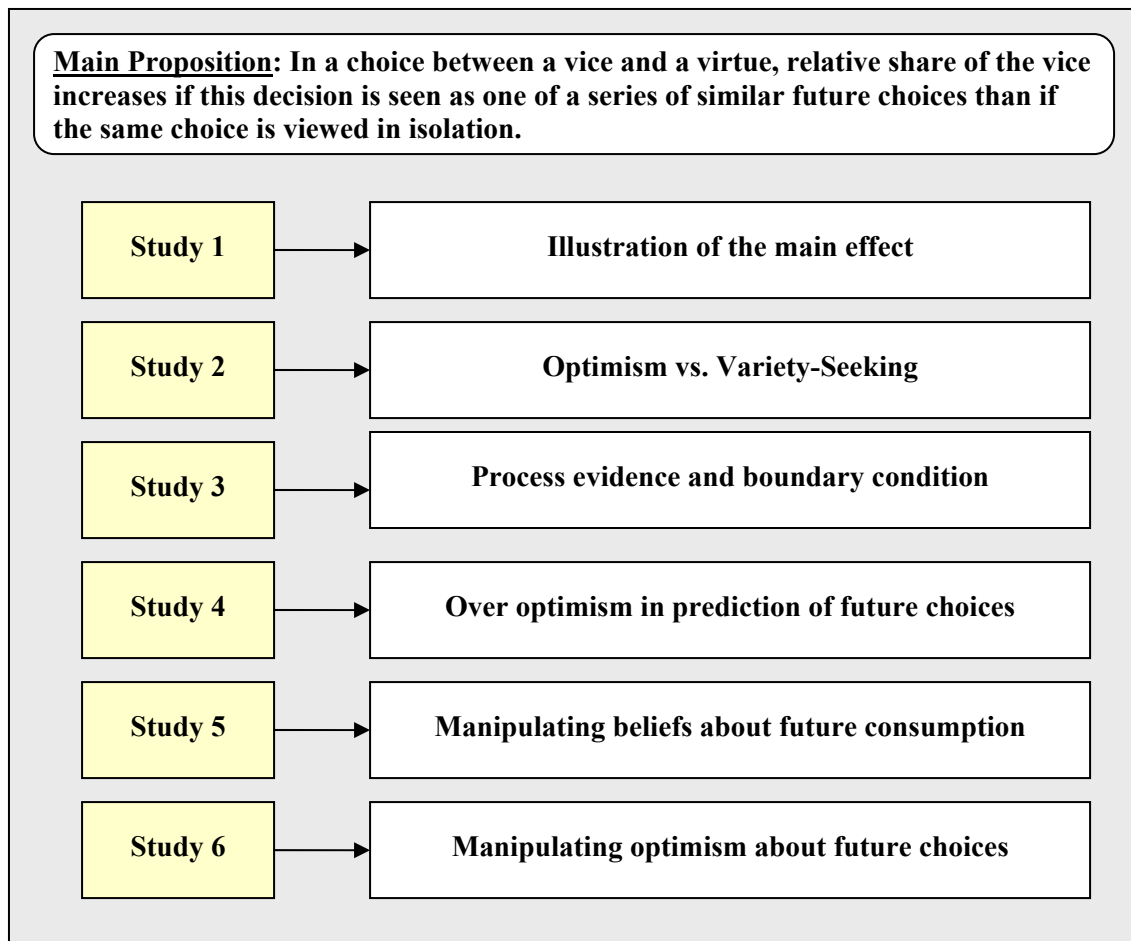
I explain how similar future choices can influence present decisions on the basis of the above notion that choosing a vice over a virtue can induce guilt, which in turn serves as a self-control mechanism and restricts the choice of a vice in isolated decisions. It is predicted that viewing a current choice between a vice and a virtue as being followed by similar future choices will increase the preference for a vice now by providing people with a guilt-reducing justification that they will choose a virtuous option later. In line with a tendency to be over-optimistic in the prediction of future, it is expected that people's forecasts of their future choices are likely to be more virtuous than what they actually choose when the future choice arrives.

#### **4. Present Studies**

The propositions and the process mechanism are tested in six studies (Road-map in Figure 1) involving real choices between two items that are perceived as a relative vice and a relative virtue. Study 1 shows that the relative preference for a vice over a virtue increases when the choice is seen as being followed by similar future choices. Study 2 examines whether the predicted effect can be explained by a preference for variety or balance in the repeated choices. Study 3 shows that guilt mediates the proposed liberating effect of future choices on current

preferences. Also, this study tests for a boundary condition and further rules out a possible alternative explanation based on difference in mood. Study 4 demonstrates that predictions of future choices are optimistic in comparison to actual future choices. Study 5 provides evidence for the explanation that beliefs about options consumed in the future influence the relative preference for a vice in the present. Finally, Study 6 illustrates how manipulating optimism about future changes the current preference for a vice.

**Figure 1: Road-Map**



The framework proposed here suggests that viewing a choice between a vice and a virtue in connection with similar future choices (repeated-choice) increases the choice of a vice by

allowing people to overestimate the likelihood of choosing a virtuous option later, hence providing them with a guilt-reducing justification to opt for a vice now. Based on this framework the main hypothesis is that:

H1: In a choice between relative virtues and relative vices, individuals are more likely to choose a relative vice when the decision is viewed as being followed by similar future choices (repeated-choice condition) than when it is viewed in isolation (isolated-choice condition).

### **Study 1: Increased Preference for Vice in the Presence of Future Choices**

#### **Method**

This study tested the proposed effect of future choices on current preference between a vice and a virtue using a choice among movies. The manipulation was adapted from Read, Loewenstein & Kalyanaraman (1999) who suggest that *“highbrow movies can be viewed as virtues relative to lowbrow movies in that they typically offer less immediate pleasure (or even some pain), but provide long term benefits in the form of educational or cultural enrichment ... Lowbrow movies fall more into the vice category because they are fun but forgettable”*.

Eighty undergraduate students at a major east-coast university took part in the study to receive a free movie rental. The movies were selected on the basis of two pretests from the same population. In the first pretest, fifteen participants rated several movies as highbrow or lowbrow on a nine-point scale (1 = lowbrow, and 9 = highbrow). Following Read, Loewenstein & Kalyanaraman (1999) highbrow movies were described as *“movies that may have sub-titles, depressing plot or may offer less immediate pleasure but are educationally or culturally enriching”*, while lowbrow movies were described as those that *“generally provide little*

*educational or cultural benefit but are good for entertainment and instant pleasure and relaxation*". Based on participants' ratings, four highbrow and four lowbrow movies were selected to be used in the main experiment (see appendix 1 for stimuli). In the second pretest, another group of fifteen participants rated each selected movie as a relative vice or a relative virtue on a nine-point scale (1 = more of a vice, and 9 = more of a virtue). A vice was defined as *"something tempting that may have fewer long-term benefits. It is something that you want but at the same time may feel more guilty choosing"*. A relative virtue was defined as *"Something that is not very tempting now but may be more beneficial in the long-run. It is something that you feel less guilty choosing"*. Pretests confirmed that the highbrow movies were considered more virtuous while the lowbrow movies were considered more of a vice (ratings on the highbrow-lowbrow scale and the vice-virtue scale were significantly correlated;  $r = 0.84, p < 0.01$ ).

Participants in the main experiment were randomly assigned to either an isolated-choice or a repeated-choice condition. Those in the repeated-choice condition were told that they were participating in a survey that would be conducted over two weeks and for participation in each of the two surveys they would receive a free movie rental each week. Participants in the isolated-choice condition were simply asked to complete a survey to receive a free movie rental. After completing an unrelated survey, participants in both conditions chose a movie for the current weekend. Prior to making the movie choice, participants in the repeated-choice condition were reminded that they will be choosing a movie from the same list again next Friday for completing part II of the survey. After participants decided the movie they wanted for the current weekend, they were asked to guess the purpose of the study. No one accurately predicted the hypothesis being tested. In the end, participants were debriefed that there would be no future choice and were thanked for their time.

## Results and Discussion

As predicted by H1, more participants chose a vice (lowbrow movie) for the current weekend when they were told that they will have the same choice again next week (80%) as compared to when they viewed the choice as an isolated decision (57.5%,  $\chi^2 = 4.71$ ,  $p < 0.05$ ). These results are consistent with the explanation that viewing a current choice in connection with similar future choices reduces the guilt associated with choosing a vice now by allowing people to optimistically believe that they will choose the virtuous option in the next period.

The choice results observed in Study 1 can also be explained by an increased preference for variety or balance in the repeated-choice condition (Simonson 1990; Dhar and Simonson 1999). As discussed earlier, while this suggests that participants would like to receive a vice on one occasion and a virtue on the next, it makes no systematic prediction about the order in which the vice and the virtue options would be preferred. However, if a preference for variety or balance is coupled with temptation it can predict the results obtained in Study 1. That is, due to its greater immediate appeal (Wertenbroch 1998; Loewenstein 1996), a vice would be preferred first and a virtue would be chosen second. While variety-seeking combined with temptation and the mechanism proposed in this article can both explain the pattern of choice results in the first period, they generate different predictions for the subsequent choice.

If the results are due to a metacognitive preference for variety or balance, people assigned to the repeated choice condition should choose the alternative that they did not select in the first period. That is, given that in the first choice the proportion of vice is significantly higher in the repeated-choice condition, in the second choice the proportion of virtue should be significantly higher (or in other words, the proportion of vice should be significantly lower). However, if

over-optimism is driving the increased preference for a vice in the first period of the repeated-choice condition then people will not choose more virtue in the second period and hence:

H2: The overall choice share of a vice would be higher in the repeated choice condition than in the isolated choice condition.

Because in Study 1 participants in the repeated-choice condition were not given a second choice, it cannot be determined whether they balance their choice of vice in the first period by choosing more virtue in the second. Study 2 examines second period choices to disentangle the accounts based on variety-seeking (balancing) and optimism. Moreover, Study 2 uses items from a different product category in order to generalize the effect to other vices.

## **Study 2: Variety-seeking (or Balancing) vs. Optimism**

### **Method**

Sixty female students at a major South Asian university took part in the study to receive a free magazine. The magazines were selected on the basis of two pretests from the same subject population. In the first pretest, a separate group of fifteen female participants rated a few magazines (that were indicated by another group of participants as most frequently read) as highbrow or lowbrow on a nine-point scale (1 = more lowbrow, and 9 = more highbrow). Based on this pretest, *The Economist* (M = 8.4) and *Fortune* (M = 7.9) were selected as highbrow magazines and *Xtra* (M = 1.13) and *Social Pages* (M = 1.46) were chosen as lowbrow magazines. In the second pretest, another set of fifteen female participants rated the selected magazines as a relative vice or a relative virtue on a nine-point scale (1 = more of a vice, and 9 = more of a virtue). The definitions of a vice and a virtue were the same as in study 1. According to

this pretest, the highbrow magazines were rated as more virtuous ( $M = 6.5$ ) than the lowbrow magazines ( $M = 4.4$ ,  $t(28) = 4.4$ ,  $p < 0.01$ ).

Participants were randomly assigned to either an isolated or a repeated-choice condition. In the repeated-choice condition, participants were told that the survey would be conducted over two weeks. They were informed that for completing part I of the survey they can select one of the four magazines this week and will have the same choice again next week for completing part II. Participants in the isolated-choice condition were unaware of the second choice and were simply told that they can choose a free magazine for completing a survey. After completing an unrelated survey, participants in both conditions chose the magazine they wanted for the current week. A week later, all participants were approached again and were given the same choice of magazines for completing part II of the survey. Since all these magazines are published weekly, there was no overlap between the week 1 and week 2 choice sets. While participants in the repeated-choice condition were informed about the second choice at the time of the first choice, those in the isolated-choice condition were unaware of the second choice opportunity prior to week 2. All participants who made a choice at the first week also participated in the survey the following week. At the end of the study participants were questioned about the real purpose of the study. None of the participants guessed the main purpose of the study correctly. They were debriefed and thanked for their time.

## **Results and Discussion**

First, the main proposition was replicated. That is, in the first choice more participants chose a vice option (lowbrow magazine) when they were aware of the choice next week (83%) than when they did not know about the second choice opportunity at the time of the first choice (53%,  $\chi^2 = 6.24$ ,  $p < 0.05$ ). However, in the second period the choice share of the vice was not

significantly lower in the repeated-choice condition (53%) than in the isolated-choice condition (40%,  $\chi^2 = 1.07$ , *ns*). This result shows that the main effect cannot be explained by the notion of variety-seeking (or balancing), which predicts that greater share of vice in one period would be off-set by greater share of virtue in the other. The findings also support H2, that is, more participants chose a vice over the two periods in the repeated-choice condition (68%) as compared to when they made two isolated choices (47%,  $\chi^2 = 5.76$ ,  $p < 0.05$ ). These results are consistent with the notion that overly optimistic beliefs about one's ability to choose a virtue later increase the preference for a vice now.

Participants' switching behavior (between vice and virtue options) provides further support against an account based on variety-seeking/balancing. A preference for variety or balance makes two possible predictions about how people switch from choosing one type of alternative in the first choice to choosing the other type in the second choice. 1) Variety-seeking suggests that people seek less variety in isolated choices than when multiple choices are made together. Therefore, the proportion of participants who switch between a vice and a virtue should be lower in the isolated-choice condition than in the repeated-choice condition. 2) When participants arrive at period 2, they can all look back at what they chose in the first period and switch to the alternative that was not chosen previously. Therefore, participants in both conditions should be equally likely to switch. Together 1 and 2 predict that the proportion of switchers should be either higher in the repeated-choice condition or the same in the two conditions. In contrast, results show that the proportion of participants who switched between vice and virtue in the two choices is higher in the isolated-choice condition (67%) than in the repeated-choice condition (37%,  $\chi^2 = 5.4$ ,  $p < 0.05$ ). These findings suggest that the proposed effect of viewing a current choice in connection with similar future choices cannot be explained



by a heightened preference for variety or balance in repeated choices.

So far the studies have shown evidence for the proposition that the preference for a vice increases in the current period when this decision is seen as being followed by similar choices in the future. However, these studies did not examine the process underlying the proposed effect. The proposed framework proposed suggests that future choices influence the current choices by reducing the guilt in choosing a vice now. If guilt is the underlying process, then the level of guilt in choosing a vice should mediate the effect of future choices on current preferences.

Hence, it is predicted that:

H3a: Participants will feel less guilty in choosing a vice in repeated-choice condition than in the isolated-choice condition. Furthermore, guilt associated with choosing a vice in the current choice will mediate the effect of future choice on current preferences.

If future choices increase the preference for a vice now by reducing the guilt involved in the current choice, than future choices that do not reduce the guilt in the current choice should not increase the immediate preference for a vice. An obvious implication is that future choices that undo the negative effects of a current decision will be more effective in attenuating the guilt in present consumption as compared to choices that do not undo the effects of the current choice. For example, while thinking that one would consume a low-fat yogurt in the future can undo the effects of having a cookie now, thinking that one would watch a highbrow movie in the future may not compensate for having a cookie now. Therefore, while repeated similar choices are likely to reduce the guilt in choosing a vice now, choices that are unrelated (such as those that do not serve the same goal) may not reduce the guilt of choosing a vice in the immediate decision. Therefore, the next hypothesis suggests that:

H3b: A similar future choice will reduce the guilt in choosing a vice now and will increase its share in the current choice. However, a dissimilar (unrelated) future choice will not be as effective in reducing the guilt in choosing a vice now and will not increase the current preference for a vice significantly.

The purpose of the next study is threefold: First, in order to test the proposed mediating role of guilt, it directly measures the degree of guilt people anticipate in choosing a vice in the repeated and isolated choices. Second, it tests for the boundary condition proposed in H3b. Third, the study examines whether the two choice conditions differ in their effect on mood and if these differences in mood can account for the effect on preferences.

### **Study 3: Test of Process and Boundary Condition**

This study included a third condition in addition to the isolated and repeated choice conditions. In this condition, the future choice was between a vice and a virtue that were different from the current period choice. The key idea here is that while both different and similar future choices can allow people to optimistically believe that they will choose the virtuous option later, these choices will not be equally effective in reducing the guilt in choosing a vice now. For example, one may feel less guilty eating the large cookie if she believes that she will have the healthy yogurt next time than if she believes that she will watch a highbrow movie next week.

#### **Method**

Ninety female undergraduate students at a major east-coast campus took part in the study to receive a free snack. The snacks were selected on the basis of a pretest in which a separate group of twenty female respondents rated several snacks as a relative vice or a relative virtue on

a nine-point scale (1 = more of a vice, and 9 = more of a virtue). A vice and a virtue were defined as in the earlier studies. Based on this pretest a large Mrs. Field's cookie was identified as a relative vice ( $M = 1.95$ ) while a plain fat-free yogurt was identified as a relative virtue ( $M = 8.0$ ,  $t(38) = 18$ ,  $p < 0.01$ ).

Participants in the main experiment were randomly assigned to three conditions. The first two conditions were the same as the isolated and repeated choice conditions in Study 1. Specifically, in the isolated-choice condition participants choose between a plain fat-free yogurt and a large Mrs. Field's cookie without being told about any further choice. In the repeated-choice condition, before participants chose between the two snacks they were aware that they will be given the same choice again next week. The third condition was the same as the second condition except that the period 2 choice for completing the survey was between highbrow and lowbrow movies. That is, participants were told that today they can choose between a yogurt and a cookie and for next week they would get a free video rental of their choice (they were shown the same list of highbrow and lowbrow videos as in Study 1).

In all the three conditions, before choosing a snack, participants responded to an unrelated survey. Part of the unrelated survey included a mood measure where they stated how they felt *at the moment* on a four-item, seven-point mood scale (Lee and Sternthal 1999) that was anchored by: sad-happy, bad mood-good mood, irritable-pleased, and depressed-cheerful (1 = most negative and 7 = most positive). After completing the questionnaire, participants further responded to a three-item, seven-point guilt scale (Dahl et al. 2003) that was anchored by: no guilt-lot of guilt, no remorse-lot of remorse, and very bad-not at all bad (1 = most negative and 7 = most positive). Specifically, participants indicated how they would feel on the guilt scale separately for each of the two snacks. After completing the survey, participants chose a snack. At

the end of the study participants were questioned about the real purpose of the study. None of the participants guessed the main purpose of the study correctly. They were debriefed that there would be no further choice and thanked for their time.

## **Results and Discussion**

First, the results replicated the main proposition. That is, the choice share of a vice was significantly higher when participants expected to have the same choice next week (83%) as compared to when they viewed this decision as an isolated choice (57%,  $\chi^2 = 5.08$ ,  $p < 0.05$ ).

To test H3a, ratings on the three guilt items were averaged to form the guilt scale, which was highly reliable (Cronbach's alpha = 0.93). The measures on the guilt scale (Table 1) show that participants felt more guilty choosing a vice when they saw this choice in isolation ( $M = 4.6$ ) than when the same choice was seen as being followed by a similar choice in the future ( $M = 3$ ,  $t(58) = 3.33$ ,  $p < 0.01$ ). However, the guilt reported in choosing a vice was not significantly different from the isolated-choice condition when future choice was among vices and virtues that were different from the current choice ( $M = 3.9$ ,  $t(58) = 1.49$ , *ns*).

Consistent with H3a, the data also fulfilled the criteria for a mediation model (Baron and Kenny 1986): First, choice-condition (repeated or isolated) had a significant effect on guilt in choosing a vice ( $\beta_1 = 0.4$ ,  $p < 0.01$ )<sup>1</sup>. That is, participants indicated less guilt in choosing a vice in repeated-choice condition than in the isolated-choice condition. Second, there was a significant effect of choice condition on the choice of vice ( $\beta_2 = 0.3$ ,  $p < 0.05$ ). More participants chose a vice in repeated than in isolated choice condition. Also, guilt in choosing a vice significantly impacted the choice of vice ( $\beta_3 = -0.75$ ,  $p < 0.001$ ). Finally, when choice of vice

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<sup>1</sup> The level of guilt in choosing a virtue was not significantly different in the isolated ( $M = 2.63$ ) and repeated-choice conditions ( $M = 2.44$ ,  $t = 0.55$ , *ns*).

was regressed on both choice-condition and guilt in choosing a vice, the coefficient for choice-condition was no longer significant ( $\beta_1 = 0.01$ , ns), while the coefficient for guilt in choosing a vice was significant ( $\beta_2 = -0.76$ ,  $p < 0.001$ ). The results of the mediation test are consistent with the explanation that viewing a current choice in connection with similar future choices reduces the guilt in taking a vice now by allowing people to optimistically believe that they will make virtuous choices in the future.

The results also support H3b. While a similar future choice significantly increased the current share of the vice from 57% in the isolated-choice condition to 83.3% ( $\chi^2 = 5.08$ ,  $p < 0.05$ ) in the repeated-choice condition, there was no significant increase in the share of vice when the next week's choice was between vices and virtues that were not the same as the current choice (63%,  $\chi^2 = 0.28$ , ns). Also, compared to the isolated-choice condition, the guilt in choosing a vice was significantly lower when participants had the same choice next week. However, there was no significant difference in the level of guilt in isolated-choice condition ( $M = 4.6$ ) and when people had a different choice next week ( $M = 3.9$ ,  $t(58) = 1.49$ , ns).

**Table 1: Study 3 Results**

	<b><u>Isolated</u></b> Week1	<b><u>Repeated</u></b> Week1= Snack Week 2= Snack	<b><u>Dissimilar Future Choice</u></b> Week 1=Snack Week 2=Movie
<i>(n = 30 in all cells)</i>			
Choice of vice (cookie) at Week 1	57%	83.3%	63%
Guilt	4.6	3	3.9
Mood	5.15	5.45	6.2

Finally, to examine whether the choice share results can be explained by mood differences in the isolated and repeated choice conditions, the four mood ratings were averaged

to form a highly reliable mood measure (Cronbach's alpha = 0.97). The data (Table 1) show that participants reported significantly better mood when they had a dissimilar choice next week ( $M = 6.2$ ) than in the isolated-choice condition ( $M = 5.15$ ,  $t(58) = 3.5$ ,  $p < 0.01$ ). It can be argued that a positive mood induced by a future choice opportunity impacts the preference for a vice now. However, results do not support this account. That is, while mood was better when participants anticipated a dissimilar future choice than in the isolated-choice condition, the proportion of vice was not significantly different in the two conditions. Furthermore, while the proportion of vice was significantly higher in the repeated-choice condition than in the isolated-choice condition, mood was not significantly different in these conditions ( $t(58) = 1.01$ , *ns*). These results indicate that the increased preference for a vice in the repeated-choice condition cannot be due to differences in mood.

Study 3 makes the following contributions. It replicates the main proposition in a different choice domain and provides evidence for the proposed underlying role of guilt. The study further rules out the possibility that the effect can be due to differences in mood. This study also provides some insight into the role of guilt reduction in choosing a vice now when the decision is seen in connection with similar future choices. The results are consistent with the idea that optimistic belief in choosing a virtuous option in the future reduces the guilt in choosing a vice now. As the study shows, future choices reduce the guilt in choosing a vice now when the future choice is from the same consumption domain and can therefore undo the first choice. However, when the future choice is from a seemingly unrelated domain it does not reduce the guilt in choosing a vice in the current period as it may not undo the effects of the current choice.

The proposed theoretical framework suggests that seeing a current choice as being followed by similar future choices liberates people to choose a vice now by allowing them to

optimistically believe that they will choose the more virtuous option later. Study 4 tests directly whether participants are overly optimistic about their future choices or not. If participants are indeed optimistically biased about future choices then:

H4: Predictions of future choices will have a higher proportion of virtues than the actual choices in the future.

### **Study 4: Over Optimism in Prediction of Future Choices**

#### **Method**

Sixty-six female participants were randomly assigned to an isolated or a repeated choice condition and were given a choice among same highbrow and lowbrow magazines that were pretested to be relative virtue and relative vice respectively in study 2. Participants in both conditions were told that for completing part I of the survey they can choose from the four magazines this week and will have the same choice again next week for completing part II. In one condition (predicted-choice), participants were asked to predict the magazine that they would like to receive next week before indicating their choice of magazine for the current week. They were told that their next week's choice was not binding. After participants predicted the magazine they would like to receive next week and indicated their choice of magazine for the current week, they were debriefed that there would be no further choice. In the second (actual-choice) condition, participants were not asked to predict their next week's choice at the time of the first choice but were given an actual choice among the four magazines the following week. If people are overly optimistic about their future choices then the percentage of participants choosing the virtue (highbrow magazines) should be higher in the choice prediction condition than in actual choice conditions.

## Results and Discussion

Given that participants in both conditions expected to receive a second choice on the following week, the proportion of vice in the first period was not significantly different in the predicted (87%) and actual-choice conditions (78%,  $\chi^2 = 0.87$ , *ns*). Consistent with H4, 67% of the participants in week 1 predicted that they will choose a virtue next week but only 36% actually chose a virtuous option when given a choice the following week. The difference in the predicted and actual choice of virtues was significant ( $\chi^2 = 6.1$ ,  $p < 0.05$ ). This supports the notion that people are overly optimistic about their ability to choose a virtuous option in the future.

The results so far implicate optimistic beliefs about future consumption as a driver of current preference for vices. More generally, if beliefs about future choices are responsible for the proposed effect, then manipulating these beliefs directly should have a similar influence on the choice of a vice in the current period. That is, if people are led to believe that they will consume a virtue later, then the choice of a vice should increase in the current period. Conversely, making people believe that they will consume a vice later should eliminate the effect of future choices on current preferences. To test whether the future choices affect current preferences by allowing people to believe that their future choices will be virtuous, the next study manipulates participants' beliefs about future by fixing the future option to either a vice or a virtue. I predict that:

H5: Fixing the second period choice to a virtue will increase the share of a vice in the present choice, while fixing it to a vice will eliminate the proposed effect of future choices on current preferences.



## **Study 5: Manipulating Beliefs about Future Choices**

### **Method**

One hundred and sixty female undergraduate students at a major east-coast campus were randomly assigned to four conditions (40 in each condition). Participants in all conditions were offered a choice between a plain fat-free yogurt and a large Mrs. Field's cookie for completing an unrelated survey. The first two conditions were the same as the isolated and the repeated choice conditions in the earlier studies. That is, in the isolated-choice condition participants were not aware of a future choice opportunity. Whereas, in the repeated-choice condition participants were told that they will be given the same choice again next week for completing another survey.

In the two new conditions, participants were specifically told of the snack they would receive next week for their participation. In one condition (Virtue-Next-Week), participants were told that they will be offered a plain fat-free yogurt for completing the survey next week. In the other condition (Vice-Next-Week) participants were told that they would be offered a cookie next week. In all conditions participants filled out an unrelated questionnaire and picked a snack for the current period. Once participants chose the snack for the present week, they were asked for any suspicion about the true purpose of the study and were debriefed that there would be no further choice. None of the participants guessed correctly the real purpose of the experiment.

### **Results and Discussion**

Consistent with the main proposition, only 47.5% chose a vice when they saw the current choice in isolation but 70% chose a vice when they were told that they will have the same choice again next week ( $\chi^2 = 4.18, p < 0.05$ ). H5 predicted that the current preference for a vice should increase even further when everyone is led to believe that they will have a virtue next week.

Consistent with this, when the next period choice was fixed to virtue, the choice share of the vice

in the current period further increased to 90% from 70% in repeated choices ( $\chi^2 = 5$ ,  $p < 0.05$ ). On the other hand, the effect of beliefs about future consumption on current choice should be attenuated when the future consumption is expected to be not virtuous. In support of this when the second period choice was fixed to a vice, only 42.5% chose a vice in the current choice, which is not significantly different from the isolated-choice condition ( $\chi^2 = 0.202$ , *ns*).

The current study makes two contributions: First, it provides evidence for the proposed mechanism that the beliefs about choosing a virtuous option later increase the relative share of a vice in the immediate choice. Second, the results provide further evidence that the effect cannot be readily explained by a desire for balance or variety in repeated choices. Notice that both balancing and variety-seeking predict that the current share of a vice should increase when next week's choice is limited to a virtue and decrease when next week's choice is limited to a vice. Contrary to the predictions of balancing/variety seeking, results show that while fixing the second choice to a virtue significantly increased the current share of a vice to 90% from 47.5% in the isolated-choice ( $\chi^2 = 20.2$ ,  $p < 0.001$ ), fixing the second choice to a vice does not significantly reduce the share of vice in the present choice (42.5%,  $\chi^2 = 0.2$ , *ns*).

In support of the proposed framework that future choices increase the preference for a vice now by allowing participants to optimistically believe that they will choose a virtuous option later, Study 5 manipulated people's beliefs about the future by constraining the future outcome. In real life, however, future outcomes are often not pre-determined. Therefore, a more realistic way to change beliefs about the future is to manipulate the level of optimism people have about their future choices. If optimism about future choices drives the preference for a vice in the present, then undoing such optimism should undo the effect of future choices on current preferences.

Based on a method used by Kirby and Guastello (2001), the next study manipulates optimism about future choices by influencing whether people consider the current choice to be predictive of their future behavior or not. The idea here is that if people are led to believe that their future choices are likely to be the same as their current choices then the effect of future choices can be eliminated. In other words, if present and future choices are likely to be the same then one cannot optimistically believe that they will choose a virtue later and still choose a vice now. Therefore, it is hypothesized that:

H6: The effect of similar future choice on current preference for a vice will be eliminated when the current choice is seen as indicative of future choice.

### **Study 6: Manipulating Optimism about Future Choice**

#### **Method**

Ninety female undergraduate students at a major east-coast university participated in the study. Participants chose between a yogurt and a cookie for survey participation in three conditions. The first two conditions were the same as isolated and repeated choice conditions used in the previous studies. In the isolated-choice condition, participants choose between the two snacks without being aware of any future choice. In the repeated-choice condition, participants made this choice after being told that they will be making the same choice again next week. Moreover, these participants were specifically told: *“Please remember that you have complete freedom to make either the same or different selection next week”*. The third condition (repeated-choice with link) was the same as the repeated-choice condition except that here participants were told: *“Please remember that each time you are offered this choice you will be in the same situation that you are in now. Therefore, the choice you make now is the best*

*indication of how you will choose next week. If you choose the cookie today, you will probably choose the cookie next week. If you choose the yogurt today, you are likely to choose a yogurt again next time*". In all conditions, participants filled out an unrelated questionnaire and chose a snack for the current week. At the end, participants were asked for any suspicion but no one guessed the true purpose of the study. Finally, participants were debriefed and thanked for their time.

## **Results and Discussion**

The main proposition was again replicated. While only 46.6% chose a vice in the isolated-choice condition, significantly more (90%) opted for a vice when they knew that they will have the same choice the following week and were told that they are free to make the same or different choice next week ( $\chi^2 = 13, p < 0.01$ ). However, suggesting a link between current and future choices significantly reduced the share of the vice in the current period from 90% to 53% ( $\chi^2 = 10, p < 0.001$ ). This result is consistent with the notion that when people optimistically believe that they will exercise greater self-control in future choices, they are less likely to exercise self-control in the present decisions. The study illustrated that if the optimism about the future behavior is corrected, the future choices will not increase preference for the vice in the immediate choices. The results suggest that simply making people aware that the optimism about future choices is not realistic can be effective in checking the influence of seeing the present decision in the context of similar future choices.

## **5. General Discussion**

When choosing between different alternatives people are often aware of having similar choice options in the future. For example, during holiday season while deciding whether to

attend a party or to prepare for an exam, people are often aware of another upcoming party next week. Similarly, while deciding what to have for lunch during a trip, people are aware of having to make the same decision later at dinner. This paper suggests how a current choice between alternatives may be different when this choice is evaluated in conjunction with similar future choices than when it is viewed in isolation. I propose that compared to the choice in isolation, viewing a current choice in conjunction with similar future choices decreases self-control in the current choice.

Consistent with the above process, the results repeatedly show that the relative preference for vice options (e.g., a lowbrow magazines, a lowbrow movies, and unhealthy but tasty snacks) increases over more virtuous options (e.g., highbrow magazines, highbrow movies, and healthy but less tasty snacks) when the decision is seen as being followed by the same choice next week as compared to when the decision is seen as an isolated choice (e.g., Study 1). I proposed that viewing a current choice as being followed by a similar choice reduces the guilt in choosing a vice now by allowing people to optimistically believe that they will choose a virtue later. In direct support for the guilt-reducing role of future choices, results show that guilt in choosing a vice mediates the effect of future choices on current preferences (Study 3). Also, the evidence does not support a variety-seeking or balancing account for the proposed effect. That is, while the share of the vice was higher in first choice, the share of virtue was not significantly higher in the second choice (Study 2).

Supporting the proposition that future choices allow participants to optimistically expect that they will choose the more virtuous option later, participants' predictions of future choices were more virtuous than actual choices made a week later (Study 4). I proposed that the optimistic belief in one's ability to choose a virtuous option in the future provides people with a

guilt-reducing justification to indulge in a vice now. Supporting this explanation, findings show that manipulating participant's beliefs about future consumption influenced their choices in the current period. Specifically, while fixing the future choice to a virtue increased the preference for a vice in the current choice, fixing it to a vice eliminated the proposed effect (Study 5). Similar effects were observed when beliefs about future were manipulated through changes in the level of optimism. That is, while share of a vice increased when the current choice was seen as being followed by a similar choice in the future, informing participants that their future choices are likely to be the same as their current choice eliminated the effect of future choices on current preferences (Study 6).

### **Theoretical Contribution**

The notion that future choice options can reduce the guilt in choosing a vice now is related to other guilt reducing mechanisms, which propose that guilt associated with relative vices can be reduced by marketer-induced tactics or by consumer's own past choices. For instance, Kivetz and Simonson (2002) showed that higher requirements of effort in frequency programs shifted people's preferences towards luxury as compared to necessity rewards. Exerting increased effort presumably makes people feel more deserving of the luxury reward. In a similar vein, Strahilevitz and Myers (1998) demonstrated that purchase of frivolous luxuries can be increased by tying them to charity donations. Current research suggests that optimistic beliefs about the future choices can also provide a guilt-reducing justification for choosing a vice in the present choice. The proposition is different from past research as it suggests that mere intentions about future choices can reduce the guilt in current consumption without actually requiring effort or commitment. The results are also related to Khan and Dhar (2004) who show that relative choice of a luxury over a necessity increases due to charitable decisions made prior

to the current choice. They explain that a prior virtuous act can boost self-concept and thus increase preference for frivolous luxuries by reducing the negative self-attributions (such as, I am self-indulgent) associated with them. The present proposition is different in that it concerns thinking about future choices rather than past decisions.

The present research also adds to the growing literature on how choices made in isolation are different from those made collectively with other decisions by showing that choice is not just influenced by how people arrive at a decision situation but also by what people think they might be consuming in the future. Also, the pattern of results observed in the studies reported in this paper cannot be readily understood in terms of diminishing utility, balancing, or variety seeking, all of which predict switching between the two options but do not systematically predict greater choice of vice over virtue in the first period. Moreover, none of these explanations include the pattern of misprediction proposed in the current paper. Nor can the current findings be easily understood in terms of value maximization, which would suggest a pattern of choices similar to the isolated-choice condition. That is, people should always choose the option that gives them higher utility regardless of whether the decision is made in isolation or as a repeated choice. Also, the findings show that the results cannot be explained by a mood-based account (Study 5).

### **Directions for Future Research**

The current research examined the effect of future choices on current preferences in the context of vices and virtues. The proposed framework can be readily extended to other decisions and choices that require exercising self-control and where guilt is an important ingredient (e.g. paying too much, choosing high quality/high price over low quality/low price, excessive spending, and moral decisions). For instance, viewing a moral decision, such as filing tax returns,

as a repeated choice may lead to less moral behavior in the present decision (e.g., misrepresentations in tax returns). This suggests that optimistic predictions can affect countless decisions when future behaviors are made salient.

Future choices may not always decrease the self-control exercised in immediate decisions. The present research showed that future choices did not impact the current preferences when the choices were not from the same consumption domain. It was proposed that choices from the same consumption domain may be more effective than choices from unrelated domains in reducing the guilt in not exercising self-control now by allowing individuals to believe that they can undo the effects of not exerting self-control today by exercising greater self-control later. Future research can investigate other occasions where future choices may not resolve the guilt involved in current choices. For example, thinking that one would be faithful in the future may not increase the likelihood of infidelity now. In this case, rather than reducing the guilt in the current action, future choices may highlight a need for consistency.

Another interesting extension would be to look at when choices may be spontaneously seen as connected or disconnected. For example, snacks and movies that may not be naturally seen as related can be framed as connected decisions by super-imposing a context. For example, telling people that movies and snack are two decisions they are to make on a holiday may connect the two choices and hence the proposed effect may apply. One fruitful area would thus be to look at goal-related choices. For example, it is likely that when people hold a certain goal (e.g., dieting) they spontaneously see different choices (e.g., eating and physical activities) as connected than when they do not hold that goal. It is therefore possible that when people hold a particular goal they may be more likely to make goal-inconsistent choices (e.g., have an unhealthy lunch) by optimistically predicting that they would make goal-consistent choices (e.g.,



go for a hike) later.

A related question here is when do people connect their current choice with the future choices and when do they not? For example, a person may think of future breakfast choices when she is on a three-day trip but not in her everyday life where she might focus more on the attributes of the available alternatives. It would be interesting to investigate what situations make the grouping of current decisions with future choices salient. Moreover, future research can further explore mechanism that can reduce the proposed effect of future choices on current preferences.

### **Managerial Implications**

The current findings also have useful practical implications. Marketers should take into account that consumers process isolated choices differently from those seen in connection with similar future choices. Hence, marketers of guilt-inducing choices may benefit from advertisements and personal communication strategies that frame a current choice between a guilt-laden product and a more virtuous product as a repeated choice rather than as an isolated choice. For example, people may be more or less likely to order an unhealthy indulgent breakfast depending on whether the menu also lists healthy dinner options or not. Similarly, travel companies may induce customers to take more expensive vacations in summer by informing them of economic holiday destinations for the winter break.

Important implications can also be drawn for online retailing. For example, several online retailers allow their shoppers to maintain a wish-list (a buy-later list) of items for future consideration. By encouraging people (through navigational tools, future discounts etc.) to put more virtuous items (e.g., books) in their wish-list, retailers may be able to increase current sale of vice products (e.g., CDs and fashion accessories).

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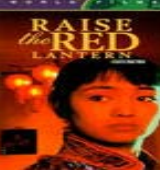


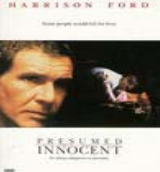
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## Appendix 1: Study 1 Stimuli

	<p><b>4 Little Girls (1997) <i>True Story/Documentary</i></b>            Director: Spike Lee  <i>Birmingham, 1963. A single explosion rocked a community and awakened a sleeping nation. A documentary of the notorious racial terrorist bombing of an African American church during the Civil Rights Movement</i></p>
	<p><b>Bruce Almighty (2003) <i>Comedy</i></b>            Director: Tom Shadyac ---*Starring: Jim Carrey and Jennifer Aniston  <i>A guy who complains about God too often is given almighty powers to teach him how difficult it is to run the world.</i></p>
	<p><b>Ocean's Eleven (2003) <i>Action/ Thriller</i></b>            Director: Steven Soderberg ---*Starring: Julia Roberts, George Clooney &amp; Brad Pitt  <i>Ocean is paroled from prison and is about to rob a vault housing cash of three casinos in Las Vegas when he discovers that his ex-wife is the main squeeze of the casino's owner.</i></p>
	<p><b>Winged Migration (2002) <i>Documentary</i></b>            Director: Jacques Cluzaud and Michel Debats  <i>Documentary on the migratory patterns of birds, shot over the course of three years on all seven continents.</i></p>
	<p><b>Raise the Red Lantern (1991) subtitled <i>Drama</i></b>            Director: Yimou Zhang ---* Starring: Li Gong, Jingwu Ma, and Cuifen Cao  <i>China, 1920. One master, four wives --- China in the 1920's. After her fathers death, nineteen year old Songlian is forced to marry Chen Zuoqian</i></p>
	<p><b>I love trouble (1994) <i>Action / Comedy / Romance</i></b>            Directed by Charles Shyer ---* Starring: Julia Roberts and Nick Nolte  <i>Romance Was Never More Dangerous! Peter and Sabrina are two competing Chicago newspaper reporters who join forces to unravel the mystery behind a train derailment.</i></p>
	<p><b>Schindler's List (1993) <i>Drama/War</i></b>            Director: <a href="#">Steven Spielberg</a> ---* Starring: Liam Neeson &amp; Ben Kingsley  <i>Oskar Schindler uses Jews to start a factory in Poland during the war. He witnesses the horrors endured by the Jews, and starts to save them.</i></p>
	<p><b>Presumed Innocent (1990) <i>Crime/Thriller/Suspense</i></b>            Director: Alan Pakula---* Starring: Harrison Ford  <i>After he becomes the prime suspect for his girlfriend's murder, Harrison Ford goes on a search to find the real killer and finds out he/she may be closer to him than he thinks.</i></p>