Together or Apart: When Goals and Temptations Complement Versus Compete

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This research examined how the presentation of items related to goals and temptations influences the dynamic of self-regulation, as reflected in evaluation and choice. The authors found that when items, such as healthy and unhealthy foods or academic and leisure activities, are presented together in a unified choice set (e.g., in 1 image) and seem to complement each other, people express a positive evaluation of and a preference for tempting items. Conversely, when the items are presented apart from each other in 2 choice sets (e.g., 2 images) and seem to compete with each other, people express a positive evaluation of and preference for goal items.

Keywords: self-control, self-regulation, goals, temptations

A person's choice of items from a menu will follow a certain pattern if maintaining a healthy diet and enjoying tasty food seem to complement each other and a different pattern if these two seem to compete against each other. Similarly, a person's choice of magazines or books will be different if expansion of knowledge and relaxation are perceived as complementary rather than as competing motivations. The goal of this article was to develop a conceptual framework that systematically addresses people's evaluations of and preferences for items that serve different underlying motivations that complement or compete with each other. We examined the dynamic of self-regulation when choice alternatives seem to complement each other and people want to balance between the underlying motivations, versus when choice alternatives seem to be in competition with each other and people want to highlight the more important motivation. We specifically addressed the implications of these dynamics for evaluation and choice.

The Dynamics of Self-Regulation

People rarely desire one thing at a time. Rather, the process of goal pursuit involves constantly prioritizing the many goals that a person wishes to pursue and resolving goal conflicts to best ensure the successful attainment of several goals (Cantor & Langston, 1989; Emmons & King, 1988; Higgins, 1989; Kruglanski et al., 2002; Markus & Ruvolo, 1989). These multiple goals pose a self-control dilemma when one goal is high order and offers delayed but larger benefits, whereas another goal is low order and offers immediate but smaller benefits (Ainslie, 1992; Baumeister, Heatherton, & Tice, 1994; Kivetz & Simonson, 2002; Loewenstein, 1996; Metcalfe & Mischel, 1999; Rachlin, 2000; Thaler, 1991). For example, a high-order goal of pursuing a successful career may not coincide with a low-order goal of taking long vacations. In the self-control dilemma, the low-order goal is labeled *temptation* (Fishbach, Friedman, & Kruglanski, 2003; Freitas, Liberman, & Higgins, 2002; Trope & Fishbach, 2000).

The simultaneous activation of goals and temptations can be chronic. For example, the majority of people under most circumstances would desire both to stay fit and to enjoy fatty food. In addition, the presence of stimuli in the environment that cue the pursuit of goals and temptations can situationally prime a self-control dilemma. In particular, the presence of choice alternatives activates the mental representation of their underlying goals and temptations (Shah & Kruglanski, 2002, 2003). For example, while shopping at a local bookstore, the textbook aisle reminds one of academic goals, the travel book aisle primes the goal of touring the world, news magazines elicit the goal to be politically involved, and a coffee shop at the corner primes food indulgence. When a single goal is activated by a choice set, a person is more likely to adhere to that goal and express a positive evaluation of the congruent choice alternatives (Ferguson & Bargh, 2004; Shah & Kruglanski, 2003). However, it is less clear how the simultaneous activation of goals and temptations by the presence of multiple choice alternatives influences evaluation and choice, particularly when people make several choices in a sequence.

To address this question, we built on the research and theory on the dynamics of self-regulation (Fishbach & Dhar, 2005; Fishbach, Dhar, & Zhang, 2006; Koo & Fishbach, in press). This theory addresses the simultaneous pursuit of multiple goals (or a goal and a temptation) over a sequence of choices that unfold over time and

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that are made with respect to each other. Research on the dynamics of self-regulation distinguishes between a dynamic of highlighting goals and one of balancing goals and temptations. In a highlighting dynamic, individuals consistently choose alternatives that are congruent with the more important goal, whereas in a balancing dynamic, individuals alternate between that high-order goal and a low-order temptation in successive choices. For example, a dieter who contemplates both healthy and fatty food options can highlight the dieting goal by consistently choosing healthy food for breakfast, lunch, and dinner. Conversely, the dieter can balance between these motivations by choosing healthy food for breakfast and lunch but indulging over dinner.

The dynamics of highlighting and balancing produce different patterns of choice, which reflect the framing of any particular choice in a sequence as signaling either goal commitment or goal progress. In a highlighting dynamic, a particular goal-congruent choice is interpreted as a commitment to that goal, and the choice increases the goal's priority over competing temptations (Aronson, 1997; Atkinson & Raynor, 1978; Bem, 1972; Feather, 1990; Festinger, 1957; Locke & Latham, 1990). Because goals and temptations appear in competition in this dynamic of self-regulation, a choice of a goal resolves the motivational conflict in favor of the goal and increases its motivational strength. However, in a balancing dynamic, a particular choice is interpreted as progress toward that particular pursuit (e.g., Byrne & Bovair, 1997; Carver & Scheier, 1998; Higgins, 1989), which serves as a justification for moving to other, neglected pursuits. In this dynamic of self-regulation, goals and temptations seem complementary, and the choice of a goal increases the motivational strength of temptations.

Effects on Evaluation and Choice

The two dynamics of self-regulation influence the motivational priority of goals or temptations, which has consequences for the evaluation and choice of related alternatives. In a dynamic of highlighting, when a goal seems to be in competition with a temptation, self-control processes act to increase the likelihood of a goal-congruent choice by increasing the relative value of goal pursuit. In this case, the motivational strength of goals would increase, and the motivational strength of temptations would decrease. For example, if a person wishes to highlight the choice of healthy food, then the value of this food increases relative to unhealthy food, and the likelihood of choosing this food goes up accordingly.

However, the dynamic of balancing should produce an opposite pattern of evaluation and choice, such that the immediate motivational strength of the temptation increases relative to the goal. Specifically, when goals and temptations are seen to complement each other and a person wishes to balance between them, there are two possible patterns of choice: A person can first choose a goal option and balance later by choosing a temptation option, or the person can first choose a temptation option and later choose a goal option. But because goals offer delayed benefits and temptations offer immediate benefits (Ainslie, 1975; Loewenstein, 1996; Mischel & Ayduk, 2004; Mischel, Shoda, & Rodriguez, 1989; Rachlin, 2000), under a balancing dynamic, the latter sequence (temptation, then goal) seems to offer greater total benefits. That is, people can expect to maximize what they attain from both by expressing an immediate preference for a tempting option and an intention to choose a goal option at the next opportunity. As such, they capture the value of the temptation in the present and expect to obtain the value of the goal in the future. It follows that when goals and temptations seem to complement each other in a dynamic of balancing, people would express an immediate preference for tempting items. In this case, the immediate value of pursuing goals will likely be less than the value of giving in to temptations.

Notably, when a person expresses an immediate preference for tempting items and plans to balance by selecting goal items in the future, it is possible that the person will keep postponing the goal-congruent choice and end up repeatedly showing a preference for temptations. This would be particularly likely when choices are made in a sequence (vs. simultaneous choices; e.g., Read, Loewenstein, & Kalyanaraman, 1999). For example, dieters may choose a tempting food item now and have an intention to balance on the next choice occasion but then give in to tempting foods when the next opportunity arises and end up repeatedly choosing fatty foods at each opportunity. This highlighting of temptation de facto would be nevertheless the result of a dynamic of balancing because people plan to pursue the goal in the future.

In summary, we propose that when goals and temptations appear to complement each other (i.e., they "go together"), people balance between them. For example, people choose fatty food now and plan to choose the healthy food later. In converse, when these same items are perceived to compete against each other, people highlight the pursuit of the more important goal and forgo temptations, for example, by choosing healthy food for now and later. Because the value of items reflects their motivational priority (Brendl & Higgins, 1996; Ferguson & Bargh, 2004; Fishbach, Shah, & Kruglanski, 2004; Fiske, 1992; Lewin, 1935; Markman & Brendl, 2000; Moors, De Houwer, & Eelen, 2004), we further expect the evaluation of the items to follow a similar pattern, even if people do not make an explicit choice.

The Presentation Format: Together and Apart

What, then, evokes the different dynamics of self-regulation? Possibly, the presentation format of the alternatives pertaining to the underlying goal and temptation can prime complementary versus competing relationships, which then elicits the dynamics of highlighting versus balancing. Specifically, when alternatives pertaining to goal and temptation coexist, they can be included either in one unified choice set or in two separate choice sets that are presented against each other. These presentation formats—together or apart—convey the information that the items included either complement each other or compete against each other. When items appear together and seem to complement each other, the resulting dynamic is of balancing, whereas when items appear apart and seem to compete against each other, the resulting dynamic is of highlighting. For example, the presentation of low-brow and high-brow magazines together (e.g., on one display) activates the perception that these items complement each other, and balancing is desirable; hence, one favors a low-brow magazine. The presentation of these magazines apart in two separate sets (e.g., on separate displays) activates the perception that these items compete with each other, and highlighting is desirable; hence, one favors a high-brow magazine.

These presentation formats of temptation and goal items should directly impact the extent to which the items are perceived to be complementary to or in competition with one another. More important, the resulting effects on value and choice should then be independent of a possible effect of the presentation format on perceived similarity between the items. That is, items that appear together and seem to complement each other do not need to appear more similar to each other, neither in terms of similarity of features nor in the similarity between the underlying motivations. Similarity, in turn, does not necessarily increase perceived complementarity. Rather, what makes the items complementary is the perception that they go together, and thus alternating between them is justified via balancing. In fact, items that are similar often appear to be in competition with rather than complement each other; for example, an entrée and a dessert complement each other more than two entrées, although an entrée and a dessert are less similar than two entrées. The presentation format of items that serve goals and temptations should therefore influence the perception of these underlying motivations as complementing or competing, but not the similarity between them.

The Present Research

We predicted that goal and temptation items that are similarly positive when presented separately would become more or less positive when they are simultaneously presented, depending on the presentation format. Specifically, when the items are presented together in a unified choice set and appear to complement each other, they prime a dynamic of balancing by which the presence of goal-related items justifies an immediate preference for tempting items. When the items are presented in two separate choice sets that seem to compete against each other, they prime a dynamic of highlighting by which the presence of tempting items provides a reminder of the more important goal, thus leading to a preference for goal items.

We tested these effects on evaluation and choice in six studies. Study 1 assessed the evaluation of healthy and unhealthy (yet tasty) foods that are depicted: (a) in one image that features both food items (e.g., an image that features both Coke and berries); (b) in two images, each of which features one food item, that are presented next to each other (e.g., an image of Coke next to an image of berries); and (c) in two images, each of which features one food item, that are presented without reference to each other (e.g., an image of Coke that is followed by an image of berries). Study 2 shifted the goal domain and tested for the evaluation of academic- and leisure-related images (e.g., a textbook and DVDs) in each of these presentation formats. Study 3 assessed the evaluation of healthy and unhealthy menu items when they are presented together in one mixed menu, on separate sections of a menu, and, independently, in separate experimental sessions. Across these three studies, we expect that presenting items together would increase the relative value of temptations, whereas presenting them separately would increase the relative value of goals.

In Studies 4–6, we then explored the underlying processes of self-regulation. In Study 4, we tested whether the presentation formats influence the perceived complementarity between items but not the perceived similarity. In Study 5, we investigated the resultant intention to balance between an immediate temptation and a delayed goal when they appear together and to highlight the goal across successive choices when it is presented apart from temptation. Finally, in Study 6, we tested whether presenting healthy and unhealthy foods together (vs. apart) increases actual choice of the unhealthy foods and whether the strength of the goal—one's concern with weight gain—predicts healthy choices only when food options are presented apart (vs. together) and appear in competition.

Study 1: Healthy and Unhealthy Foods

To assess evaluation of goals and temptations under each of the self-regulatory dynamics, we presented healthy and unhealthy (yet tasty) food items in one of three presentation formats: (a) together in one image, to induce a sense of complementarity and a dynamic of balancing, (b) in two separate images, to induce a sense of competition and a dynamic of highlighting, or (c) in two separate experimental sessions, as a control condition. We selected healthy and unhealthy food items (e.g., fresh tomatoes vs. cheeseburger) that were similarly positive when evaluated independently. We predicted that presenting these items together in one image would increase the value of unhealthy (temptation) items, whereas presenting them apart, in separate images, would increase the value of healthy (goal) items.

Method

Participants. Sixty-five undergraduate students (28 women, 37 men), who responded to an advertisement at the University of Chicago, participated in Study 1 in exchange for monetary compensation.

Stimuli. The stimuli were pictures of five healthy foods (e.g., fresh tomatoes, strawberries) and five unhealthy foods (e.g., cheeseburger, Coke). In cases in which the foods were of different sizes (e.g., a single strawberry vs. a can of Coke), we included more of the smaller food (e.g., a bunch of strawberries) to ensure that the overall size of the food images was similar. We selected the items pertaining to healthy foods (i.e., goal) and unhealthy foods (i.e., temptation) on the basis of a pilot study, in which 17 University of Chicago undergraduate students evaluated the desirability of the foods (a) in the long run and (b) in the short run (on 7-point scales ranging from 1 [*not desirable at all*] to 7 [*very desirable*]). A Time Frame (short run vs. long run) × Target (healthy vs. unhealthy) repeated measures analysis of variance (ANOVA) yielded a main effect of time frame, $F(1, 16) = 10.83$, $p < .01$, indicating greater desirability in the short run than in the long run, and the predicted Target × Time Frame interaction, $F(1, 16) = 26.92$, $p < .001$. Healthy items ($M = 3.59$, $SD = 1.28$) were more desirable than unhealthy items ($M = 2.29$, $SD = .90$) in the long run, $t(16) = 4.16$, $p < .01$, but healthy items ($M = 3.11$, $SD = 1.42$) were less desirable than unhealthy items ($M = 4.37$, $SD = 1.17$) in the short run, $t(16) = 3.05$, $p < .01$.

To create the stimuli for the *together* and *apart* presentation formats, we paired each healthy food item with an unhealthy food item (e.g., strawberries and Coke) to obtain five healthy–unhealthy pairs. To conceal the purpose of the study, we included five filler pairs that presented 10 pictures of nonfood items (e.g., nuts and bolts, table and chairs).

The together and apart presentation formats had two stimuli presented simultaneously on each trial. In the together presentation

format, the stimuli were next to each other in a single picture, and they were similarly placed at the center of each picture. In the apart condition, the stimuli were presented in two separate pictures placed next to each other on the screen and divided by a line of (white) background color. We also had a *single* (control) presentation format, in which the two items were depicted in two separate images, but only one image was shown on each trial. The same set of images were presented in each presentation format (for an example, see Figure 1).

Procedure. A 3 (presentation format: together vs. single vs. apart) × 2 (food type: healthy food vs. unhealthy food) mixed design was used in Study 1, in which presentation format was manipulated between subjects and food type within subjects. Participants completed the study using desktop computers.

An experimenter introduced the study as part of a research project on how people evaluate objects in printed advertisements. On-screen instructions informed participants that they would see a series of pictures depicting various items and that their task was to judge the appeal of each item, using a 7-point scale ranging from 1 (*not appealing at all*) to 7 (*very appealing*). In the together and apart conditions, the instructions stressed that participants would see two items on each trial and should evaluate only the target item, which would be indicated by an arrow on the picture. In addition, the target item was emphasized in the questions for these items (e.g., "How appealing are the *strawberries*?").

Trials were presented in a random order, and paired target items (i.e., those appearing in the same picture in the together condition or on the same screen in the apart condition) were not evaluated consecutively. After participants completed the experiment, they were debriefed and dismissed.

Results and Discussion

We averaged the appeal ratings of healthy ($\alpha = .69$) and unhealthy ($\alpha = .65$) food items. A Presentation Format × Food Type ANOVA of these composite value scores yielded a main effect of food type, $F(1, 62) = 5.64$, $p < .05$, indicating that the healthy foods were more appealing than the unhealthy foods. It also yielded the predicted Presentation Format × Food Type interaction, $F(2, 62) = 12.31$, $p < .001$ (see Figure 2).

A contrast analysis revealed that in the single (control) presentation format, participants provided similar ratings to healthy food items ($M = 4.56$, $SD = 1.00$) and unhealthy food items ($M = 4.18$, $SD = 1.13$), $t(23) = 1.17$, *ns*. Thus, we were successful in choosing healthy and unhealthy food items with a priori similar value. Moreover, when the items were presented together, participants provided higher value ratings to unhealthy food items ($M = 5.02$, $SD = 0.76$) compared with healthy items ($M = 4.30$, $SD = 1.04$), $t(20) = 3.36$, $p < .01$. In contrast, when the items were presented apart, participants provided higher value ratings to healthy food items ($M = 5.39$, $SD = 1.27$) compared with unhealthy items ($M = 3.65$, $SD = 1.33$), $t(19) = 3.79$, $p < .01$.

These data illustrate that presentation format—which can alter whether items are perceived as complementary or in competition with one another—impacts the relative value placed on healthy and unhealthy food items. Thus, participants valued healthy items more when these items were presented apart from unhealthy items, but they valued unhealthy items more when these items were presented together with healthy items.

We assume that these presentation formats manipulated the perception of items as complementary or in competition with one another. However, in Study 1, it is possible that these presentation formats also altered participants' beliefs about the consumption of these items. Specifically, participants may have inferred that healthy and unhealthy items that are presented together are also consumed together, as part of one meal, whereas items that are presented apart are consumed on separate occasions. Although the nature of the consumption experience cannot directly account for the asymmetric shift in value for healthy and unhealthy foods, we

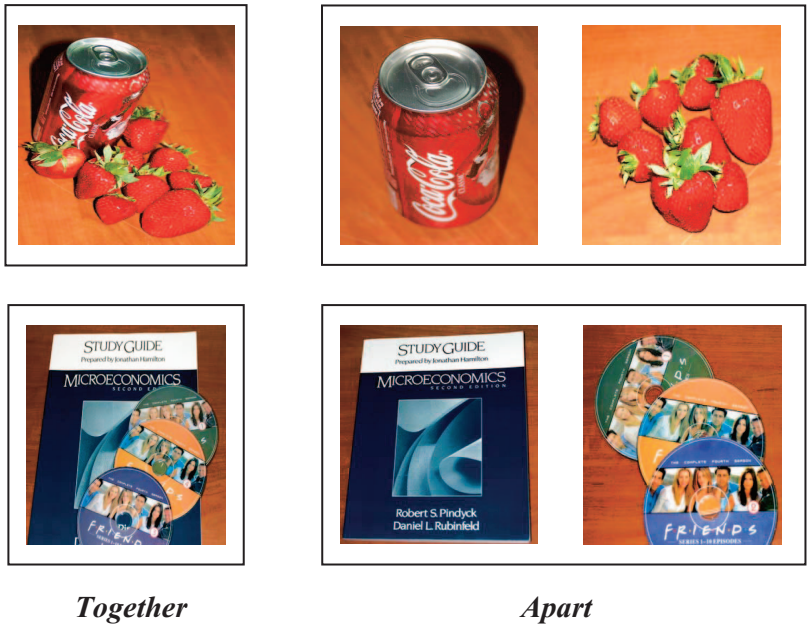

Figure 1. Examples of stimuli from Studies 1 and 2.

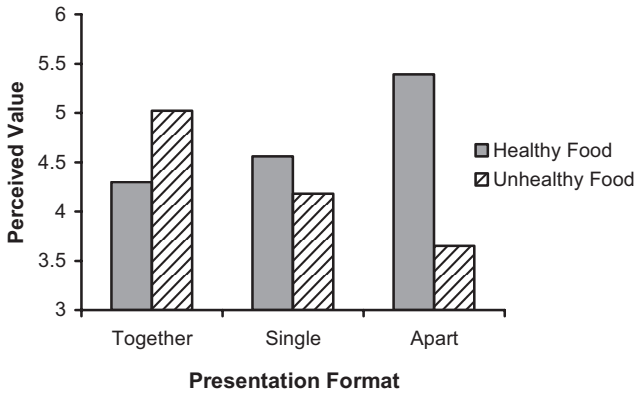

Figure 2. Perceived value of healthy and unhealthy food as a function of presentation format in Study 1.

sought to rule out this possible effect by using a different set of stimuli that are less likely to be perceived in terms of simultaneously engagement.

Study 2: Academic and Leisure

In Study 2, we assessed the value of images of objects related to academic goals (e.g., textbook) and leisure temptations (e.g., DVDs) in one of three presentation formats: (a) together in one image, to induce a sense of complementarity; (b) in two separate images, to induce a sense of competition; and (c) in two separate experimental sessions, as a control condition. We predicted that presenting these stimuli together increases the value of objects related to leisure temptations, whereas presenting them apart increases the value of objects related to academic goals.

Method

Participants. Sixty-nine undergraduate students (36 women, 33 men), who responded to an advertisement at the University of Chicago, participated in Study 2 in exchange for monetary compensation.

Stimuli. The stimuli were images of four academic-related items (e.g., textbook, study guide) and four leisure-related items (e.g., DVDs, remote control). To ensure that all the images were of similar size, we included several items of smaller objects (e.g., a picture of three DVDs). In the together and apart presentation conditions, we paired each academic item with a leisure item (e.g., textbook and DVDs) to obtain four academic–leisure combinations (see Figure 1). To conceal the purpose of the study, we also added an equal number of filler combinations (e.g., nuts and bolts).

We selected the items pertaining to academic and leisure activities on the basis of a pilot study that was similar to that of Study 1. Seventeen University of Chicago undergraduate students evaluated the desirability of eight images of the target items (along with the filler targets) (a) in the long run and (b) in the short run (on 7-point scales ranging from 1 [*not desirable at all*] to 7 [*very desirable*]). A Target (academic vs. leisure) × Time Frame (long run vs. short run) repeated measures ANOVA yielded a Target × Time Frame interaction, $F(1, 16) = 7.61$, $p < .01$. Academic items were more desirable ($M = 3.96$, $SD = 1.85$) than leisure items ($M = 2.59$, $SD = 1.45$) in the long run, $t(16) = 2.29$, $p < .05$, but less desirable ($M = 2.84$, $SD = 1.39$) than leisure items ($M = 3.94$, $SD = 1.86$) in the short run, $t(16) = 2.33$, $p < .05$.

Procedure. A 3 (presentation format: together vs. single vs. apart) × 2 (target item: academic vs. leisure) mixed design was used in Study 2, in which presentation format was manipulated between subjects and the target within subjects. Participants completed the study using a desktop computer.

The experimental procedure was similar to that in Study 1. Participants rated on a 7-point scale, ranging from 1 (*very negative*) to 7 (*very positive*), how positive each of the target items was (e.g., "How positive is the *textbook*?"). The order of the trials was random, and paired target items were not evaluated consecutively. After participants completed the experiment, they were debriefed and dismissed.

Results and Discussion

We collapsed the ratings of academic-related items ($\alpha = .63$) and leisure-related items ($\alpha = .58$). A Presentation Format × Target ANOVA of these measures yielded the predicted Presentation Format × Target interaction, $F(2, 66) = 6.58$, $p < .01$. No main effects emerged in this analysis (see Figure 3).

A contrast analysis revealed that in the single (control) presentation format, participants provided similar value ratings to academic targets ($M = 3.68$, $SD = 1.04$) and leisure targets ($M = 3.76$, $SD = 1.19$), $t(21) = .27$, *ns*. In the together presentation format, participants provided higher value ratings to leisure targets ($M = 4.44$, $SD = 1.11$) than to academic targets ($M = 3.60$, $SD = 0.93$), $t(23) = 3.20$, $p < .01$. In the apart presentation format, participants provided higher value ratings to academic targets ($M = 4.26$, $SD = 0.96$) than to leisure targets ($M = 3.67$, $SD = 0.81$), $t(22) = 1.98$, $p = .05$.

These results extend our previous evaluation effects to a different self-regulatory domain. We find that the presentation of objects related to academic goals and leisure temptations as either complementing (together) or competing (apart) affects the value assigned to these objects. In Studies 1 and 2, we used images, and in Study 3, we sought to demonstrate these evaluation effects in a more naturalistic setting, which involved evaluation of menu

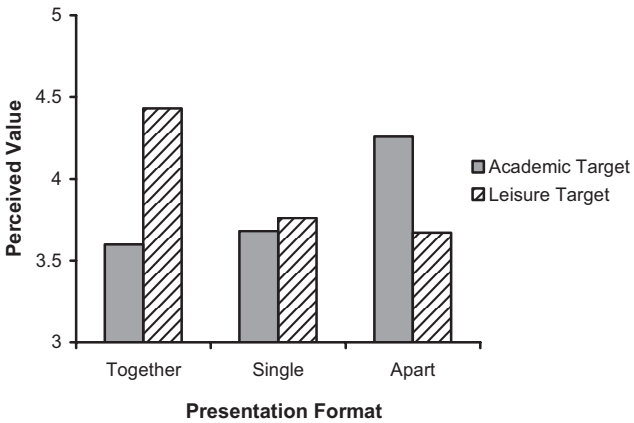

Figure 3. Perceived value of academic and leisure targets as a function of presentation format in Study 2.

courses. Menus provide a natural setting for testing our theory because they often include healthy and unhealthy food items that are presented either in a mixed order or in two separate categories (e.g., "the healthy corner"). Furthermore, when selecting from a menu, people assume that a choice of one course precludes a choice of another course in the same section; hence, joint consumption is unlikely. For example, choosing an unhealthy entrée implies that one will not have the healthier entrée. We predicted that even when joint consumption cannot be assumed, the simultaneous presentation of healthy and unhealthy items would influence their relative value, depending on presentation format.

Study 3: Menu Courses

Participants in Study 3 evaluated healthy and unhealthy courses on a restaurant menu. We predicted that mixing these courses together would increase the positive value of unhealthy courses, whereas presenting them separately would increase the positive value of healthy courses.

Method

Participants. Forty-three undergraduate students (23 women, 20 men), who responded to an advertisement at the University of Chicago, participated in Study 3 in exchange for monetary compensation.

Stimuli. We selected four appetizers, 10 entrées, and four desserts; each category had an equal number of healthy courses (e.g., edamame beans, light chicken salad, and fruit plate) and unhealthy courses (e.g., fried chicken wings, bacon cheeseburger, and chocolate mousse). There was a short description following each course and a price ($5.45 for all appetizers, $8.95 for all entrées, and $5.95 for all desserts). For example, "light chicken salad" was described as a "blend of fresh chicken breast, fresh mixed greens, and special seasonings, topped with tomato and lettuce"; "fruit plate" was described as "fresh cut apples, grapes, and oranges"; "bacon cheeseburger" was described as "ground chuck patty covered with melted cheddar and crispy bacon"; and "chocolate mousse" was described as "served with crème anglaise and chocolate sauce." In a pilot study, 15 University of Chicago undergraduate students rated (on a 7-point scale ranging from 1 [*very unhealthy*] to 7 [*very healthy*]) the healthy courses as healthier ($M = 4.93$, $SD = 0.42$) than the unhealthy courses ($M = 3.27$, $SD = 0.86$), $t(14) = 5.94$, $p < .001$.

We designed four different menus for the experiment. We composed one menu that presented healthy and unhealthy courses mixed together. This menu included all 18 courses and mixed the order of healthy and unhealthy courses in the appetizer, entrée, and dessert subsections. We composed another menu that presented healthy and unhealthy courses apart from each other. This menu included all nine healthy courses on one side (Section 1) and all nine unhealthy courses on the other side (Section 2). Each side included appetizer, entrée, and dessert subsections. For the single (control) condition, we created two separate menus, one with only the nine healthy courses and another with only the nine unhealthy courses; each included the same three subsections for appetizer, entrée, and dessert. All the menus carried a logo of a familiar restaurant and were printed in color on heavy-duty paper to imitate an actual menu from that restaurant.

Procedure. A 3 (presentation format: together vs. single vs. apart) × 2 (food type: healthy vs. unhealthy) mixed design was used, in which presentation format was manipulated between subjects and the food type within subjects.

Participants' task was to evaluate a new menu for a local restaurant. Depending on the experimental condition, they received the two-section menu that featured healthy courses apart from unhealthy courses, the combined menu that featured healthy and unhealthy courses together, or the single menu that featured either healthy or unhealthy courses (the menu was randomly assigned). Participants in the single menu condition were told that the study involved another part that required them to return to the lab in 3 days, at which time they evaluated the second (unhealthy or healthy) menu.

The experimental survey instructed participants to first read the entire menu. They then rated the appeal of each listed course a 7-point scale ranging from 1 (*not appealing at all*) to 7 (*very appealing*). After participants completed the experiment, they were debriefed and dismissed.

Results and Discussion

We collapsed the value ratings of healthy courses ($\alpha = .76$) and unhealthy courses ($\alpha = .77$). A Presentation Format × Food Type ANOVA of these indexes yielded a main effect of food type, $F(1, 40) = 5.10$, $p < .05$, indicating that healthy courses were more appealing than unhealthy courses. This main effect was qualified by the predicted Presentation Format × Food Type interaction, $F(2, 40) = 20.40$, $p < .001$ (see Figure 4).

A contrast analysis revealed that in the single (control) condition, when participants evaluated separate menus on separate occasions, they provided similar appeal ratings to healthy courses ($M = 4.25$, $SD = 0.61$) and unhealthy courses ($M = 4.36$, $SD = 0.96$), $t(12) = 0.33$, *ns.* Thus, the healthy and unhealthy courses were not assigned different values by themselves. More important, when the courses were presented together, on the same menu, participants rated the appeal of unhealthy courses ($M = 4.54$, $SD = 0.92$) as higher than healthy courses ($M = 3.90$, $SD = 0.80$), $t(15) = 2.23$, $p < .05$. When the courses were presented apart, participants rated the appeal of healthy courses ($M = 4.72$, $SD = 0.72$) as higher than unhealthy courses ($M = 2.79$, $SD = 0.73$), $t(12) = 7.51$, $p < .001$.

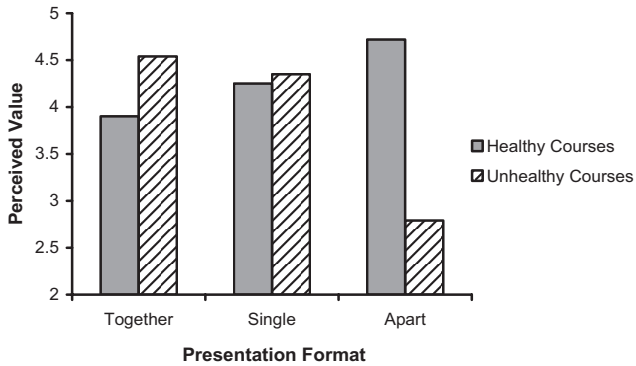

Figure 4. Perceived value of healthy and unhealthy menu courses as a function of presentation format in Study 3.

We found that the relative value of healthy and unhealthy menu items depends on their presentation format. Presenting these items together, such that they seem to complement each other, increases the value of unhealthy items. Conversely, presenting these items apart, such that they seem in competition, increases the value of healthy items.

Studies 1–3: Summary

In Studies 1–3, we assessed value using a similar design; thus, we could analyze the collapsed set of data as a function of Study (1 vs. 2 vs. 3) × Presentation Format (together vs. single vs. apart) × Target (goal vs. temptation). This ANOVA replicated the Presentation Format × Target interaction, $F(2, 168) = 32.91$, $p < .001$, and there was no significant effect for study, $F(4, 168) = 1.46$, *ns*, indicating a similar pattern across all three studies. We further used this combined sample to calculate separate simple contrasts for goal targets (e.g., healthy foods, academic objects) and temptation targets (e.g., unhealthy foods, leisure objects), rather than comparing goal and temptation targets, as in each individual study.

Beginning with goal targets, participants provided higher ratings for goals that were presented apart from temptations ($M = 4.77$, $SD = 1.14$) than in the single, control presentation format ($M = 4.16$, $SD = 1.01$), $t(113) = 3.03$, $p < .01$. There was no significant decrease in the value assigned to goals that were presented together with temptations ($M = 3.92$, $SD = 0.97$) compared with the single presentation format, $t(119) = 1.33$, $p = .19$. A similar analysis of temptation-related targets revealed that participants assigned lower value to temptations that were presented apart from goals ($M = 3.46$, $SD = 1.20$) compared with the single, control presentation format ($M = 4.06$, $SD = 1.28$), $t(113) = 2.79$, $p < .01$. They further assigned higher value to temptations that were presented together with goals ($M = 4.66$, $SD = 0.97$) compared with the single presentation format, $t(119) = 3.13$, $p < .01$.

In Studies 1–3, we assumed that the presentation format induced a sense of competition or complementarity, which, in turn, primed the self-regulatory dynamics of highlighting or balancing. In the following studies, we tested for these underlying processes. Specifically, Study 4 was designed to test for the effect of the presentation format on perceived complementarity between goals and temptations and to rule out the possibility that presentation format influences the value of items by altering perceived similarity. Presumably, if items that are presented together appear more similar, in addition to more complementary, then any one of these variables can account for the effects on perceived value.

Study 4: Complementary but Not Similar

We predict that when goals and temptations are presented together (vs. apart), they will appear to complement each other but will not appear more similar to each other. In fact, perceived complementarity can imply low similiarity, for example, when a light appetizer complements a heavy entrée more than a heavy appetizer. As a result, items that seem to complement each other because they appear together will not also be perceived as more similar. To test this hypothesis, we presented participants with the stimuli from Studies 1–3 in one of two presentation formats: together or apart. They were asked to rate the extent to which these stimuli (a) go together; hence, they are complementary and (b) are similar to each other.

Method

Participants. One hundred six undergraduate students (65 women, 41 men), who responded to an advertisement at the University of Chicago, participated in Study 4 for monetary compensation.

Procedure. A 2 (rating: complement vs. similar) × 2 (presentation format: together vs. apart) × 3 (domain: food images vs. academic images vs. menu courses) mixed design was used in this study. We manipulated the rating scale and presentation format between subjects and the domain within subjects.

Participants completed a survey on perception of objects in various categories. The survey presented pairs of objects from each category. The participants in the complement condition read that their task was to evaluate the extent to which the two objects in each pair go together—that is, they can be consumed or used in proximity. Those in the similar condition read that their task was to evaluate the extent to which the two objects in each pair are similar to each other—that is, they share similar features. Participants made their ratings on 7-point scales (1 = *do not go together* and 7 = *go together* vs. 1 = *not similar* and 7 = *similar*, respectively).

Using one of these scales, all the participants then rated the food and academic/leisure images from Studies 1 and 2, which depicted goal- and temptation-related items, either in the together format (one image) or in the apart format (two separate images). As previously, we included five filler pairs featuring neutral items (e.g., nuts and bolts). Participants also evaluated 10 entrée–dessert pairs from the menus used in Study 3. These pairs included healthy and unhealthy courses (e.g., cheese spaghetti–fruit plate; marinated roasted vegetables–Oreo-laced four-layer cheesecake) that were selected either from the menu that mixed healthy and unhealthy courses (the together format) or from the two-section menu that separated healthy courses and unhealthy courses (the apart format). Participants first reviewed the entire menus and then evaluated these pairs. After providing their ratings, participants were debriefed and dismissed.

Results and Discussion

We collapsed participants' ratings in each category to obtain three composite measures of perceived similarity and complementarity. A repeated measure ANOVA yielded a main effect for presentation, $F(1, 102) = 4.48$, $p < .05$, indicating higher ratings (of similarity and complementarity) when items were presented together ($M = 3.35$, $SD = 0.93$) compared with when they were presented apart ($M = 3.00$, $SD = 0.78$). There was no effect for domain, suggesting a similar pattern across domains. This analysis further yielded the predicted Rating × Presentation interaction, $F(1, 102) = 4.83$, $p < .05$.

Separate analyses of the complementarity and similarity ratings revealed that participants perceived goal–temptation pairs as more complementary when they were presented together, in unified choice sets ($M = 3.65$, $SD = 0.85$), than when they were presented apart, in two separate choice sets ($M = 2.95$, $SD = 0.91$), $F(1, 52) = 8.63$, $p < .01$. However, participants did not perceive these

items as more similar when they were presented together (M = 3.05, SD = 0.92) and apart (M = 3.07, SD = 0.62), $F(1, 50)$ = .04, *ns*.

We conclude that the presentation of alternatives that pertain to goals and temptations together elicits a sense that these options go together; hence, they are complementary. As a result, a person may wish to balance between these alternatives by preferring temptations in the present and deferring the consumption of goal alternatives to the future. By contrast, the presentation of alternatives apart from each other elicits a sense that they are in competition. As a result, a person may wish to highlight the more important goal by preferring goal-related items both in the present and for the future. In our next study, we explored these choice dynamics directly. We predicted that the presentation format primes balancing or highlighting, as reflected in the choice between goals and temptations for immediate and delayed consumption.

Study 5: Immediate and Delayed Choices

Whereas high-order goals offer large but delayed benefits, low-order temptations offer small but immediate benefits. Therefore, if a person perceives a goal and a temptation as competing against each other and believes that the pursuit of one will only be attained at the cost of the other, then the person is expected to maximize the attainment by repeatedly choosing the goal, as it offers greater value. However, if a person perceives a goal and a temptation to be complementary to each other and believes that both pursuits are possible, then the person would maximize the attainment by balancing between the two, showing an immediate preference for the tempting option while holding an intention to choose a goal item at the next opportunity.

We tested these patterns of consecutive choices in two self-control domains: the choice between healthy and unhealthy menu courses and the choice between low-brow and high-brow magazines. We predicted that when goals and temptations are presented together and induce a sense of complementarity, people choose tempting items in the present and plan to choose goal items in the future. However, when goals and temptations are presented apart and induce a sense of competition, people choose goal items for both the present and for the future.

Method

Participants. One hundred sixty-three undergraduate and graduate students (95 women, 68 men) were recruited on the campus of the University of Chicago. They either volunteered to participate or participated in exchange for monetary compensation.

Procedure. A 2 (domain: menu vs. magazine) × 2 (presentation format: together vs. apart) × 2 (time order: initial vs. subsequent choice) mixed design was used in this study. Domain and presentation format were manipulated between subjects and time order within subjects.

For the *menu* condition, we used the same menus as in Studies 3 and 4. Participants in the together condition viewed a menu that included all 18 healthy and unhealthy courses together, in mixed order. Participants in the apart condition viewed the same 9 healthy and 9 unhealthy courses in two separate menu sections. All participants read that we were interested in students' preferences for dinner food. They were to assume that they were going to the restaurant and choosing courses from their assigned menu. Their task was to indicate their initial choice of an entrée and what they might subsequently choose for a dessert.

For the *magazine* condition, we first created two lists of magazines, one consisting of eight low-brow magazines (e.g., *Maxim*, *Cosmopolitan*) and one consisting of eight high-brow magazines (e.g., *Time*, *The Economist*). We selected and categorized these magazines on the basis of a pilot study in which students indicated that they were familiar with these magazines and perceived them as low-brow versus high-brow, respectively. In the together condition, we presented the low-brow and high-brow magazines in a unified list with mixed order, and in the apart condition, we presented low-brow and high-brow magazines in two separate lists, next to each other. An image of a sample cover of each magazine appeared above each title to help participants recognize the magazine.

Participants read that we were interested in people's preferences for magazines. They were to assume that they were at an airport and a magazine subscription service offered them the choice of two free magazines from a newspaper stand for their upcoming flights. The first magazine was for their initial flight, and the second was for their connecting (subsequent) flight later in the day. After participants indicated their choices for either menu courses or magazines, they were debriefed and dismissed.

Results and Discussion

We conducted a binary logistic regression of participants' choice on domain, presentation format, and time order (including all the two-way and three-way interactions). In support of our hypothesis, the predicted Presentation Format × Time Order interaction was significant, Wald's $\chi^2(1, N = 163) = 5.42$, $p < .05$. The presentation format was also a significant predictor of choice, Wald's $\chi^2(1, N = 163) = 9.97$, $p < .01$. No other predictors were significant in this analysis. In particular, the three-way Domain × Presentation Format × Time Order interaction was nonsignificant, suggesting that participants' choice patterns did not differ as a function of domain (see Figure 5).

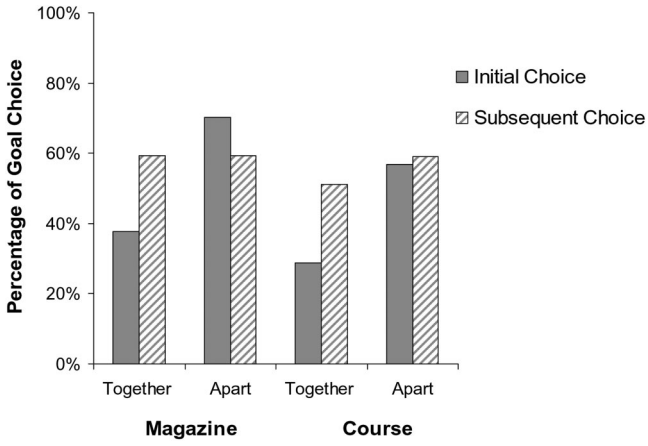

Figure 5. Percentage of participants choosing high-brow (vs. low-brow) magazines and healthy (vs. unhealthy) courses as a function of presentation format and position in the choice sequence (initial vs. subsequent choice) in Study 5.

Recall that we predicted that presenting the choice alternatives together increases the selection of tempting items for initial consumption and goal items for subsequent consumption. Presenting choice alternatives apart was expected to increase the selection of goal items for both initial and subsequent consumption. Indeed, further analysis revealed that when the options were presented together, fewer participants chose the goal-related option (healthy entrée, high-brow magazine) for their initial consumption (32.9%) than for subsequent consumption (54.9%), $\chi^2(1, N = 82) = 8.02$, $p < .01$, a pattern that indicates balancing. Conversely, when the options were presented apart, participants were equally likely to choose the goal-related option for both initial consumption (63.0%) and subsequent consumption (59.3%), $\chi^2(1, N = 81) = .23$, *ns*, a pattern that indicates highlighting.

Consistent with our previous results, we also found that presenting the goal- and temptation-related options together reduced the initial choice of goal-related options (32.9%) compared with presenting them apart (63.0%), $\chi^2(1, N = 163) = 14.7$, $p < .01$. However, presenting the options together (54.9%) versus apart (59.3%) did not affect the subsequent intention to choose a goal-related option, $\chi^2(1, N = 163) = 0.32$, *ns*.

To assess the pattern of balancing (vs. highlighting) more directly, we further analyzed the percentage of participants who chose a temptation-related option for their first choice but switched to a goal-related option for their second choice. Consistent with our predictions, more participants made this temptation–goal switch when the options were presented together than when they were presented apart (39.0% vs. 22.2%), $\chi^2(1, N = 163) = 5.41$, $p < .05$. As a comparison, we also analyzed the percentage of participants who switched from a goal option to a temptation option: As expected, the percentage of participants who made this goal–temptation switch was similar when the options were presented together (17%) and apart (26%), $\chi^2(1, N = 163) = 1.89$, *ns.* This analysis further confirms that presenting goal- and temptation-related options together in a unified set entails an immediate preference for temptation and a delayed preference for goals.

It appears that the presentation of choice alternatives together or apart not only influences the perceived value and complementarity of these options but also affects people's intended choices that either balance between temptations and goals or highlight the goals. When the options are presented together, people perceive them as complementing each other and express a greater immediate preference for a tempting item (unhealthy food, low-brow magazine) and a delayed preference for a goal item (healthy food, high-brow magazine). However, when the options are presented apart, people perceive them as competing with each other and express a greater preference for goal items for both immediate and delayed consumption.

In this study, participants' future intentions to pursue a goal either legitimated disengagement from the goal in the present or increased goal pursuit (see also Zhang, Fishbach, & Dhar, 2007). However, as demonstrated in our earlier studies, a second explicit choice is not required for a dynamic of balancing or highlighting to influence evaluation. In our final study, we tested whether the presentation format and the resulting dynamic of self-regulation further influence actual choice, even in situations in which there is opportunity to make only a single selection among goals and temptations. We further predicted that the strength of the high-order goal would predict choice of goal items only when goals and temptations appear in competition (apart) but not when they seem to complement each other (together) and people perceive an opportunity to balance.

Study 6: Food Choice

To test whether people's actual food choices vary as a function of the presentation format, we first conducted a pilot study in which 49 University of Chicago students were offered (unhealthy) chocolate and (healthy) apple snacks. These snacks were either mixed together on one tray or served on two separate but adjacent trays, and participants could select one snack option or both. When the snacks were mixed together, participants were more likely to pick a chocolate (96%) than an apple (44%), but this difference diminished when the snacks were presented apart (83% picked a chocolate and 71% picked an apple). It appears that presenting these items apart increased choice of healthy snacks.

On the basis of these pilot data, we conducted a study that measured a single choice of goal versus temptation item (a bag of carrots vs. a chocolate bar) in each of the presentation formats. We predicted that presenting these items in sorted piles would increase the choice of healthy (vs. unhealthy) items. We further predicted that people make healthy selections to the extent that they have a high-order goal to control their weight, and they perceive healthy and unhealthy items as competing with each other. To test this prediction, we measured participants' concern with weight gain. We predicted that concern with weight gain would be associated with a choice of healthy items only when the choice options are sorted into two piles and are perceived as being in competition, but not when choice options are presented together and seem to complement each other. When the choice options appear to complement each other, those who subscribe to the health goal will nonetheless choose unhealthy items.

Method

Participants. Sixty-five undergraduate students (37 women, 28 men), who replied to an advertisement at the University of Chicago, participated in exchange for monetary compensation. We wanted to include only participants who would like to lose weight; thus, we asked participants to indicate on a presurvey "what is the difference between your current weight and your ideal weight." We included only those who indicated that they were currently above their ideal weight.

Procedure. Presentation format (together vs. apart) was manipulated in a between-subjects design. The stimuli were Hershey's milk chocolate bars and fresh baby carrots with dip (packed in a small transparent plastic bag) presented on the desk on which participants completed the survey. We selected these stimuli on the basis of a pilot study in which 24 University of Chicago undergraduate students indicated (on 7-point scales ranging from 1 [*not healthy at all*] to 7 [*very healthy*] and from 1 [*not tasty at all*] to 7 [*very tasty*]) that the carrots are healthier ($M = 5.75$, $SD = 1.26$) than the chocolate bars ($M = 3.50$, $SD = 1.29$), $t(23) = 5.56$, $p < .001$, but less tasty ($M = 4.17$, $SD = 1.23$) than the chocolate ($M = 5.21$, $SD = 1.28$), $t(23) = 2.51$, $p < .05$.

In the together condition, an equal number of chocolate bars and carrot bags were scrambled together in the same pile on the desk. In the apart condition, an equal number of chocolate bars and carrot bags were put in separate piles, which were arranged next to

each other. The presentation format alternated between the together and the apart conditions every 30 min to ensure a proper randomization of participants into both conditions.

An experimenter presented the study as a survey of campus life and informed participants that in return for their participation, in addition to the cash payment, they could take either a chocolate bar or a pack of carrots with dip. The experimenter directed participants to pick one item before completing the experiment. After making their choice, participants completed an unrelated filler survey on campus activities, at the end of which they provided the routine demographic information, such as gender and age, and answered a few questions, including how closely they pay attention to their daily calorie intake, rated on a 7-point scale ranging from 1 (*not at all*) to 7 (*very much*). This last item assessed the value of the high-order goal to watch one's weight. After participants completed the demographic survey, they were debriefed and dismissed.

Results and Discussion

As predicted, participants were more likely to choose chocolate bars when they were served together with carrots than when they were presented in a separate pile. Specifically, when the chocolate bars and carrot bags were presented together, 52.94% of the participants chose chocolate bars, whereas when the chocolate bars were presented in a separate pile next to carrots, only 29.03% of the participants chose chocolate bars, $\chi^2(1, N = 65) = 3.82, p = .05$.

We predicted that when the choice options are presented apart in two separate piles, and appear to be competing, participant's choices would correspond to their high-order goal to watch their weight. However, when the choice options are presented together in one pile, and appear to complement each other, participants' choices would not correspond to their high-order goal because the present choice is viewed as an opportunity to maximize short-term benefits, whereas long-term benefits are expected to be captured on a later occasion. Accordingly, we conducted a binary logistic regression of choice of snacks (carrots vs. chocolate) on presentation format and weight watching. In support of our hypothesis, the Presentation Format $\times$ Weight Watching interaction was significant, Wald's $\chi^2(1, N = 65) = 7.60, p < .01$. No other predictors were significant in this analysis. Consistent with our hypothesis, when the healthy and unhealthy options were presented apart from each other, participants' concern with weight watching predicted their choice of carrots over chocolate, $\chi^2(1, N = 31) = 4.97, p < .05$. However, when these options were presented together, participants' concern with weight watching did not predict their choice, $\chi^2(1, N = 34) = 0.13$, *ns*. These results suggest that people's choices correspond to their high-order goal when the goal seemed to be in competition with the temptation, but these choices correspond to temptation when the goal and temptation seem to complement each other.

General Discussion

This research examines how the presentation of items pertaining to goals and temptations influences the dynamic of self-regulation, as reflected in evaluation and choice. We find that when a goal and a temptation are presented together, in a unified choice set, they seem to complement each other and prompt a dynamic of balancing between the underlying motivations. As a result, the immediate value of the temptation relative to the goal increases. However, when these items are presented apart from each other in two different choice sets, the goal seems to be in competition with the temptation, which prompts a self-regulatory dynamic of highlighting the more important goal. As a result, the immediate value of the goal relative to the temptation increases.

We demonstrated these patterns across several self-control domains, including the evaluation and choice between healthy and unhealthy foods, academic and leisure activities, and low-brow and high-brow magazines. In addition, we used two methods of manipulating the perception of goals and temptations as complementing or competing with each other: presenting related alternatives in one versus two images, and in one stimulus list versus two stimulus lists, sorted by the underlying motivations. Specifically, in Study 1, when healthy and unhealthy food items were presented apart, in two separate images and appeared to be competing, participants evaluated healthy items more favorably than unhealthy items. However, when these food items were presented together and appeared to be complementary, participants evaluated unhealthy items more favorably than healthy items. In Study 2, similar effects on value were obtained using images of objects related to academic goals and leisure temptations (e.g., a textbook and DVDs). Study 3 extended these findings to the evaluation of menu courses. Participants assigned greater value to healthy courses than unhealthy courses when they were presented apart, in a two-section menu, but they assigned greater value to unhealthy courses than healthy courses when they were presented together, in a single menu.

Study 4 confirmed our hypothesis that goals and temptations seem to complement each other when they are presented together, in one set, compared with when they are presented apart, in two sets. Moreover, these presentation formats had no influence on perceived similarity between the items, providing further evidence that perceived complementarity (rather than similarity) accounted for the effects on evaluation and choice. Study 5 then tested for the dynamics of balancing and highlighting in choice sequence. We found a tendency to balance between an initial choice of a tempting alternative and a subsequent choice of a goal-related alternative when the alternatives were presented together and seemed to complement each other. Because the benefits from giving in to temptations are immediate, people intending to balance show a greater preference for an immediate tempting option. However, presenting the alternatives apart from each other led to consistent preferences for goal-related options for both initial and subsequent consumption. In this case, people perceive the two motivations as undermining each other, and they can maximize the benefits by emphasizing the goal. Finally, Study 6 extended the effect on evaluation and choice to actual consumption of healthy versus unhealthy snacks (carrots vs. chocolate bars). We found a greater preference for unhealthy snacks when they were included in the same (vs. different) pile with healthy snacks. Taken together, these studies illustrate how presentation formats trigger the operation of different dynamics of self-regulation.

An Alternative Interpretation

We argue that the presentation format influences the perception of goal and temptation items as either complementing or compet-

ing with each other. Alternatively, the presentation format could influence the relative focus on similarities versus differences between the items, such that items that are assigned to the same category may appear to be more similar to each other than items that are assigned to different categories (e.g., Goldstone, 1995; Tajfel & Turner, 2001). These effects on perceived similarity could trigger assimilation and contrast comparisons (Dijksterhuis et al., 1998; Mussweiler, 2003; Schwarz & Bless, 2005) and lead to a more favorable evaluation of temptations when they are assimilated with goals and a more favorable evaluation of goals when they are contrasted with temptations.

Several reasons argue against this alternative explanation. First, when we asked participants in Study 4 to rate the similarity of items that were presented together in one set or apart in two sets, their ratings did not differ as a function of the presentation format. Instead, consistent with our reasoning, the items appeared to complement each other more when they were presented together than when they were presented apart. Second, even if items are indeed more similar in a together (vs. apart) presentation format, then perceived similarity should not increase the amount of variety that people incorporate into their choices (McAlister, 1982; Ratner, Kahn, & Kahneman, 1999), for instance, by alternating between goal and temptation that are presented together (vs. apart).

Third, in Studies 1–3, we used goal and temptation stimuli that had similar a priori positive valence when evaluated on separate experimental sessions. Because the goals and temptations were similarly positive, it is unlikely that making these items more or less similar systematically reduced the value of one item and increased the value of the other item. For example, because a textbook and a DVD are similarly positive, contrasting them against each other should not increase the value of one item (the textbook) relative to the other (the DVD). In addition, emphasizing their similarities should not increase the value of the latter item (the DVD) relative to the former (the textbook). Alternatively, as we suggest, these presentation formats activated different patterns of self-regulation (balancing vs. highlighting) that people use. Notably, it is still possible that increasing the perceived similarity between goals and temptations (e.g., by asking participants to elaborate on what makes these items similar to each other) would increase the relative preference for tempting alternatives, whereas increasing the perceived difference would increase the relative preference for goal alternatives. However, in this case, the increase in similarity should activate a dynamic of balancing rather than directly affecting evaluation and choice.

Implications for Self-Control and Value Theories

A common assumption in the self-control literature is that the mutual presence of goals and temptations inevitably activates a self-control conflict between these competing motivations. In response to a self-control conflict, people use a variety of self-control strategies that decrease the motivational strength of tempting alternatives and increase the motivational strength of goal alternatives (Fishbach & Trope, 2005; Gollwitzer, 1999; Kuhl, 1986; Mischel, 1984, 1996). In this view, succumbing to temptation is a result of self-control failure, for instance, as a result of lack of mental resources (Baumeister et al., 1994; Muraven & Baumeister, 2000; Vohs & Heatherton, 2000; Vohs & Schmeichel, 2003).

This research introduces the possibility that individuals sometimes succumb to temptation when, in fact, they never perceived a self-control problem in the first place. A failure to recognize a self-control dilemma occurs when goals and temptations appear complementary and people plan to balance between these motivations in the same way they balance between any equally central goals (e.g., career and family). When they balance, people are not trying to resist the temptation. Rather, they give in to temptations in the present and hold an intention to balance by pursuing goals in the future. Overall, whereas cues for goals often remind people of the self-control problem and help them to guard against competing desires (e.g., Shah, Friedman, & Kruglanski, 2002), in a dynamic of balancing, the presence of goal cues can have the opposite effect, liberating one to pursue desires or temptations in the present and incurring self-control failure (see also Monin & Miller, 2001; Steele, 1988).

Balancing is often an adaptive self-regulatory strategy. But in the context of a self-control conflict, balancing can mean that a person chooses to succumb to temptations in the present and plans to pursue the goal in the future. Therefore, a dynamic of balancing is often associated with a failure to recognize a particular situation as requiring self-control. For example, in Study 6, when healthy and unhealthy snacks were presented together (vs. apart) and seemed complementary, participants' concern with weight gain did not predict their choice of healthy snacks. This result suggests that in this presentation format, weight watchers did not recognize a self-control problem, and they did not try to resist. In contrast, when the snack options were presented apart and seemed competing, participants' concern with calorie intake predicted a healthy choice, suggesting that participants exercised self-control.

In general, then, whereas balancing between goals and temptations and highlighting goals are both viable self-regulatory strategies, the preference for a tempting alternative in the present that is balanced by a plan to pursue a goal in the future may be maladaptive if a person follows the same evaluative pattern and makes the same temptation choice on each opportunity. For example, balancing fails if dieters end up always acting on the preference for fatty food while planning to start their diet tomorrow. Under such circumstances, balancing is an excuse more than an adaptive strategy of self-regulation.

Finally, this research has implications for the study of value. Goal researchers have identified several routes by which goals influence value. Goal states increase the value of goal-facilitating items and decrease the value of goal-undermining items (Ferguson & Bargh, 2004; Fishbach et al., 2004; Markman & Brendl, 2000; Moors et al., 2004). In addition, goal actions activate goal states, which then promote a positive evaluation of congruent, present goal actions (Aronson, 1997; Shultz & Lepper, 1996). Moreover, goal states increase the value of items or actions that "fit" their regulatory orientation (i.e., promotion vs. prevention; see Higgins, 2000; Higgins, Idson, Freitas, Spiegel, & Molden, 2003). In light of this body of research, the present investigation illustrates an additional factor that determines the effect of goals on value: the dynamic of self-regulation. We find that in the regulation of several goals with different motivational priority, the value of items or actions is not only a function of the relationship between the goal and the item (e.g., facilitative vs. inhibitory, low vs. high fit) but also a function of the perceived relationship between the

goals and temptations as complementing or competing with each other. A more complete understanding of the effect of goals on value would therefore entail considering the relationships between the different goal states that underlie choice.

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