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The Transience of Constructed Preferences

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ABSTRACT

A large body of research suggests that preferences are constructed rather than merely accessed in the course of making decisions. The current research examines the stability of constructed preferences over time. Preferences for various factors relevant to a job choice were measured prior to presentation of the job-choice task, at the point of decision, and again following a delay. It was found that relative to baseline pre-decision levels, preferences shifted to provide stronger support for the emerging decision. Preference changes proved to be transient, receding to baseline after 1 week (Experiment 1), and even within 15 minutes (Experiment 2). These findings, which can be interpreted in terms of decision-making by constraint satisfaction, suggest that preferences are constructed to serve the decision at hand, without constraining the decision maker in future decisions. Copyright © 2007 John Wiley & Sons, Ltd.

KEY WORDS decision making; constructed preferences; constraint satisfaction; time and decision making; regret; decisional conflict

INTRODUCTION

A substantial body of literature on judgment and decision-making has been devoted to the construction of preferences. It has been observed that individuals are often unsure of their preferences, hold inconsistent preferences, and change their preferences as they go about making decisions (Slovic, 1995; for a comprehensive review, see Lichtenstein & Slovic, 2006). It has been suggested that preferences are invented rather than found (Johnson, Steffel, & Goldstein, 2005), more like the product of architecture than of archaeology (Gregory, Lichtenstein, & Slovic, 1993; Payne, Bettman, & Schkade, 1999).

Preference construction is an important element in a number of decision-making theories positing that the solution to decisional conflict lies in the reconstruction of the decision task (Janis & Mann, 1977; Mills & O'Neal, 1971; Montgomery, 1983; Montgomery & Willen, 1999; Russo, Medvec, & Meloy, 1996; Svenson, 1992, 1996). A shared premise of these theories is that confident and defensible decisions are possible when

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one of the decision alternatives become superior to its rivals, which requires that alternatives be 'spread apart' by altering the initial preferences of the decision's attributes. Thus, for certain decisions, the construction of preferences can be considered an integral and essential part of the decision-making process.

Little attention has been paid to the temporal stability of constructed preferences. Do they have a long-lasting effect on the decision maker's underlying preferences, or do they dissipate after the decision has been made? Will they affect future decisions that involve similar attributes, or are they confined in an ad hoc manner to the decision at hand? If constructed preferences are generally stable across time, then every decision could potentially have long-term effects on future decisions that involve any of the same attributes. It is not clear whether such stability would be desirable, as it implies that preferences that were constructed in the context of a given decision will constrain one's freedom of choice in many subsequent decisions. The little available data from a somewhat different domain suggests that constructed preferences tend to be confined in scope (Ariely, Loewenstein, & Prelec, 2003). The current research is designed to examine the stability of constructed preferences.

Preference construction in decision making by constraint satisfaction

Previous research (Simon, Krawczyk, & Holyoak, 2004) investigated preference construction within the paradigm of multi-attribute decision theory (MAUT; e.g., Edwards & Newman, 1982; Hammond, Keeney, & Raiffa, 1999). Those studies were based on the following basic design. In the initial phase ('baseline'), participants were asked to state their preferences for a variety of putatively unrelated attributes that could be included in Job offers, such as different salaries and various lengths of commute to one's workplace. Participants were subsequently presented with a decision task requiring them to choose between two similarly attractive job offers that contained some of the same attributes presented in the first instrument. At some point close to the completion of the task (either before or immediately after the decision was to be made), participants were asked to rate the attributes of the job offers, thus effectively repeating the judgments they made on the baseline test. The subsequent ratings were found to have shifted toward providing stronger support for the emerging decision; that is, the ratings of the positive attributes of the chosen alternative increased in strength and its negative attributes waned, and vice versa for the attributes of the rejected offer. In other words, constructed preferences inflated the attractiveness of one choice and deflated the other, so that one alternative attained a state of superior attractiveness over its rival. These changes can be labeled 'coherence shifts,' in that the ratings of the decision attributes shift toward greater coherence with the chosen decision. The decisions were also accompanied by high levels of confidence, as would be expected by the chosen alternative's superiority over its rival.

The studies by Simon, Krawczyk, et al. (2004) are part of a larger body of research on decision making by constraint satisfaction that has found coherence shifts in a variety of tasks, including high-level reasoning such as inductions, analogies, applications of rules to ambiguous situations, and social reasoning (Holyoak & Simon, 1999; Simon, Pham, Le, & Holyoak, 2001), and various factual inferences (Simon, Snow, & Read, 2004). It is important to note that a number of studies have shown consistently that coherence shifts occur mostly pre-decisionally (Holyoak & Simon, 1999, Experiment 1; Simon et al., 2001, Experiments 1, 2, 3; Simon, Krawczyk, et al.,2004, Experiment 1; Simon, Snow, et al., 2004, Experiment 3) and are thus not mere post-hoc rationalizations (see Brownstein, 2003; cf. Festinger, 1957, 1964). However, previous studies have not investigated the persistence of coherence shifts over time.

EXPERIMENT 1

Experiment 1 was designed to determine whether coherence shifts generate transient or long-lasting changes in the decision maker's preferences for the attributes. We obtained measures of desirability and weights of

decision attributes before the choice was presented, immediately following the decision, and then 1 week later. The design was intended to determine whether the coherence shifts would persist 1 week post-decision.

Method

Participants

Participants were 28 undergraduates from the University of California, Los Angeles (UCLA), who were compensated with course credit for completing the experiment.

Materials, design, and procedure

The materials were based on the 'job choice' materials created by Simon, Krawczyk, et al. (2004). Participants completed the experiment in three phases. Desirability and importance ratings of job-related attributes were measured within-subjects, prior to the presentation of the decision task (baseline), at the point of decision (decision test), and 1 week following the decision (delay test). Participants were run in groups of 1–3. At each stage of the experiment, participants received a booklet specific to the experimental stage. Each booklet contained an instrument that measured desirability and importance ratings for job attributes.

The first booklet was a baseline test that was presented before participants learned about the job offers. This booklet was titled 'Waiting For a Job Offer.' Participants were told to imagine that they were about to graduate from college and were interviewing for a job in the field of marketing. While waiting to receive an offer, they were asked to state their evaluation of job-related features that might be included in job offers. The booklet contained 11 statements describing a variety of job attributes. There were four dimensions of interest: the length of the commute to the office (*commute*), the type of office offered (*office*), the vacation package offered (*vacation*), and the salary offered (*salary*). Each dimension could take on either of two attribute values, one more attractive and one less attractive. Responses were given on a 10-point scale from -5 (highly undesirable) to $+5$ (highly desirable). For example, one of the desirability questions was phrased as follows:

> 'For your working space, you will be given a medium sized cubicle. Please state how desirable it is to work in the cubicle.'

Each of the eight attributes appeared in one of the 11 statements (three statements measured unrelated attributes, serving as distractor items).

After completing the desirability task, the next section of the booklet asked for ratings of the importance of each of the four dimensions (office, commute, salary, and vacation). Participants were asked to indicate how much weight they would assign to each dimension assuming that they were included in a job offer. Each dimension was delimited by values that corresponded to its high and low attributes. The importance ratings were made on a 9-point scale ranging from 0 (no weight) to 8 (maximum weight). The order of statements for both the desirability and importance tasks was counterbalanced within- and between-booklets to control for order effects. After this booklet was collected, participants completed a 5 minute unrelated reasoning task.

In the second phase, participants received a booklet entitled 'Choosing a Job,' which contained the job-choice task and decision instrument. Participants were told that they had received job offers from two large department store chains, Bonnie's Best ('BB') and Splendor. Participants were encouraged to take the task seriously and process the information thoughtfully. Prior to reading the choice pairs and then again prior to making the decision, participants were given the following statement: 'Please consider all pros and cons of both job offers carefully. Try to make this decision as if you were really in the described situation and were facing a choice that will strongly influence your future career.'

The companies were described as being similar in size, reputation, stability, and opportunities for promotion. Participants were also informed that they had met with key personnel at the two companies and found them to be stimulating and pleasant. Each of the offers had two positive attributes and two negative attributes on the four dimensions of office, commute, salary, and vacation. The commute to Splendor was short (18 minutes) and Splendor offered a private office, but it also paid a low salary ($600 less than the industry's average of $40 000) and offered minimal vacation. The four attributes varied in the opposite manner for BB: it offered a higher salary ($800 above industry average) and a superior vacation package, but the commute to its offices was longer (35 minutes), and it provided a cubicle rather than a private office. The presentation order of the job offers and their attributes was counterbalanced.

Following the presentation of the job choices, participants were asked to report their choice between the offers and their confidence in that choice on a scale from 1 to 5, with 5 representing maximal confidence. They were then given a slightly modified version of the desirability and importance instrument (the decision instrument). The questions eliciting the preferences and weights were the same as those in the baseline instrument, except that the descriptions leading to the questions were worded in terms of the corresponding job offers. For example, one of the desirability questions was phrased as follows:

> 'At Bonnie's Best, you will be given a medium sized cubicle. Please state how desirable it is to work in a cubicle.'

The final booklet, given to participants 1-week later, was titled 'Thinking More About the Job Market' and contained the delay instrument. The booklet informed participants to continue playing the role of a college student who is about to graduate and is looking for work. The instructions stated that BB and Splendor had both been taken over by a large corporation and had been moved out of state. Participants were encouraged not to be concerned since they had received interviews at several other companies. The following pages contained the delay instruments, assessing desirability, and importance, which were identical to the baseline measures.

Results

On average, participants in Experiment 1 were moderately confident about their decisions for both Splendor and BB ($M = 3.7$, $SD = 0.95$, out of 5). There was no significant difference in confidence ratings for choosers of either job offer, $p > 0.05$. Job choice preference was slightly weighted toward BB with 57% of participants choosing the BB job offer over the Splendor offer.

Following Simon, Krawczyk, et al. (2004), desirability scores at each experimental stage were integrated into a composite measure of coherent evaluations in favor of the Splendor choice (*S-score*). The S-score composite was calculated by taking the average of desirability ratings for the eight attributes, reversing the scale for the attributes that favored BB.

S-scores for desirability ratings were compared using a 2 between (job choice) × 3 within (experiment stage) mixed-model analysis of variance (ANOVA). For this analysis four extreme outlier scores were identified, using a >2 *SEM* criterion, and corrected by transforming to the most extreme point within 2 *SEM*. A significant interaction was found between experimental stage and job choice, $F(2, 25) = 4.05$, $p < 0.04$, as depicted in Figure 1. Orthogonal planned comparisons were conducted to compare decision shifts with baseline and delay shifts. The results replicated the coherence shifts found in past research (e.g., Simon, Krawczyk, et al., 2004), as desirability shifted significantly in the direction of the participants' preferred option at the point of decision ($M = 0.95$, $SD = 1.28$) relative to baseline or after a delay ($M = 0.26$, $SD = 0.92$), $p < 0.05$. Supporting our hypothesis that coherence shifts would prove to be transient, the difference decreased 1 week following the decision, ($M = 0.10$, $SD = 1.04$), returning to a level not significantly different from baseline ($M = 0.41$, $SD = 1.34$), $p > 0.29$.
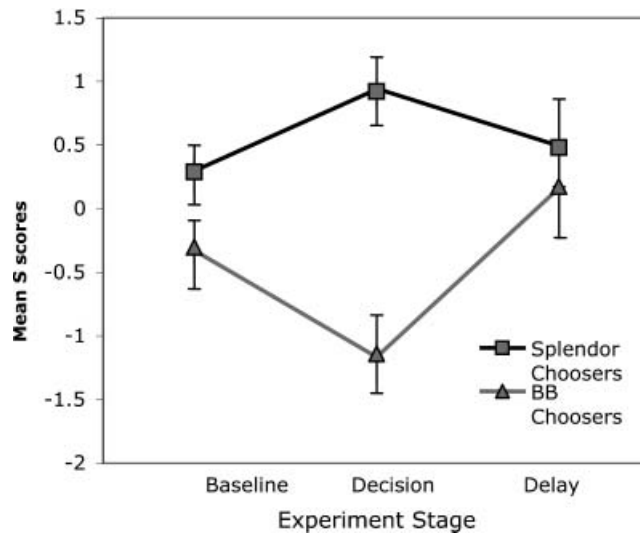
Figure 1. Participants' composite desirability ratings in favor of the Splendor option (S-score) at baseline, immediately after, and 1 week following the job-choice task, broken down by chosen option (Experiment 1)

For analysis of importance weightings, dimensions were categorized as being either positive or negative with respect to the participants' choice. A mixed, 2 between (job choice) $\times$ 2 within (positive or negative) $\times$ 3 within (experiment stage) ANOVA was run on participants' mean importance ratings. A significant interaction was found between experimental stage and positive versus negative dimensions, $F(2, 26) = 3.90$, $p < 0.02$, and is plotted in Figure 2. Post-hoc t-tests were Bonferroni corrected to control for groupwise error. As can be seen from Figure 2, the results followed a general pattern similar to that observed for desirability
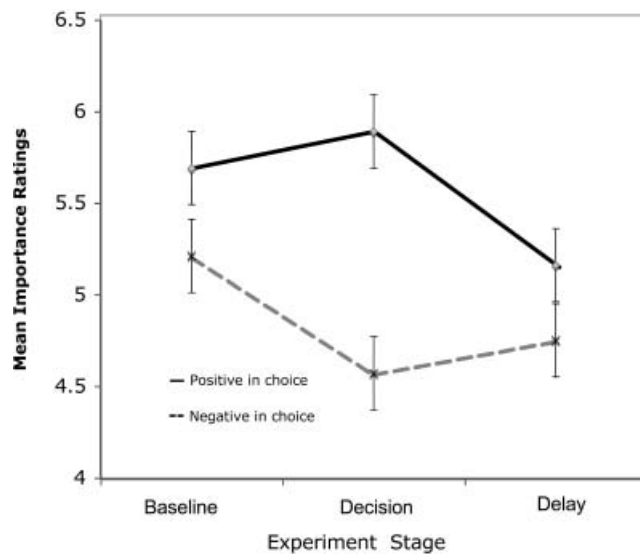

Figure 2. Participants' importance ratings for the attribute dimensions that were positive and negative in their choices at each experimental stage (Experiment 1)

ratings. Dimensions negative in participants' choices became significantly less important from baseline ($M = 5.7$, $SD = 1.06$) to point of decision ($M = 4.57$, $SD = 1.2$), $p < 0.05$. Dimensions positive in participants' choices also followed a similar pattern to desirability ratings, generally becoming more important from baseline ($M = 5.7$, $SD = 1.06$) to point of decision ($M = 5.9$, $SD = 1.35$), though this trend was not significant, $p > 0.05$. In addition, the present results indicate that shifts in importance returned close to baseline after a 1-week delay, significantly so for items positive-to-choice, $M = 5.16$, $SD = 1.45$, $p < 0.05$; but not for items negative-to-choice, $M = 4.75$, $SD = 1.38$, $p > 0.05$.

To provide an integrated measure of coherence using both desirability of attributes and importance weights (as in MAUT), we computed the product of attribute desirability (scaled from -1 to 1) and attribute importance (scaled from 0 to 1) to create an integrated S-score. Integrated S-scores were compared using a 2 between (job choice) $\times$ 3 within (experiment stage) mixed-model ANOVA. As shown in Figure 3, a significant interaction was found between experimental stage and job choice, $F(2, 25) = 3.24$, $p < 0.05$. As can be seen from Figure 3, trends for integrated S-scores followed a similar pattern to S-scores, peaking at the point of decision and then returning toward baseline 1 week later.

Discussion

The results of Experiment 1 replicated the findings of Simon, Krawczyk, et al. (2004), demonstrating the changes in evaluations from the baseline measurement to the point of decision. This shift manifests the result of the spreading apart of decision choices as one choice increases in attractiveness: participants who chose the BB offer reported stronger preferences for that offer's positive attributes and for the Splendor offer's negative attributes, and weaker preferences for the BB offer's negative attributes and the Splendor offer's positive attributes. Participants who chose the Splendor offer reported changes in the opposite direction. Thus, both groups of participants constructed the decision environment so that their chosen option attained superior attractiveness relative to its rival.

This experiment also provides a clear answer to the principal question it was designed to study. We found that 1 week after the decision was made, the heightened attractiveness of the chosen option had entirely dissipated, with the ratings returning to levels that were no different than baseline levels. This finding
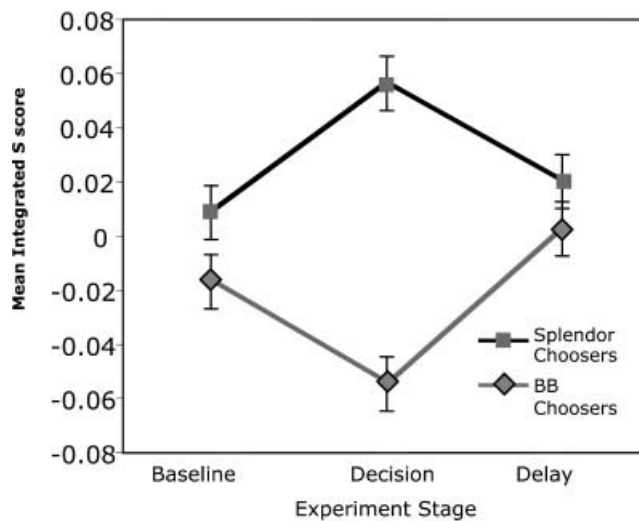

Figure 3. Participants' integrated S-scores (desirability $\times$ importance for each attribute) at each experimental stage by job choice (Experiment 1)

supports the conclusion that coherence shifts are short-term rather than permanent, demonstrating that coherence shifts do not fundamentally change preferences in the long term. However, because the delay was substantial (1 week), the results of Experiment 1 provide little information about the rate of dissipation. Experiment 2 was designed to offer some insight into this issue.

EXPERIMENT 2

In Experiment 2, we sought to test whether constructed preferences dissipate rapidly. We replicated the procedure used in Experiment 1, but administered the delay test less than 15 minutes from completing the job-choice task.

Method
Participants
Participants were 82 UCLA undergraduates. Participants were compensated with course credit for participating.

Materials, design, and procedure
As in Experiment 1, participants' desirability ratings for the attributes of job decisions were measured within-subjects, prior to (baseline), at the point of (decision test) and after a time delay following job decisions (delay test). We sought to increase the generality of our findings by adding a second decision task. In addition to the BB versus Splendor choice from Experiment 1, participants in Experiment 2 were administered a second choice between job offers from two other companies, Grand Value (GV) and Zacks. Attributes for this choice pair were incorporated into the baseline and delay test, and a GV versus Zacks decision test booklet was presented to participants after the BB versus Splendor decision test booklet. The attributes of the GV versus Zacks pair of job offers were different from the attributes contained in the BB versus Splendor pair. The delay instrument was administered 10 minutes following the completion of the GV versus Zacks decision test. A version of a Latin-square counterbalancing technique was used to control for ordering effects for attributes and presentation of choices on the job-choice tasks, as well as item ordering on the desirability and importance measures.

The baseline booklet was again labeled 'Waiting for a Job Offer.' Baseline desirability ratings for the GV and Zacks attributes were added and interspersed among the baseline desirability measures of the Splendor and BB attributes. The attribute dimensions measured for the GV and Zacks pair were: time before promotion (*promotion*), presence of old friends at the work place (*friends*), the location of the workplace (*location*), and the site of an annual training conference (*training*). Participants rated one high and one low instance of each of these four attributes on a 10-point scale from −5 (highly undesirable) to +5 (highly desirable). Two distractor items were also included. The importance measures for the Splendor and BB attributes were presented in a separate section of the booklet following the measures of desirability. Importance measures were not included for GV and Zacks attributes.

There were two decision test booklets, A and B. Decision booklet A was titled 'Choosing a Job Offer (A).' This was an exact replication of the decision test booklet from Experiment 1. Following the first choice task, participants rated desirability and importance for Splendor versus BB attributes only.

A second decision booklet involved the GV versus Zacks choice task and was titled 'Choosing a Job Offer (B).' The instructions informed participants that the Splendor and Bonnie's Best job offers were no longer an option: they had both been taken over by a larger company and had been moved out of state. Participants were further instructed to imagine that they had received two new offers of equivalent location and salary. The next

page presented the two offers from Zacks and GV, each of which had two positive attributes and two negative attributes. Participants were informed that the offices of GV are located in a nice part of town (positive), and two of their best friends from high school work there (positive), but they will not be considered for promotion before 18 months (negative), and the job training site is in a dull place in Jackstown, Tennessee (negative). At Zacks, participants were told, employees are considered for promotion as soon as 6 months from hiring (positive), and employees are sent every year for training at an attractive place in Chicago (positive), but its offices are located in an industrial part of town (negative), and they do not know anyone who works there (negative). The GV versus Zacks desirability measures followed directly after the GV versus Zacks decision was made. The desirability questions were the same as those in the baseline but were worded in terms of the Zacks and GV job offers.

The delay booklet was again titled 'Thinking More About the Job Market.' Instructions informed participants that the GV versus Zacks offers were also no longer available. They were instructed not to be disheartened because they had been interviewed by several other companies. The delay desirability questions were the same as those in the baseline, with the attributes of both job choice pairs interspersed. Because of the short time-delay, 10 distractor items were added to the delay test to diminish recognition of questionnaire items. These items required participants to rate various levels of these attributes, which differed from the ones in the Splendor versus BB choice pair and baseline.

To ensure that the delay was similar for all participants, participants were time-monitored from the completion of the first decision task until the presentation of the delay booklet. Importantly, participants were given exactly 10 minutes to perform an unrelated distraction task following the completion of the second decision task. At the end of the 10 minutes, participants were administered the delay booklet. All participants completed the first decision task within between 2 and 5 minutes, with the majority of participants taking between 3 and 4 minutes. A standard sports stopwatch was used to record participants' times on tasks. Participants were run in groups of 1–4.

Results and discussion

Participants in Experiment 2 were moderately confident about their decisions for both choice pairs: Splendor versus BB ($M = 3.82$, $SD = 0.83$, out of 5) and GV versus Zacks ($M = 3.56$, $SD = 0.83$, out of 5). There was no significant difference in confidence ratings for choosers of either job offer within pairs, $p > 0.05$. However, a small non-significant trend suggested BB choosers ($M = 3.96$, $SD = 0.82$) may have been slightly more confident in their chosen offer than were Splendor choosers ($M = 3.60$, $SD = 0.81$), $p = 0.06$. Sixty-three percent of participants chose the BB job offer over the Splendor offer (37%). Participants were more evenly split over the GV versus Zacks choice pair, with 52% choosing GV over Zacks (48%).

As in Experiment 1, a composite S-score of desirability was calculated for the Splendor versus BB choice (see Figure 4A). S-scores were compared using a 2 between (job choice) $\times$ 3 within (experiment stage) mixed-model ANOVA. A significant interaction between job choice and experiment stage was found, $F(2, 80) = 11.89$, $p < 0.01$. Orthogonal planned comparisons were conducted to compare decision shifts with baseline and delay shifts. The results replicated the coherence effects found in past research, desirability shifted significantly in the direction of participants' decision at the time immediately following the decision ($M = 0.97$, $SD = 1.19$), becoming significantly higher than baseline and delay measures ($M = 0.56$, $SD = 1.16$), $p < 0.01$. The comparison between baseline ($M = 0.24$, $SD = 1.36$) and delay ($M = 0.90$, $SD = 1.30$) indicated a significant difference, $p < 0.01$, suggesting that S-scores may not have returned to baseline after the initial shift. Based on observed trends, this effect was followed up separately for each decision group via paired samples t-tests, Bonferroni-corrected to control for groupwise error. As can be seen in Figure 4A, the effect was the result of BB choosers' delay desirability shifts ($M = -1.19$, $SD = 1.08$), which failed to return to baseline ($M = -0.31$, $SD = 1.05$), $p < 0.01$. For Splendor choosers, the delayed
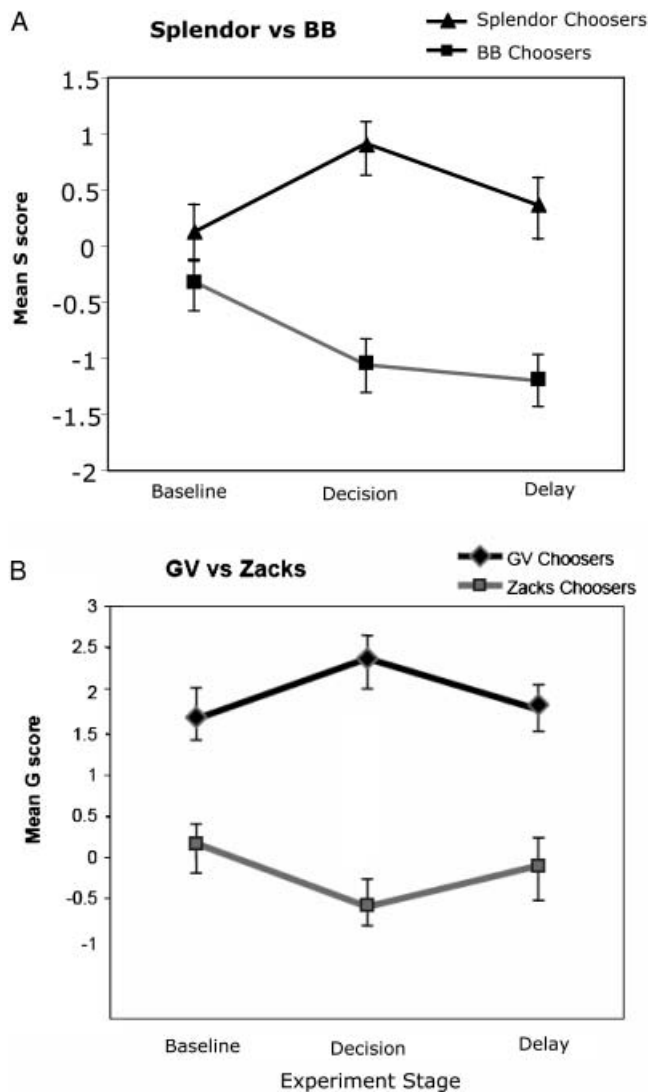
Figure 4. (A) Participants' composite desirability ratings in favor of the Splendor option (S-score) at each experimental stage broken down by chosen option. (B) Participants' composite desirability ratings in favor of the Grand Value option (G-score) at each stage broken down by chosen option (Experiment 2)

post-decision desirability ($M = 0.36$, $SD = 1.50$) returned to a level that did not differ significantly from baseline ($M = 0.12$, $SD = 1.38$), $p > 0.05$.

To determine whether the persistence of coherence effects for BB choosers was due to the interference of some especially salient attribute, eight individual 2 (decision group) $\times$ 2 (experiment stage) analyses were run on participant ratings for each of the attributes that made up the desirability composite. No significant differences or notable trends were found to indicate that any one attribute was responsible for the effect ($p > 0.05$ for all comparisons).

For the GV versus Zacks choice pair (see Figure 4B), an analogous 'G-score' for desirability oriented toward the GV option was calculated. G-scores were compared using a 2 between (job choice) × 3 within (experiment stage) mixed-model ANOVA. A significant interaction was found between experimental stage and job choice, $F(2, 80) = 10.43$, $p < 0.01$. Orthogonal planned comparisons were conducted to compare decision shifts with baseline and delay shifts. As in the case of the Splendor versus BB choice, desirability shifted significantly in the direction of participants' decision at the point of decision ($M = 1.56$, $SD = 1.67$), becoming significantly higher than baseline and delay measures ($M = 0.93$, $SD = 1.50$), $p < 0.01$. Supporting the hypothesis that coherence shifts would prove to be transient, this shift decreased within 10 minutes following the decision, ($M = 1.01$, $SD = 1.56$), returning to a level not significantly different from baseline ($M = 0.84$, $SD = 1.68$), $p > 0.2$.

The results of Experiment 2 replicate and strengthen the findings of Experiment 1. Coherence shifts were found to be very transient, in that for one of the two groups in the first choice task, the shifts dissipated within 15 minutes, and for both of the groups in the second choice task, the dissipation occurred within 10 minutes. We do not have a clear explanation why the single group of BB choosers behaved differently from the other three groups. One possibility might have to do with the unique nature of the monetary attribute. While the BB job offered the highest salary, it entailed two substantially negative features: a considerably longer commute and having to work in a cubicle instead of a private office. It is possible that making these sacrifices for the sake of a higher salary required somewhat different processing that entailed a high level of self-consciousness.

GENERAL DISCUSSION

Evidence for preference construction

The present findings provide further evidence favoring the hypothesis that preferences are constructed as a means of spreading apart the choice alternatives at the point of decision. Participants' ratings of the desirability of the attributes and their respective weights shifted toward providing stronger support for the chosen job offer, effectively resulting in greater attractiveness of the chosen option. Our interpretation of these findings is that the spreading apart serves to reduce the decision maker's decisional conflict, and thus presumably increases the confidence in the decision. These results replicate the effect of coherence-based decision-making on MAUT tasks (Simon, Krawczyk, et al., 2004). The findings are consistent with theories that posit that decision-making is facilitated by spreading the alternatives apart (Janis & Mann, 1977; Mills & O'Neal, 1971; Montgomery, 1983; Russo et al., 1996; Svenson, 1992). As in the case of prior work on coherence-based decision-making (Holyoak & Simon, 1999; Simon et al., 2001, Simon, Snow, et al., 2004; see Simon, 2004), the coherence shifts observed in the present studies can be explained by neural models that implement processes of constraint satisfaction. According to such models, coherence is generated by means of a bi-directional process, in which evaluations of attributes influence the emerging decision and are influenced by it in return, resulting in a gradual spreading apart of the choice alternatives (e.g., Holyoak & Simon, 1999; Holyoak & Thagard, 1989; Read, Vanman, & Miller, 1997; Spellman, Ullman & Holyoak, 1993; Thagard, 1989).

It is important to note that our data show that participants' choices were compatible with their initial preferences, as can be seen from the baseline gaps apparent in Figures 1, 3, and 4. By the point of decision, however, these gaps had grown significantly larger. Neither the results of the present study nor of similar previous studies indicate that coherence shifts cause actual reversals in people's preferences. Rather, the findings suggest that the baseline preferences were not sufficiently superior to their rivals so as to enable a confident decision, but the preferences shifted during the course of the process to reach a state of superior attractiveness. Coherence shifts are thus best understood as an amplification, or inflation, of existing preferences.

A possible criticism of our methodology should be noted. The wording of the preference questions in the baseline and delay instruments was slightly different than the wording in the decision instrument. Only the latter referred to a given job offer by name (e.g., 'At Bonnie's Best, …') and afforded participants the opportunity to assess the attributes in relation to other attributes contained in the same offer. Thus, it is theoretically possible that participants' preferences were compensated for, or offset by, other attributes (e.g., the cubicle could seem less undesirable because the corresponding job offered a higher salary). We contend, however, that one would be hard pressed to explain the observed shifts of all attributes in the predicted direction without resorting to an explanation based on some form of a coherence-maximization function. It is noteworthy also that similar coherence effects have been found using different stimuli that contained more attributes and where the possibility of interaction among the variables was even more remote than in the job choice (see Holyoak & Simon, 1999; Simon, Snow, et al., 2004).

The transience of constructed preferences

The results of these studies indicate that the changes brought about by construction of preferences tend to dissipate over time. In Experiment 1, participants' preferences returned to their baseline states within 1 week after the decision. The findings of Experiment 2 were more striking: for three of the four decision groups, the changes receded to baseline within 10–15 minutes. The slower rate of return to baseline for the fourth group does not indicate a lack of recession to baseline, as even these shifts dissipated completely within a period of a week (Experiment 1). Whether the longest-lasting of the shifts survives for 20 minutes or 3 days does not alter the basic conclusion that coherence shifts do not appear to have long-lasting effects on people's preferences.

A positive effect of the dissipation of coherence is that it prevents the construction of preferences from becoming a hindrance for subsequent decisions. If constructed preferences resulted in permanent changes, every preference constructed in the course of any decision would constrain the decision maker in all future decisions that involve similar attributes. This danger appears to be allayed by the transience of the phenomenon. Coherence shifts dissipate quickly and thus free the decision maker from being bound by the recently altered preferences.

Combined, the construction of preferences and its dissipation makes for an effective and adaptive decision-making process, in that it enables choice even in the face of tough decisions without encumbering the person's preferences into the future. This ad hoc view of constructed preferences agrees with Shafir's (in press) observation that decisions are local in nature, in that they fit one's proximal goals and biases, with less regard to broader goals or underlying preferences. The transience of coherence shifts is consistent with neural-network models that implement processes of constraint satisfaction. Constructed preferences would be expected to be transient because they correspond to activations of nodes (rather than weights on links, which are more long-lasting).

It is important to bear in mind that decision-making by constraint satisfaction is not without potential downsides. The fact that decisions are made at the point of inflated attractiveness can lead to suboptimal behavior. For example, people might tend to overvalue the choices they make, resulting in over-paying for products, or purchasing products which they would not have purchased absent the inflation of preference. Transient coherence shifts could help explain why items that seem attractive at the time of purchase end up hanging idly in our closets or stored away in boxes. The overvaluing of the choice may also affect other choices made immediately following the decision, including the purchasing of insurance for the product at an inflated rate (which could explain the high margins retailers extract from selling warranties), or the purchasing of another similar or complementary item (as advocated by showroom salespeople and Internet retailers alike).

By the same token, the dissipation of constructed preferences can induce post-decisional regret. Once the shifts dissipate, the preference for the chosen alternative recedes to its non-inflated state of moderate advantage, which was insufficient to enable a conflict-free decision in the first place. In other words, the person is confronted

with the realization that the choice is no longer as attractive as it seemed when the decision was made. The transience of inflated preferences might also help explain the finding that enjoyment of consuming a desired object often falls short of the anticipated pleasure of its consumption (Gilbert, 2006). A possible explanation for this discrepancy is that the anticipation corresponds to an inflated state of preference, which cannot be matched by the consumption itself.

When may preference shifts endure?

We do not claim that constructed preferences will always dissipate and return to their *ex ante* levels. There is good reason to believe that various factors will moderate the dissipation. One distinction is between decisions that involve novel attributes and those that involve familiar ones. Some learning, that is, long-lasting effects on preferences, is likely to occur when people encounter novel situations (e.g., a first-time parent evaluating the features of a baby stroller; Hoeffler & Ariely, 1999). Learning will presumably decrease as people become familiarized with the attributes. Still, familiarity is no guarantee that decisions will be conflict-free. In real life, we often find ourselves hard pressed to make decisions in familiar domains, as when purchasing a stroller for one's third child, grappling over mundane choices such as going to a dinner or a concert, or even choosing between the chicken and salmon dishes at one's favorite restaurant.

An important distinction needs to be made between final decisions and lingering ones. Some decisions tend to cease to be of interest to the decision maker after they are made. Examples include most of the numerous choices people make when remodeling a house, the grading of exams, and a judge's decision to sentence a person to imprisonment. Our data pertain to this category of decisions, which we believe to be frequent and potentially important. Other types of decisions, however, are likely to be reiterated and possibly reconstructed well after the choice was made. For example, a person who experiences persistent regret over the purchase of a particular car might revisit the decision at every visit to the gas pump, or whenever encountering the car that was regretfully rejected (Festinger, 1964; Svenson, 1992, 1996). Another limitation of our studies is that we did not test decisions that involve material stakes for the participants. Future research should examine the variables that moderate the dissipation of constructed preferences.

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