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The Effect of Option Attachment in Satisfaction

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This study investigates that level of deliberation and changeability of choice influence consumer satisfaction with a chosen option. In two experiments, the authors found that changeability of choice had a significant impact on satisfaction with chosen options while Level of deliberation did not have a significant impact on satisfaction. It also discovered interaction effect between deliberation level and changeability of purchase. In other words, when the level of deliberation was high, the difference in option attachment between changeable and unchangeable conditions was significant. Notably, this took place when consumers considered the option more closely.

Field of Research: Marketing and Sales

1. Introduction

Previous studies suggested that consumer satisfaction with their purchase depended on the performances of the selected options. Consumers are satisfied with their purchase when the performances of the chosen options are greater than they expected prior to the choice (*e.g.,* Day, 2002; McDougall and Levesque, 2000). In reality, however, more consumers consider which options to choose among various alternatives, rather than considering whether or not to choose an option. Therefore, they are satisfied not only by the performances of the selected options, but also by comparing the options with forgone ones.

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Meanwhile, consumers tend to deliberate more on what they think as important factors in decision making since they believe that more deliberative decision making could enhance the quality of their decision. Deliberating on alternative choices can make not only the features of the chosen options, but also those of the forgone options look attractive. When consumers forgo certain options after pre-commitment, they experience a sense of loss. In turn, they become attached to the forgone options since the less preferred options can appear more attractive after a choice is made.

This study is different from that of Gilbert and Ebert (2002). This study shows that the consumer's satisfaction is influenced according to the attachment for the forgone options considered prior to the choice, not for the mechanism for psychological immune system.

Also, this study was explained by option attachment that the consumer's satisfaction is different between changeable conditions and unchangeable conditions after choosing a specific option under the contexts where trade-off is high between each option. Accordingly, this study can be deemed as a more advanced one compared to presently existing studies.

2. Literature Review

2.1. Changeability of Choice

The level of satisfaction with chosen options is significantly influenced by changeability of the options (Gilbert and Ebert, 2002). Gilbert and Ebert (2002) looked at consumer satisfaction from a different angle, that is, consumer satisfaction is influenced not only by simple expectation-performance paradigm on choice alternatives, but also by whether the choice can be reversed. In particular, the psychological immune system is critical in understanding that changeability of the choice affects satisfaction with the chosen option. The psychological immune system enables consumers to psychologically restructure the outcome of their decision as time pass (Gillbert, Pinel, Wilson, Blumberg, and Wheatley, 1998). The psychological immune system sets people free from negative outcomes as time passes.

Consumer satisfaction with a chosen option is influenced by the psychological immune system. Changeability of choice, in particular, is closely related to the psychological immune system. Under the unchangeable condition, the psychological immune system begins to work, in order to protect oneself, while the system can be neglected under the changeable conditions, as the less preferred option can emerge

as an alternative. This explains why people are less satisfied with changeable choice options than unchangeable ones (Gilbert and Ebert, 2002).

2.2. Attachment to Forgone Options

When buying a particular product, consumers tend to precommit each product in a consideration set. Then they become attached to the item after the choice. According to the Loss aversion theory, the subjective value of forgone options greater than that of chosen options generally, even though they have the same economic values (Kahneman, Knetsch, and Thaler, 1990; Strahilevitz and Loewenstein, 1998). Especially, through the deliberation process, people develop a stronger prefactual ownership, and the foregone options become more attractive than they seem before making the choice (Carmon, Wertenbroch, and Zeelenberg, 2003).

The impact that the deliberation has on attachment to forgone options can be affected by changeability of choice. The same is true with satisfaction with chosen options. Naturally, they become less attached to the forgone options and more satisfied with chosen options. Then what if people do not deliberate much before making a decision? In this case, changeability will have no impact because the low level of deliberation allows little time for simulation, which, in turn, allows low prefactual ownership. Automatically, people will become less attached to the forgone options.

3. Experiment 1

3.1. Method

3.1.1. Participants and Design

In this study, 48 female and male undergraduate marketing students took part to fulfill a class requirement. This study used a 2(deliberation: high vs. low) × 2(changeability: changeable vs. unchangeable) between and within subject design. In other words, the participants were divided into two groups according to the level of their deliberation (high vs. low), and each group was asked to read two different scenarios, one with a character who had bought a product under changeable conditions, and the other character who had bought a product under unchangeable conditions. Then, the participants evaluated their level of satisfaction with the products that the characters had bought.

3.1.2. Pretest

This study aims at examining the impact that the changeability of choice option and the level of deliberation have when making decisions on satisfaction with the chosen options. To this end, a pretest was carried out in advance of the main test, in order to find out the level of deliberation and appropriate products for the main test. Deliberation was manipulated by the duration method of Carmon et al. (2003). Carmon et al. (2003) regarded two months as a long duration of deliberation and two days as a short duration. In the same context, this study measured the level of deliberation through duration.

As a result of the pretest, the longest duration of deliberation was decided to be a week, whereas the shortest one was decided to be 5 minutes (5.50 vs. 3.65, $t(41)=5.82$, $p< .01$). Regarding the products for the main test, a jazz CD and a classical music CD(4.91 vs. 4.63) were chosen, as the pretest showed no statistical differences between them in their preference level($t(43)=1.13$, $p> .26$), and no statistical differences in their involvement level (3.87 vs. 4.05, $t(43)=- .41$, $p> .69$).

3.1.3. Procedure

In Experiment 1, we made several instructions about how to fill out the questionnaire and directed the study. Each participant was given one of the 2 scenarios. After reading both scenarios (Free return vs. No return), the participants were asked to answer under what situation Mr. K would feel more satisfied. Under the condition that he can freely exchange and be refunded or under the condition that exchange or refund is not available. They were also asked to evaluate the levels of satisfaction with the chosen products under each condition. Then, the researcher directed them to take a manipulation check on deliberation.

3.1.4. Measures

The study modified the measuring item of DeCarlo and Leigh (1996) to see "how careful they were in purchasing,", "how prudent they think they were," and "how deliberative the purchasing was.”. The participants were asked to give 1 to 7-points to each question. Point 1 was "not at all" while 7 meant "very correct." The closer a point is to 1, the less deliberate they were, and vice versa. Changeability of choice was measured not by level, but by categories of yes, or no. Therefore, the participants were given two scenarios that said either "changeable" or "unchangeable."

The dependent variable used in the study was level of satisfaction with chosen options. The study used two measuring items for this. The first item was that of Oliver's (1993), asking "how satisfied do you think Mr. K will be with the chosen

option?" and the participants responded based on 7-point scale. Similarly, score 1 meant "not at all," while 7 meant "very correct." The closer a score is to 1, the less satisfied he was, and vice versa. This study also modified the measuring item introduced by Zeelenberg, van den Bos, van Dijk and Pieters (2002) to ask the participants "under what conditions do you think you will be more satisfied," among either changeable or unchangeable conditions.

3.2. Results

3.2.1. Manipulation Check

The manipulation check was carried out using a modified version of a measuring item used by DeCarlo and Leigh (1996), to measure "how careful they were when purchasing", "how prudent they think they were,", and "how deliberative the purchasing was" by a 7 score scale. The coefficient of Cronbach' α between the measuring items was .91. As a result, the manipulation test showed a significant difference between the high level of deliberation, with a deliberating duration of a week, and the low level of deliberation with a deliberating duration of 5 minutes (4.44 vs. 3.97, $t(46)=2.26$, $p< .05$).

3.2.2. Satisfaction with the Chosen Options

Chi-square (χ^2) analysis and ANOVA through repeated measures for measuring within group design were used in this study for hypothesis testing. As a result of χ^2 analysis, 6 out of 25 participants with high levels of deliberation replied that they were more satisfied with the scenario without changeability, and the remaining 19 out of 25 replied the opposite way. To the contrary, 8 out of 23 participants with low levels of deliberation replied that they were more satisfied with the scenario with changeability, while the remaining 15 participants replied the opposite way. The level of satisfaction of participants with low levels of deliberation, therefore, was not affected by the changeability of choice ($\chi^2(23)=2.13$, $p> .14$).

This study also adapted ANOVA through repeated measures, in order to overcome the limits in the χ^2 analysis. As a result, the changeability of purchase had a significant impact on satisfaction with choice options ($F(1, 46)=4.37$, $p< .05$). There was a difference between the satisfaction level under changeable and unchangeable conditions (4.54 vs. 5.06). However, the levels of deliberation did not have a significant impact on satisfaction ($F(1, 46)=1.01$, $p> .32$). The interaction between the deliberation levels and changeability of purchase had a significant impact on satisfaction with choice options ($F(1, 46)=7.99$, $p< .01$). When the level of deliberation was low, however, the changeable conditions and the unchangeable

conditions brought about non-significant differences (4.61 vs. 4.78, $t(22)=-.44$, $p>.67$).

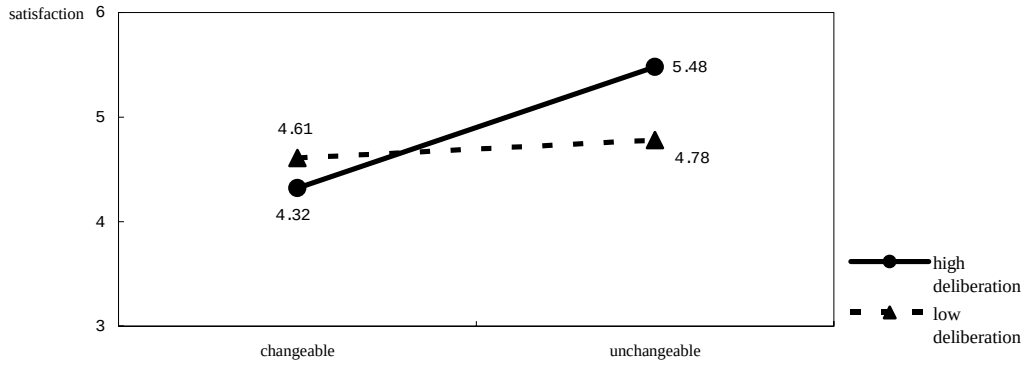

Figure 1: Interaction between Deliberation and Changeability

4. Experiment 2

This study is on the impacts the levels of deliberation and changeability have on satisfaction with choice options. Experiment 1 was carried out both between and within subject design on the same group of participants due to difficulties in recruiting enough participants. However, the method may generate demand artifact. Another problem could arise with Experiment 1, which used a single-item in measuring satisfaction. It also used a third person, named Mr. K. To overcome the shortcomings, Experiment 2 is designed by a between subject design and uses multi-items to measure satisfaction and self-centered scenarios.

4.1. Method

4.1.1. Participants and Design

This study was designed by a between-subject design with two decisive factors of levels of deliberation (high vs. low) and changeability of choice (changeable vs. unchangeable). In other words, participants were divided into four groups, two groups by the level of their deliberation (high vs. low), the other two groups by changeability of their choices. The participants were 112 undergraduate students who participated in the study to fulfill a requirement for their introductory advertising class.

4.1.2. Procedure and Stimuli

The purpose of this experiment was to investigate the impact that the changeability of choice option and the level of deliberation have, when making satisfactory decisions with the chosen options. To this end, pretest 1 was carried out in advance of the main test, in order to find out the level of deliberation and appropriate products for the main test. Deliberation was manipulated by the duration method of Carmon et al. (2003). Carmon et al. (2003) regarded two months as a long duration of deliberation and two days as a short duration. In the same context, this study measured the level of deliberation through duration. As a results of pretest 1, the longest duration of deliberation was decided to be a week, whereas the shortest one was decided to be 5 minutes (5.50 vs. 3.65, $t(41)=5.82$, $p< .01$).

The reason Experiment 2 had a pretest is because the jazz and classical music CDs used in Experiment 1 were similar products, but with different categories. Experiment 2 changed its products so that it can induce differences in features within the same category. As a result of pretest 2, the products decided upon were to be running shoes, with different features in their cushions and colors. The two features had no statistical difference in preference level (5.13 vs. 5.39, $t(40)=-1.00$, $p> .33$), nor in involvement level (4.33 vs. 4.67, $t(40)=- .72$, $p> .47$).

4.1.3. Procedure

The participants were randomly allocated into one of 4 groups. The participants were given one of 4 scenarios, and evaluated on their satisfaction level with the chosen option after reading all scenarios. Then a manipulation check on deliberation was carried out.

4.1.4. Measures

The study employed the modified version of the measuring item of DeCarlo and Leigh (1996) to see “how careful they were in purchasing,” “how prudent they think they were,” and “how deliberative the purchasing was.” The participants were then asked to give 1 to 7 points to each question (the closer a point is to 1, the less deliberate they were, and vice versa). Changeability of choice was measured not by level, but by categories of yes, or no. Therefore, the participants were given two scenarios that said either “changeable” or “unchangeable.”

The dependent variable used in the study was level of satisfaction with chosen options. The study used three measuring items for this. “Are you satisfied with the chosen options?”, “How happy are you thanks to the chosen options?” and “How

good are the chosen options?"(Spreng, MacKenzie, & Olshavsky, 1996). Participants also responded with ratings on 7-point scale (point 1 was not at all, while 7 was very correct).

4.2 Results

4.2.1. Manipulation Check

The manipulation check was carried out by using a modified version of a measuring item used by DeCarlo and Leigh (1996). As a result (Cronbach'α= .88), a high and low level of deliberation had significant difference (4.43 vs. 3.83, $t(103)=2.30$, $p< .05$).

4.2.2. Satisfaction with the Chosen Options

Three items were used as multi items in Experiment 2(Cronbach'α= .78). Experiment 2 used two-way ANOVA for its result analysis. As a result, changeability of choice was significant ($F(1, 101)=4.02$, $p< .05$). To elaborate, there was a difference in the satisfaction level under unchangeable conditions and the satisfaction level under changeable conditions (4.91 vs. 4.48). However, the levels of deliberation had no significant influence on satisfaction with the chosen options ($F(1, 101)=1.06$, $p> .31$). The interaction between deliberation levels and changeability of purchase had a significant impact on satisfaction with choice options ($F(1, 101)=4.68$, $p< .05$). To elaborate, when the level of deliberation was high, the difference in satisfaction between changeable and unchangeable conditions was very significant (4.36 vs. 5.21, $t(51)=3.33$, $p<.01$). Under a low level of deliberation, however, there was no significant difference in satisfaction under changeable conditions and under unchangeable conditions (4.59 vs. 4.56, $t(50)=-.10$, $p> .92$).

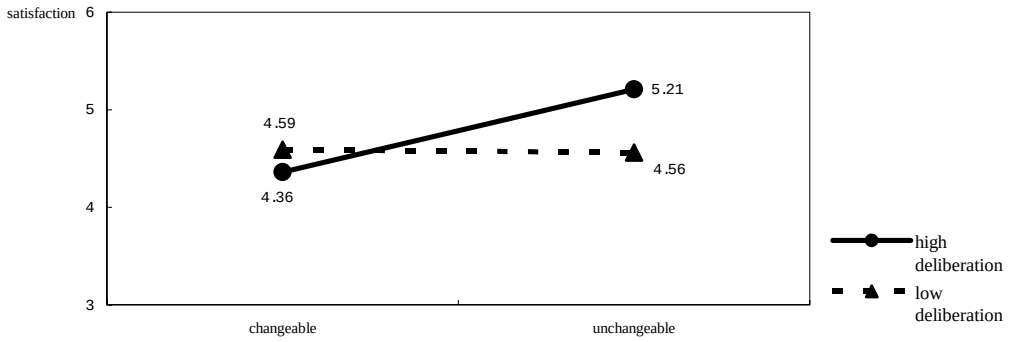

Figure 2: Impact of Deliberation and Changeability on Satisfaction with the Chosen Options

4.2.3. Attachment to Forgone Options

This study examines the attachment to the non-chosen options. Three measuring items were used. The coefficient of Cronbach' α was .82. Option attachment was analyzed by a two-way ANOVA.

As a result, changeability of choice was significant (F(1, 101)=4.45, p< .05). In other words, there was a difference in attachment to the forgone options under unchangeable conditions and attachment to the forgone options under changeable conditions (3.02 vs. 3.58). Moreover, the levels of deliberation had a marginally significant influence on attachment to the forgone options (F(1, 101)=2.97, p< .10). To elaborate, there was a significant difference in attachment to forgone options between the choice with a high level of deliberation and the choice with a low level of deliberation (3.53 vs. 3.06). The interaction between deliberation levels and changeability of purchase had a marginally significant impact on option attachment (F(1, 101)=5.11, p< .05). Under a low level of deliberation, however, there was no significant difference in option attachment between the choice under changeable conditions and under unchangeable condition (3.04 vs. 3.08, t(50)= 1.12, p> .91).

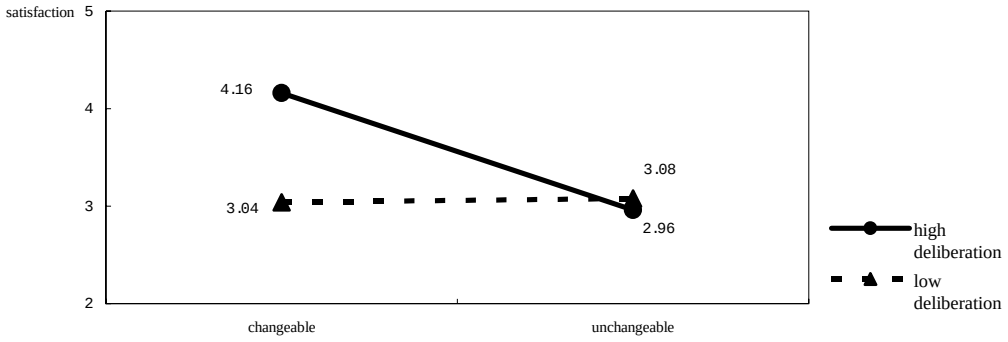

Figure 3: Impact of Deliberation and Changeability on Attachment to Forgone Options

6. Conclusions

The primary goal of this study is to verify that consumer satisfaction with a chosen option is affected by levels of deliberation and changeability of choice. The results of study are as follows.

First, consumers were attached to non-chosen options under changeable conditions, rather than under unchangeable conditions. The unchangeable conditions made

consumers more satisfied with the chosen options than the changeable conditions did.

Second, when consumers extensively deliberated, rather than when they deliberated lightly, they had a tendency to be more attached to the forgone options after the choice. Consumers experienced pre-factual ownership of the forgone options through simulation process before the choice. After the choice, however, they become attached to the forgone options, since they felt as if they lost subjective and psychological gains from the simulation process, which is called loss aversion.

Third, for consumers who had less deliberation, attachment to forgone options and satisfaction with chosen options were not affected by changeability of the choice.

The implications of this study are as follows:

First, while existing studies examined consumer satisfaction with chosen options from a viewpoint of forecast and performances of the chosen options, this study set a new paradigm of looking at consumer satisfaction from the view point of attachment to forgone options.

Second, a company's policy for free refund and exchange could actually diminish consumer satisfaction, thereby increasing financial cost of companies and decreasing their profitability. Therefore, it was recommended for companies to set financial and psychological limits to refunds and exchange policies.

References

Carmon, Z., Wertenbroch, K. and Zeelenberg, M. 2003. "Option Attachment: When Deliberating Makes Choosing Feel like Losing." *Journal of Consumer Research*, Vol 30, pp. 15-29.

Day, E. 2002. "The Role of Value in Consumer Satisfaction." *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, Vol 15, pp.22-32.

DeCarlo, T.E. and Leigh, T.E. 1996. "Impact of Salesperson Attraction on Sales Managers' Attribution and Feedback." *Journal of Marketing*, Vol 60, pp. 47-66.

Gilbert, D.T. and Ebert, J. 2002. "Decision and Revisions: The Affective Forecasting of Changeable Outcomes." *Journal of Personality and Social Psychology*, Vol 82, pp. 503-514.

Gilbert, D.T., Pinel, E.C., Wilson, T.D., Blumberg, S.J., and Wheatley, T.P. 1998. "Immune Neglect: A Source of Durability Bias in Affective Forecasting." *Journal of Personality and Social Psychology*, Vol 75, pp. 617-638.

Kahneman, D. and Tversky, A. 1979. "Prospect Theory: An Analysis of Decision Under Risk." *Econometrica*, Vol 47, pp. 263-291.

Kahneman, D., Knetsch, J.L., and Thaler, R.H. 1990. "Experimental Tests of the Endowment Effect and the Coase Theorem." *Journal of Political Economy*, Vol 98, pp. 1325-1348.

McDougall, G.H.G and Levesque, T. 2000. "Customer Satisfaction with Service: Putting Perceived Value Into the Equation." *Journal of Service Marketing*, Vol 14, pp. 392-410.

Oliver, R.L. 1993. "Cognitive, Affective, and Attribute Bases of the Satisfaction Response." *Journal of Consumer Research*, Vol 20, pp. 418-430.

Spreng, R.A., MacKenzie, S.B., and Olshavsky, R.W. 1996. "A Reexamination of the Determinants of Consumer Satisfaction." *Journal of Marketing*, Vol 60, pp. 15-32.

Strahilevitz, M.A. and Loewenstein, G. 1998. "The Effect of Ownership History on the Valuation of Objects." *Journal of Consumer Research*, Vol 25, pp. 276-289.

Zeelenberg, M., van den Bos, K., van Dijk, E., and Pieters, R. 2002. "The Inaction Effect in the Psychology of Regret." *Journal of Personality and Social Psychology*, Vol 82, pp. 314-327.