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To change or not to change: A matter of decision maker's role

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ABSTRACT

The status quo effect derived from loss aversion is common in decision making. However, we propose that advisors (vs. personal decision makers) are less susceptible to such an effect because they are less loss-averse. The difference in loss aversion between personal decision makers and advisors is reflected in both the query order and content. Compared to advisors, personal decision makers produce more queries favoring the status quo, at an earlier time, than those favoring the new option. As hypothesized, the status quo effect was observed among personal decision makers, but not among advisors (Studies 1 and 2). Query order and content were found to mediate the impact of decision maker's role on the status quo effect (Study 2). When personal decision makers and advisors made queries in the same order (Study 3) or of the same content (Studies 4a and 4b), the difference between self–other decision making disappeared.

Introduction

The tendency to maintain current states rather than accept new options is termed as status quo bias (Samuelson & Zeckhauser, 1988), and proved to be prevalent in decision making (Hesketh, 1996; Moshinsky & Bar-Hillel, 2010; Samuelson & Zeckhauser, 1988). Such a phenomenon is called a "bias" partially because it hinders people from making changes, which have apparent advantages such as bringing about opportunities that result in innovations. In this context, one question emerges: Is a certain group of people less trapped in the status quo bias? In this study, we focus on the *decision maker's role* in disclosing the divergent effects of the roles of personal decision makers and advisors on the willingness to change.

This paper adopts an "advantage–disadvantage analysis" to take a closer look at the status quo bias. Although the advantages of change are prominent, disadvantages are also salient: the uncertainty associated with the unknown, the efforts to adapt to unfamiliar situations, and the risks of failure. Therefore, the choice of whether to change or not depends on the tradeoff between advantages and disadvantages.

We assume that personal decision makers are caught in the status quo bias because they put more emphasis on the bad consequences of change than on the good ones. Nevertheless, advisors (vs. personal decision makers) weigh the advantages more than the disadvantages (Polman, 2012b), which results in the disappearance or even the reversal of the status quo bias.

Status quo effect: why are people reluctant to change?

Status quo effect

In 1988, Samuelson and Zeckhauser noted that options labeled as perpetuating the status quo are more preferred compared to options without such a label. Later, the default effect was raised to reveal a similar phenomenon, in which decision makers are reluctant to depart from default states (Johnson, Hershey, Meszaros, & Kunreuther, 1993). For instance, the policy that set organ donation as a default facilitates donation registry because people tend not to change current default states (Johnson & Goldstein, 2003).

Although status quos are often actively chosen by the self, whereas default options are, in most cases, passively decided by unknown others, such as policy makers and designers, both demonstrate the tendency of people to do nothing and maintain current states. Therefore, the term status quo *effect* is used in the present research to refer to the phenomenon in which decision makers tend to maintain their current status rather than make a change.

Such an effect has been proved to be common in decision making (e.g., Brown & Krishna, 2004; Dinner, Johnson, Goldstein, & Liu, 2011; Hartman, Doane, & Woo, 1991; Madrian & Shea, 2001). For instance, when policies of various kinds are set as the status quos, the attitude of people toward them is more favorable (Moshinsky & Bar-Hillel, 2010; Pichert & Katsikopoulos, 2008). Similarly, people are unwilling to exchange their randomly drawn lottery tickets (Bar-Hillel & Neter, 1996; Risen & Gilovich, 2007).

When does the status quo effect occur? If the advantages of either the new option or the status quo are dominant, people will undoubtedly go with the one that offers benefits. However, if the

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advantages of both sides seem to be equivalent and people find themselves in a dilemma, the status quo will typically dominate. But how can the status quo stand out?

Loss aversion

The root of the status quo effect may lie in the tradeoff between the advantages and disadvantages of the current state and the new option. According to prospect theory (Kahneman & Tversky, 1979; Tversky & Kahneman, 1981), the status quo functions as a reference point and is compared to the new option. As illustrated in Fig. 1, the advantages of the new option (either the negative aspects of the status quo or the positive aspects of the new option) are viewed as gains, and the disadvantages (either the positive aspects of the status quo or the negative aspects of the new option) are considered losses (Moshinsky & Bar-Hillel, 2010; Samuelson & Zeckhauser, 1988).

People put more weight on losses than gains due to loss aversion (Kahneman & Tversky, 1979), thus causing a preference for the status quo. In other words, the status quo effect is a result of loss aversion (Kahneman, Knetsch, & Thaler, 1991; Novemsky & Kahneman, 2005; Samuelson & Zeckhauser, 1988).

Loss aversion is reflected in queries

According to query theory, the tendency of loss aversion can be reflected in the queries made during the decision-making process (Johnson, Häubl, & Keinan, 2007; Weber et al., 2007). The first assumption of query theory is that people deconstruct a decision problem into several queries. For instance, the question of "Should I make a change or maintain the status quo" would be divided into "Why should I maintain the current state" and "Why should I choose the new option".

The second is that decision makers generate queries in a sequence. Because losses loom larger than gains, people generally tend to consider losses prior to gains. Therefore, when comparing the status quo to the new option, they initially consider the disadvantages of the new option (part A in Fig. 1) and then the advantages of the new option (part B in Fig. 1).

The third and the most crucial assumption is that an *earlier* query results in *more* retrieval than a later one due to memory interference, referring to that the earlier retrieval in memory would interfere with the later retrieval. For example, people who first consider the disadvantages of the new option (part A in Fig. 1) followed by its advantages (part B in Fig. 1) obtain more reasons that favor the status quo (part A in Fig. 1) than those that favor changes (part B in Fig. 1). Consequently, they decide to maintain the status quo. To put it simply, the main idea of query theory is that both *query order* and *query content* affect decision making.

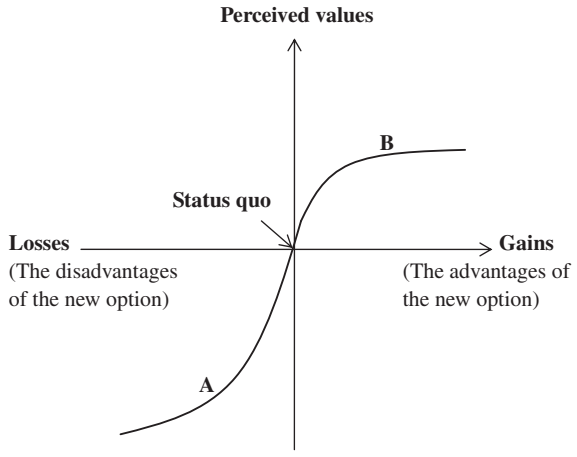

Fig. 1. Loss aversion as an account of the status quo effect.

The roles of query order and content in the status quo effect were supported by a recent study (Dinner et al., 2011), in which half of the participants were told that they had been using incandescent bulbs and were given an opportunity to switch to compact fluorescent bulbs, whereas the others were told that using compact fluorescent bulbs was the status quo. They were asked to record their thoughts in the decision-making process and then make the choice. As a result, the status quo effect was replicated. More importantly, participants considered the disadvantages of the new option *before* they considered its advantages. Moreover, they considered the disadvantages of the new option *more* than its advantages.

Decision maker's role: is everyone reluctant to change?

Although the status quo effect is commonly observed, do all people tend to resist changes? We propose a moderator in the role of decision makers. In daily life, people act as either a *personal decision maker* to decide for themselves or an *advisor* to advise others. For instance, we sometimes make investment decisions by ourselves, but in some situations, consultants provide us with suggestions. Similarly, students may decide as an individual which school to attend, or their parents may give them advice. Interestingly, even when confronted with the same problem, decision makers with different roles make divergent choices due to different cognitive processes (Liviatan, Trope, & Liberman, 2008; Polman & Emich, 2011), such as in weighing desirability and feasibility (Danziger, Montal, & Barkan, 2012; Lu, Xie, & Xu, 2013), primary and secondary aspects (Liviatan et al., 2008), and important and less important attributes (Kray & Gonzalez, 1999).

As for loss aversion, Polman (2012b) evidenced that advisors focus more on gains than losses relative to personal decision makers. In his research, participants were asked to make decisions either for themselves or for others in multiple domains, with or without risks. Results consistently showed that advisors (vs. personal decision makers) are less loss-averse.

The difference of self–other decision making in loss aversion would be reflected in the means of conducting queries. Because personal decision makers focus more on losses than gains, *more* queries about the disadvantages of the new options (part A in Fig. 1) would be generated at an *earlier* time. Advisors, however, weigh gains more than losses compared to personal decision makers, thus they would generate *more* queries about the advantages of the new options (part B in Fig. 1) at an *earlier* time. As a result, the status quo effect is hypothesized to be found among personal decision makers but a diminished or reverse effect is predicted to be observed among advisors.

The present research

We aimed to illustrate self–other decision-making difference in the status quo effect and investigate why such difference emerged. The status quo effect was expected to be found among personal decision makers but a diminished or even reverse effect among advisors. In addition, both query order and content were hypothesized to mediate the impact of the decision maker's role on the status quo effect. Our research framework is illustrated in Fig. 2. Study 1 aimed to illustrate the predicted self–other decision-making difference. Study 2 was designed to examine the mediation roles of both the query order and content using the thought-listing paradigm, in which participants were asked to record their real-time thoughts during the decision-making process. Finally, we

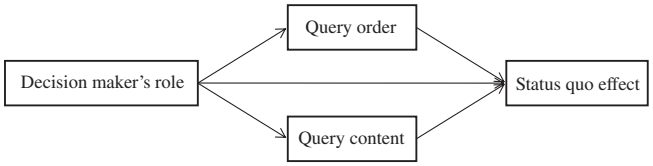

Fig. 2. Research framework.

manipulated the order (Study 3) and content (Studies 4a and 4b) of queries and asked participants of both roles to make queries in the same order or of the same content before they made the final decision. According to the research framework, the self–other decision-making difference regarding the status quo effect was hypothesized to disappear.

Study 1: self–other decision-making difference

In this study, we aimed to explore the difference of self–other decision making regarding the status quo effect. A recruiting decision-making scenario was used and participants were instructed to picture themselves as a human resource (HR) manager or a friend of an HR manager. Two recruiting strategies could be considered for this year: either to follow the prior year one that had been used for years or to adopt a new one. Participants rated the attractiveness of both strategies. We expected to observe the status quo effect solely among personal decision makers.

Method

Participants and design

The participants comprised 170 university students (120 women, 50 men, M_{age} = 22.88 years, SD = 2.75), who were recruited via a campus BBS. They were randomly assigned one of two roles, namely, personal decision maker or advisor.

Procedure and materials

Participants were told that the research was designed to investigate their decision-making habits. They should read and imagine the scenario before answering questions. The scenario presented a decision-making dilemma that an HR manager faced. The company used to allocate half of the available positions to campus recruitment and the other half to experienced candidates, which was proved to be an optimal strategy (the status quo). However, to encourage campus recruitment, employers who allocate more than 65% of the available positions to on-campus applicants that year were eligible for government incentives (the new option). The HR manager was considering which strategy to choose. Half of the participants read the version as described above, whereas the other half were given the version in which the incentive strategy was considered the status quo and the "50–50" strategy was the new option. Specifically, the company used to allocate 65% of the position to on-campus applicants to obtain government incentives (the status quo). To optimize human resource allocation, the HR manager was considering allocating only half of the positions to campus recruitment and the other half to experienced candidates. However, such allocation meant abandoning the government incentives (the new option).

Participants who were assigned the role of an HR manager made decisions on their own, whereas those who were given the role of an HR manager's friend were required to offer advice. They indicated the attractiveness of both strategies on a 9-point scale (1 = *very unattractive*, 9 = *very attractive*). Afterwards, they identified their roles in the scenario as a manipulation check and completed control variable measures including regret ("How regretful would you be if the decision you made was proved to be bad?"; 1 = *not regret at all*, 9 = *very regretful*), difficulties in picturing the scenario ("How difficult is it in imagining the given scenario?"; 1 = *very easy*, 9 = *very difficult*), carefulness in performing the tasks ("Do you make the decision carefully?"; 1 = *not carefully*, 9 = *very carefully*), perceived responsibility of decision outcomes ("Do you feel responsible for the decision outcome?"; 1 = *not responsible*, 9 = *very responsible*), and demographic information (i.e., gender and age). Finally, participants were debriefed, thanked, and paid 5 RMB (renminbi).

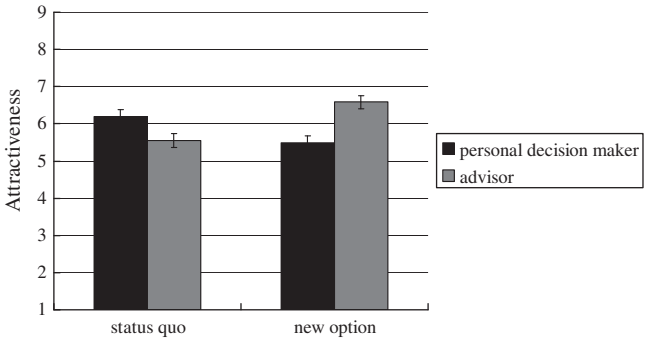

Fig. 3. Attractiveness as a function of decision maker's role and choice in Study 1.

Results and discussion

Seven participants failed the manipulation check and were excluded from analysis. Attractiveness ratings were submitted to a 2 (decision maker's role: personal decision maker or advisor) × 2 (choice: status quo or new option) mixed-design analysis of variance (ANOVA), with the decision maker's role as a between-participants variable and choice as a within-participants variable. Consequently, as Fig. 3 illustrates, we obtained an interaction between decision makers' role and choice, $F(1,161) = 16.54$, $p < .001$, $\eta^2 = .09$. Personal decision makers rated the status quo ($M = 6.19$, $SD = 1.61$) as more attractive than the new option ($M = 5.49$, $SD = 1.73$), $t(80) = 2.22$, $p = .029$. Conversely, advisors rated the new option ($M = 6.59$, $SD = 1.41$) as more attractive than the status quo ($M = 5.55$, $SD = 1.83$), $t(81) = -3.59$, $p < .001$. In addition, personal decision makers rated the status quo as more attractive than advisors, $F(1,161) = 5.55$, $p = .020$. However, regarding the new option, a reverse tendency emerged, $F(1,161) = 19.53$, $p < .001$.

Notably, given that personal decision makers and advisors only differed in terms of perceived responsibility among multiple control variables, $F(1,161) = 50.23$, $p < .001$, and responsibility may affect the magnitude of the status quo effect (Tetlock & Boettger, 1994), we conducted a 2 (decision maker's role) × 2 (choice) mixed-design analysis of covariance (ANCOVA) on the attractiveness ratings with responsibility as a covariate. Consequently, the interaction remained significant, $F(1,160) = 23.90$, $p < .001$, $\eta^2 = .13$.

To conclude, Study 1 proved that the status quo effect was a matter of the decision maker's role. We observed the status quo effect for personal decision makers, but a reverse effect for advisors. Study 2 was designed to examine the reasons of these findings as well as remedy the limitations. For example, target specificity was not constant across the two conditions. The personal decision makers decided for a specific person, whereas the advisors gave advice to an abstract and hypothetical friend. Therefore, we endeavored to make both targets specific in Study 2.

Study 2: mediators of query order and content

The goal of Study 2 was twofold: to replicate the self–other decision-making difference found in Study 1, and to verify the

mediation roles of both query order and content. Participants, who acted as either a personal decision maker or an advisor, made a purchase decision. Their real-time queries were recorded according to the thought-listing paradigm. We predicted that personal decision makers would make *more* queries about the disadvantages of the new option at an *earlier* time relative to advisors, and that query order and content would mediate the impact of the decision maker's role on the status quo effect.

Furthermore, to confirm that the differences in queries between personal decision makers and advisors emerged due to differences in loss aversion, loss aversion was measured as well. Personal decision makers were predicted to be more loss-averse than advisors.

Method

Participants and design

Eighty-six university students (47 women, 39 men, M_{age} = 22.93 years, SD = 2.41) who were recruited via a campus BBS were randomly assigned as either a personal decision maker or an advisor.

Procedure and materials

Participants were greeted and told that they should complete all the tasks on a computer. First, personal decision makers took a test called "Describing the Self," whereas advisors took a test called "Describing a Friend." The test, which was ostensibly aimed to determine who participants were or who their friends were, was actually designed to remind participants of a specific person. Participants were asked to write down their own surnames or the surnames of their friends and then identified their gender and age. Next, they judged the extent to which the given adjectives (i.e., "passionate", "careful", "rational", "withdrawn", "responsible", "depressive", "decisive", and "peaceful") were appropriate to describe themselves or their friends on a 7-point scale (1 = *not appropriate*, 7 = *very appropriate*).

Subsequently, they read about a scenario in which they were assigned one of the two roles. Personal decision makers were told that they had owned a laptop of Brand A for several years and were thinking about upgrading due to rapid technological innovation. They narrowed down their choices to a laptop of the same brand (the status quo) and another of Brand B (the new option). The two were similar in features, specifications, and selling price. However, Brand A was more fashionable, whereas Brand B was lighter. Additionally, the customer service store of Brand A was closer to their homes, whereas free on-site customer support was available for Brand B. The descriptions of the two brands were counterbalanced across participants. Advisors were asked to imagine that the friend they had described in the previous test was confronted with the decision problem and asked for their advice.

After reading the scenario, participants were encouraged to list their real-time thoughts as they made their decision, which is a common method for recording queries during the decision-making process (Johnson et al., 2007). The instruction read, "Before you make up your minds, please carefully consider the decision scenario. You should list at least three of your real-time thoughts with as much details as possible."

Afterwards, personal decision makers rated the likelihood of purchasing each laptop respectively on a 9-point scale (1 = *totally unlikely*, 9 = *very likely*). Next, they decided which one to buy: Brand A or Brand B. Advisors, however, rated the likelihood of recommending each laptop respectively and then decided which one to recommend.

Furthermore, participants also finished the measurement of loss aversion. They answered the question, "How is the likelihood that the laptop of Brand B is better than the one of Brand A?" on a 9-point scale (1 = *totally unlikely*, 9 = *very likely*). A lower score indicated a stronger tendency of loss aversion.

Next, participants identified their roles in the scenario and finished the control variable measures including regret, difficulties in picturing the scenario, carefulness in performing the tasks, perceived responsibility of decision outcomes, familiarity with laptops, and demographic information. Finally, they were debriefed, thanked and paid 10 RMB.

Coding of thoughts

Two independent judges, who were unaware of the hypotheses, classified each listed thought into one of the following three categories: the disadvantages of the new option (either the positive aspects of the status quo or the negative aspects of the new option; e.g., "The one of Brand B is not good-looking enough"); the advantages of the new option (either the negative aspects of the status quo or the positive aspects of the new option; e.g., "Although the customer service store of Brand A is closer, free on-site customer support is more convenient"); or other thoughts (e.g., "The configuration of the two is similar"). Inter-judge consistency was .93 (274 of 296 pieces of thoughts were placed into the same categories by two judges). Discrepancies were resolved by a third judge.

Calculation of query order and content

We computed the indices of query order and content according to previous research (Dinner et al., 2011; Johnson et al., 2007):

$$\text{Index of query order} = \frac{2 \times (MR_{disadvantages} - MR_{advantages})}{n} \quad (1)$$

$$\text{Index of query content} = \frac{Disadvantages - Advantages}{Disadvantages + Advantages} \quad (2)$$

where $MR_{disadvantages}$ denotes the median rank of thoughts about the disadvantages of the new option, $MR_{advantages}$ denotes the median rank of thoughts about the advantages of the new option, *Disadvantages* denotes the number of thoughts about the disadvantages of the new option, and *Advantages* denotes the number of thoughts about the advantages of the new option. In addition, n refers to the total number of listed reasons.

Therefore, a higher query order index denotes earlier queries about the disadvantages of the new option, and a higher query content index denotes more queries about the disadvantages of the new option. For example, in the query order index, 1 refers to that all the thoughts about the disadvantages of the new option were listed before all the thoughts about the advantages of the new option, whereas −1 refers to a reverse case. In the query content index, 1 refers to that all listed thoughts were about the disadvantages of the new option, whereas −1 refers to a reverse case (see Dinner et al., 2011; Johnson et al., 2007 for more details about the equations). Notably, a conservative method by Johnson et al. (2007) was adopted if all listed reasons in a sequence of length s belonged to one side (either the disadvantages or advantages of the new option). In such cases, the median rank of another side was set to $s + 1$. Moreover, n was set to $s + 1$. If an unrelated reason existed in a sequence, the rank of the reasons after it increased accordingly.

Results and discussion

A 2 (decision maker's role: personal decision maker or advisor) × 2 (choice: status quo or new option) mixed-design ANOVA was conducted on the likelihood ratings. Consequently, as Fig. 4 illustrates, an interaction between decision maker's role and choice was obtained, $F(1,84) = 11.01$, $p = .001$, $\eta^2 = .12$. Personal decision makers were more likely to buy the status quo ($M = 6.93$, $SD = 1.89$) than the new option ($M = 4.89$, $SD = 2.03$), $t(43) = 3.86$,

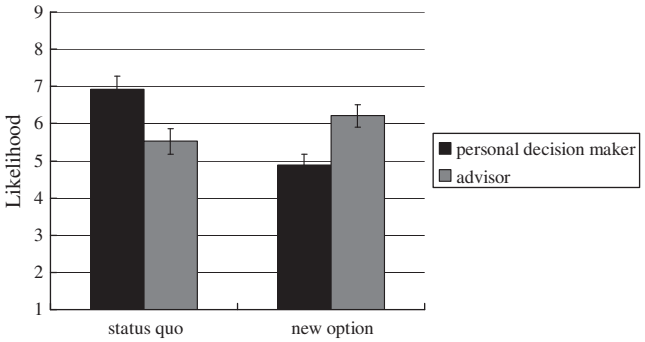

Fig. 4. Likelihood as a function of decision maker's role and choice in Study 2.

$p < .001$. Conversely, advisors considered the status quo ($M = 5.52$, $SD = 2.56$) and the new option ($M = 6.21$, $SD = 1.87$) as similar, $p > .25$. Additionally, the mean rating regarding the status quo among personal decision makers was higher than that among advisors, $F(1,84) = 8.49$, $p = .005$, whereas the mean rating regarding the new option among advisors was higher than that among personal decision makers, $F(1,84) = 9.96$, $p = .002$. Given that personal decision makers and advisors differed in terms of responsibility among multiple control variables, $F(1,84) = 20.68$, $p < .001$, we conducted a 2 (decision maker's role) $\times$ 2 (choice) mixed-design ANCOVA on likelihood ratings with responsibility as a covariate. As a result, the interaction remained significant, $F(1,83) = 6.99$, $p = .01$, $\eta^2 = .08$. The findings demonstrated that personal decision makers had a stronger tendency to maintain the status quo than advisors.

Next, a Chi-square test on choice was performed. The results indicated that the choices were different between personal decision makers and advisors, $\chi^2(1, N = 86) = 9.33$, $p = .002$. Specifically, 34 personal decision makers chose the status quo, and 10 chose the new option. However, 19 advisors recommended the status quo, and 23 recommended the new option. Again, the results indicated self–other decision-making difference regarding the status quo effect.

To examine whether query order was influenced by the role of decision makers, we conducted an ANOVA on the index of query order. The main effect for the role of decision makers was significant, $F(1,83) = 9.33$, $p = .003$, $\eta^2 = .10$. The index for personal decision makers ($M = .60$, $SD = .79$) was higher than that for advisors ($M = .01$, $SD = .98$), indicating that personal decision makers made *earlier* queries about the disadvantages of the new option than advisors. Treating responsibility as a covariate did not change the results, $F(1,82) = 9.68$, $p = .003$, $\eta^2 = .11$. Furthermore, a similar ANOVA on the index of query content yielded a main effect for the role of decision makers, $F(1,83) = 9.25$, $p = .003$, $\eta^2 = .10$. The index for personal decision makers ($M = .51$, $SD = .80$) was higher than that for advisors ($M = -.05$, $SD = .90$), indicating that personal decision makers made *more* queries about the disadvantages of the new option than its advantages compared to advisors. Treating responsibility as a covariate did not change the results as well, $F(1,82) = 8.79$, $p = .004$, $\eta^2 = .10$.

Finally, a bootstrapping analysis was performed to investigate whether query order mediated the impact of the role of decision makers on the status quo effect. We subtracted the likelihood ratings of the new option from those of the status quo to reflect the willingness to maintain the status quo; a higher score implied a stronger status quo effect. Furthermore, the role of decision makers served as the independent variable. The results suggested a 95% confidence interval of -3.33 to $-.71$ based on 5000 bootstrap samples, proving the mediation role of query order. Including responsibility in the analysis as a covariate did not change the results, $[-3.81, -.97]$. The same steps were repeated to examine the putative mediation role of query content. A 95% confidence interval of -3.72 to $-.80$ based on 5000 bootstrap samples demonstrated that query content mediated the impact of the role of decision makers on the status quo effect as well. Similarly, including responsibility as a covariate did not change the results, $[-3.67, -.80]$.

In this study, we replicated the self–other decision-making difference in the status quo effect, and verified the mediation roles of the query order and content on the impact of the decision makers' role on the status quo effect. The fact that personal decision makers made *more* queries, at an *earlier* time, about the disadvantages of the new option than its advantages contributed to the status quo effect. However, advisors produced *fewer* queries, at a *later* time, about the disadvantages of the new option than its advantages compared to personal decision makers, which extinguished the status quo effect.

Why did personal decision makers and advisors differ in terms of query order and content? We proposed that the manner of conducting queries reflected loss aversion. Personal decision makers were more loss-averse than advisors; thus, they made *more* queries about the potential losses (i.e., the disadvantages of the new option) at an *earlier* time compared to the potential gains (i.e., the advantages of the new option). To test this assumption, we compared the loss aversion ratings between personal decision makers and advisors. As hypothesized, an ANOVA showed that the role of decision makers had a significant effect, $F(1,84) = 4.06$, $p = .047$, $\eta^2 = .05$. Advisors ($M = 5.71$, $SD = 1.74$) were less loss-averse than personal decision makers ($M = 4.95$, $SD = 1.75$). Including responsibility in the analysis did not change the significance, $F(1,83) = 4.29$, $p = .041$, $\eta^2 = .05$.

We had so far tested the mediators of the query order and content. In the subsequent studies, we attempted to manipulate both mediators to see if the difference regarding the status quo effect between personal decision makers and advisors would disappear.

Study 3: manipulation of query order

We experimentally manipulated query order in this study to have personal decision makers and advisors conduct queries in the same orders. Specifically, both groups were asked to make queries on one of the following two orders: Order 1—three disadvantages of the new option first, followed by three advantages of it, or Order 2—three advantages of the new option first, followed by three disadvantages of it. We hypothesized that such manipulation would diminish the self–other decision-making difference. The status quo effect would appear among the decision makers who made queries in Order 1 because earlier queries about the disadvantages of the new options would unveil more disadvantages of the new option, which in turn would result in a more negative attitude toward it. On the contrary, a reverse effect would be observed among those who made queries in Order 2, regardless of their roles.

Method

Participants and design

Ninety-seven university students (59 women, 38 men, $M_{age} = 22.39$ years, $SD = 2.62$) who were recruited via a campus BBS were randomly assigned to conditions in a 2 (decision maker's role: personal decision maker or advisor) $\times$ 2 (query order: Order 1 or Order 2) between-participants design.

Procedure and materials

Participants were told that the purpose of the study was to investigate their decision-making habits. They were asked to picture the scenario before answering the questions. First, personal decision makers were told that they had recently moved to a

new house and were going to request Internet access. What had been used in the past was a plan called Happy Plan, provided by Company A (the status quo). In addition to the Happy Plan, a Surfing Plan from Company B was offered as an alternative (the new option). The bandwidth and costs of the two plans were identical. However, the Happy Plan offered two additional free services, including caller identity delivery and bundled cable, whereas the Surfing Plan provided a 60-min talk plan per month and TV on demand service. Both plans could be easily ordered by phone. For half of the participants, the Happy Plan was labeled as the status quo, and the Surfing Plan was labeled as the new option. For the other half, however, the Surfing Plan was labeled as the status quo, and the Happy Plan was labeled as the new option. Advisors were told that Wang, one of their friends, was having difficulty in deciding and had asked for their advice.

Next, participants following Order 1 were asked to list three disadvantages of choosing the new option first (either the positive aspects of the status quo or the negative aspects of the new option) and then three advantages of going with the new option (either the negative aspects of the status quo or the positive aspects of the new option). Participants following Order 2 listed three advantages of choosing the new option first and then three disadvantages of choosing the new option.

Afterwards, they indicated their preference on a 9-point scale (for half of the participants who read the scenario in which the Happy Plan served as the status quo whereas the Surfing Plan served as the new option, 1 = *Happy Plan*, 9 = *Surfing Plan*; for the other half of participants who read the scenario in which the Surfing Plan served as the status quo whereas the Happy Plan served as the new option, 1 = *Surfing Plan*, 9 = *Happy Plan*; a lower score indicated a stronger status quo effect), identified their roles in the scenario, and completed the measures of control variables, including their perceived responsibility for the decision outcomes, previous experiences with broadband Internet connections, and demographic information. Finally, they were debriefed, thanked and paid 10 RMB.

Results and discussion

Eight participants failed the manipulation check. Therefore, their responses were excluded from the analysis. Importantly, as illustrated in Fig. 5, a 2 (decision maker's role: personal decision maker or advisor) × 2 (query order: Order 1 or Order 2) ANOVA on preference ratings yielded a main effect for query order, $F(1,83) = 6.45$, $p = .013$, $\eta^2 = .07$, indicating that participants who made queries in Order 1 ($M = 3.93$, $SD = 2.20$) were more likely to stick to the status quo than those who made queries in Order 2 ($M = 5.16$, $SD = 2.25$). In addition, the difference of self–other decision making disappeared both in Order 1($M_{\text{personal decision makers}} = 3.91$, $SD_{\text{personal decision makers}} = 2.39$, $M_{\text{advisors}} = 3.95$, $SD_{\text{advisors}} = 2.01$, $p > .95$) and in Order 2 ($M_{\text{personal decision makers}} = 5.18$, $SD_{\text{personal decision makers}} = 2.44$, $M_{\text{advisors}} = 5.14$, $SD_{\text{advisors}} = 2.10$, $p > .90$). Although personal decision makers and advisors differed in terms of responsibility among multiple variables, $F(1,87) = 16.90$, $p < .001$, after treating responsibility as a covariate in the analysis, the main effect for query order remained significant, $F(1,82) = 6.30$, $p = .014$, $\eta^2 = .07$.

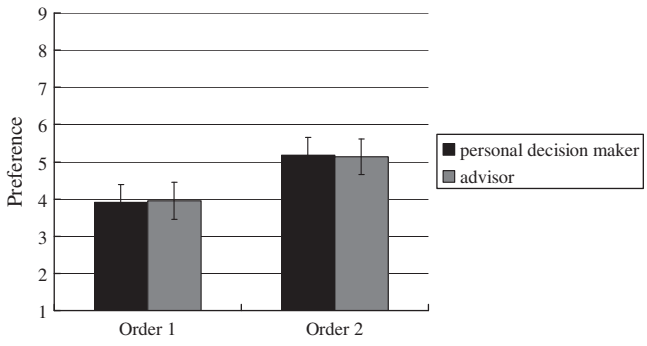

Fig. 5. Preference as a function of decision maker's role and query order in Study 3.

These results fit with our framework. Regardless of the role of decision makers, people who initially made queries about the disadvantages of the new option and then asked about its advantages demonstrated a stronger tendency to maintain the status quo than those who made queries in a reverse order. In Studies 4a and 4b, we attempted to manipulate query content to explore whether the self–other decision-making difference would disappear as predicted.

Studies 4a and 4b: manipulation of query content

We manipulated query content in Studies 4a and 4b by asking both the personal decision makers and advisors to conduct the same number of queries. Therefore, in Study 4a, both groups were asked to make queries in one of the following two ways: Content 1—two disadvantages of the new option only, or Content 2—two disadvantages of the new option first and then two advantages of the new options. In Study 4b, both groups were asked to make queries in one of the following two ways: Content 3—two advantages of the new option only, or Content 4—two advantages of the new option first and then two disadvantages of the new option. The hypothesis of Study 4a was that the self–other decision-making difference in the status quo effect would diminish such that regardless of whom they were deciding for, participants in the condition of Content 1 would resist changes more than those in the condition of Content 2, as queries about the disadvantages of the new option would result in a more positive attitude toward the status quo than would queries about both the disadvantages and advantages of the new option. The same logic applied to Study 4b. The self–other decision-making difference would diminish as well, such that participants in the condition of Content 3 would be more willing to make a change than those in the condition of Content 4.

Method

Participants and design

In Study 4a, 104 university students (63 women, 41 men, $M_{\text{age}} = 21.99$ years, $SD = 2.56$) were randomly assigned to conditions in a 2 (decision maker's role: personal decision maker or advisor) × 2 (query content: Content 1 or Content 2) between-participants design. In Study 4b, 112 university students (61 women, 50 men, 1 unreported, $M_{\text{age}} = 22.75$ years, $SD = 3.31$) were randomly assigned to conditions in a 2 (decision maker's role: personal decision maker or advisor) × 2 (query content: Content 3 or Content 4) between-participants design. All the participants were recruited via a campus BBS.

Procedure and materials

In this research, "A Survey on Decision Habits," participants were asked to read and imagine the scenario, and then make decisions. First, personal decision makers were told that their one-year automobile insurance would soon expire and that they were considering the renewal options. The current insurance policy was Package A (the status quo), including Traffic Liability Compulsory Insurance, Damage Loss Waiver, Wading Insurance, and Paint Insurance. Conversely, the new alternative, Package B, offered Traffic Liability Compulsory Insurance, Damage Loss Waiver,

Spontaneous Combustion Insurance, and Scratch Insurance. Brief descriptions for each kind of insurance were provided. Both contracts could be entered easily by phone. Descriptions of both packages were counterbalanced across participants. Advisors were told that Chen, one of their friends, was having difficulty in deciding and had asked for their advice.

In Study 4a, participants in the condition of Content 1 listed two disadvantages of choosing the new option (either the positive aspects of the status quo or the negative aspects of the new option), whereas participants in the condition of Content 2 listed two disadvantages of choosing the new option first and then two advantages of choosing the new option (either the negative aspects of the status quo or the positive aspects of the new option). In Study 4b, participants in the condition of Content 3 listed two advantages of choosing the new option, whereas participants in the condition of Order 4 listed two advantages of choosing the new option first and then two disadvantages of choosing the new option.

Afterwards, they rated their preference on a 9-point scale (1 = *Package A*, 9 = *Package B*). Next, personal decision makers indicated the highest price they were willing to pay for Package B, assuming that Package A cost 3000 RMB, whereas advisors indicated the highest price they were willing to advise Chen to pay.

Participants then identified their roles in the scenario and completed the measures of control variables, including their perceived responsibility for the decision outcomes, previous experiences with automobile insurance purchases, and demographic information. Because participants in the conditions of Content 1 and 3 listed two reasons fewer than those in the conditions of Content 2 and 4, their perceived difficulties in listing reasons were assessed by a 9-point scale (1 = *very easy*, 9 = *very difficult*) to investigate any differences in cognitive load (DeLeeuw & Mayer, 2008). Finally, they were debriefed, thanked and paid 10 RMB.

In case participants would discover the experimental goal, we asked another 21 students to participate in Study 4a. After completing all the tasks, they were asked to guess the aim of the study ("What do you think the purpose of this experiment was?" and "What do you think the hypothesis of this experiment was?").

Results and discussion

In Study 4a, one participant did not list the reasons as required, and five failed the manipulation check; thus, they were excluded. None of the participants who were asked to write down the experimental goal discovered the exact aim.

A 2 (decision maker's role: personal decision maker or advisor) × 2 (query content: Content 1 or Content 2) ANOVA on ratings of preference yielded a main effect for query content (see the left panel in Fig. 6), $F(1,94) = 13.89$, $p < .001$, $\eta^2 = .13$, indicating that participants in the condition of Content 1 ($M = 3.17$, $SD = 2.13$) were more reluctant to change than those in the condition of Content 2 ($M = 4.82$, $SD = 2.25$). In addition, the self–other decision-making difference disappeared both in Content 1 ($M_{\text{personal decision makers}} = 3.44$, $SD_{\text{personal decision makers}} = 2.38$, $M_{\text{advisors}} = 2.87$, $SD_{\text{advisors}} = 1.82$, $p > .35$) and in Content 2 ($M_{\text{personal decision makers}} = 4.85$, $SD_{\text{personal decision makers}} = 2.40$, $M_{\text{advisors}} = 4.78$, $SD_{\text{advisors}} = 2.11$, $p > .90$).

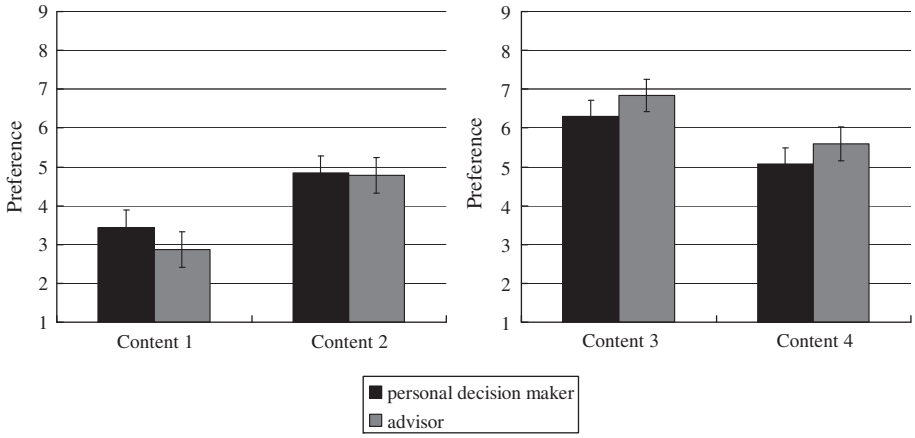

Fig. 6. Preference as a function of decision maker's role and query content in Studies 4a (left panel) and 4b (right panel).

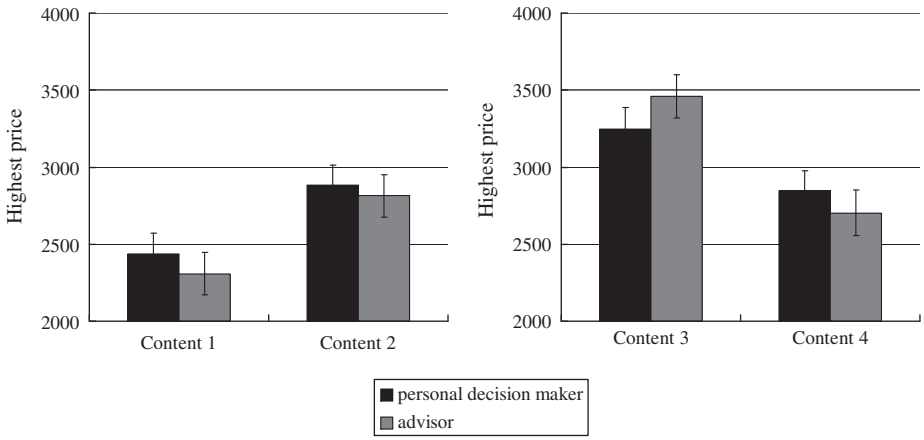

Fig. 7. Highest price as a function of decision maker's role and query content in Studies 4a (left panel) and 4b (right panel).

Similarly, we conducted a 2 × 2 ANOVA on the highest price. Consequently, the main effect for query content was significant (see the left panel in Fig. 7), $F(1,94) = 12.24$, $p < .001$, $\eta^2 = .12$. The highest price in the condition of Content 1 ($M = 2375.00$, $SD = 644.62$) was lower than that in the condition of Content 2 ($M = 2850.00$, $SD = 684.90$), indicating that participants in the condition of Content 1 were more likely to adhere to the status quo. Additionally, the self–other decision-making difference disappeared in Content 1 ($M_{\text{personal decision makers}} = 2436.00$, $SD_{\text{personal decision makers}} = 673.23$, $M_{\text{advisors}} = 2308.70$, $SD_{\text{advisors}} = 620.05$, $p > .50$) as well as in Content 2 ($M_{\text{personal decision makers}} = 2881.48$, $SD_{\text{personal decision makers}} = 762.61$, $M_{\text{advisors}} = 2813.04$, $SD_{\text{advisors}} = 595.67$, $p > .70$). Finally, given that participants in the four conditions only differed in responsibility among multiple control variables, $F(3,94) = 11.83$, $p < .001$, we included it as a covariate in ANCOVAs both on the ratings of preference and highest price. The main effects for query content remained significant, $F(1,93) = 13.18$, $p < .001$, $\eta^2 = .12$, and $F(1,93) = 11.92$, $p < .001$, $\eta^2 = .11$, respectively.

In Study 4b, two participants did not list the reasons as required, and 11 failed the manipulation check. Therefore, their responses were excluded. A 2 (decision maker's role: personal decision maker or advisor) × 2 (query content: Content 3 or Content 4) ANOVA on ratings of preference yielded a main effect for query content (see the right panel in Fig. 6), $F(1,93) = 8.41$, $p = .005$, $\eta^2 = .08$, indicating that participants in the condition of Content 3 ($M = 6.57$, $SD = 2.03$) were more open to changes than those in the condition of Content 4 ($M = 5.31$, $SD = 2.14$). Moreover, the self–other decision-making difference disappeared in Content 3 ($M_{\text{personal decision makers}} = 6.29$, $SD_{\text{personal decision makers}} = 1.94$, $M_{\text{advisors}} = 6.84$, $SD_{\text{advisors}} = 2.12$, $p > .35$) as well as in Content 4 ($M_{\text{personal decision makers}} = 5.08$, $SD_{\text{personal decision makers}} = 2.00$, $M_{\text{advisors}} = 5.59$, $SD_{\text{advisors}} = 2.30$, $p > .40$).

A similar 2 × 2 ANOVA was also conducted on the highest price. As hypothesized, a main effect for query content was detected (see the right panel in Fig. 7), $F(1,95) = 16.99$, $p < .001$, $\eta^2 = .15$. The highest price in the condition of Content 3 ($M = 3354.00$, $SD = 702.24$) was higher than that in the condition of Content 4 ($M = 2780.61$, $SD = 692.88$). Additionally, the self–other decision-making difference disappeared in Content 3 ($M_{\text{personal decision makers}} = 3248.00$, $SD_{\text{personal decision makers}} = 675.85$, $M_{\text{advisors}} = 3460.00$, $SD_{\text{advisors}} = 725.72$, $p > .25$) and in Content 4 ($M_{\text{personal decision makers}} = 2844.44$, $SD_{\text{personal decision makers}} = 739.72$, $M_{\text{advisors}} = 2702.27$, $SD_{\text{advisors}} = 638.91$, $p > .45$). Finally, given that the participants in the four conditions marginally only differed in responsibility among multiple control variables, $F(3,95) = 2.64$, $p = .054$, we included it as a covariate in ANCOVAs both on the ratings of preference and highest price. The main effects for query content remained significant, $F(1,92) = 7.89$, $p = .006$, $\eta^2 = .08$, and $F(1,94) = 16.98$, $p < .001$, $\eta^2 = .15$, respectively.

The results of Studies 4a and 4b fit with our reasoning. When personal decision makers and advisors were required to make the same number of queries, the difference observed in earlier studies between self–other decision making diminished.

General discussion

The status quo effect, in which people are reluctant to make changes from their current states of affairs, is prevalent in decision making. Along with this effect, similar phenomena discovered in recent years, such as the longevity bias (Eidelman, Pattershall, & Crandall, 2010) and the existence bias (Eidelman, Crandall, & Pattershall, 2009) also demonstrate that people prefer an existing condition to a new one. Researchers are now furthering their studies on the status quo effect in two ways: by identifying the factors that can attenuate it, and by examining the reason for it.

We proposed that the role of decision makers acted as a moderator, whereas the order and content of queries acted as mediators. In Study 1, the self–other decision-making difference was observed in that advisors were more willing to change than personal decision makers. In Study 2, the difference between personal decision makers and advisors in terms of their query order and query content mediated the relationship between decision maker's role and the status quo effect. In Studies 3, 4a, and 4b, the self–other decision-making difference disappeared as predicted when personal decision makers and advisors made queries in the same order or of the same content.

Using different indicators such as attractiveness (Study 1), likelihood (Study 2), choice (Study 2), preference (Studies 3, 4a, and 4b), and highest price (Studies 4a, and 4b), we demonstrated the consistency of the impact of the role of decision makers on the status quo effect. Furthermore, our results are consistent with the previous findings that the magnitude of the status quo effect could be moderated by contextual factors (e.g., Chernev, 2004; Kempf & Ruenzi, 2006; Rubaltelli, Rubichi, Savadori, Tedeschi, & Ferretti, 2005; Tetlock & Boettger, 1994).

Why are advisors less trapped in the status quo effect than personal decision makers? As Study 2 and the prior research (Polman, 2012b) demonstrated, personal decision makers were more loss-averse than advisors. We proposed that the difference in loss aversion could be further reflected in the ways of conducting queries during the decision-making process. The more loss-averse, the earlier and more queries about losses (disadvantages of the new option) were conducted than the queries about gains (advantages of the new option). Consequently, the status quo effect was more prevalent among personal decision makers (vs. advisors). Notably, we do not intend to pit query theory against loss aversion. Meanwhile, we do not suggest that loss aversion results from the ways of conducting queries as well. Instead, the current findings indicate that loss aversion can be reflected in the queries.

The difference between personal decision makers and advisors in weighing gains and losses implies that the negativity bias, a phenomenon that bad is stronger than good (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Rozin & Royzman, 2001), could be eliminated by advisors. Acquired during the evolution process, the negativity bias is adaptive, given that it impels human beings to be sensitive to potential danger and risks. However, paying attention to positivity is also beneficial from the perspective of positive psychology in that it helps people to be aware of potential gains. Our results indicate that advisors are more sensitive to the positive aspects of making a change, which causes them to capitalize on underlying opportunities.

The significance of the research on self–other decision-making difference is to shed light on the methods of increasing decision rationality. The result that advisors are less susceptible to the status quo effect seems to indicate that advisors are more rational than personal decision makers due to a more balanced set of queries. Several existing studies obtained similar findings, such as that advisors (vs. personal decision makers) were less trapped in the choice overload bias (Polman, 2012a), omission bias (Zikmund-Fisher, Sarr, Fagerlin, & Ubel, 2006), and confirmatory bias (Jonas & Frey, 2003).

Notably, the observed self–other decision-making difference in the status quo effect can also be interpreted in other ways. For example, the status quo is what personal decision makers, but not advisors, owned. The ownership may promote preference (Beggan, 1992; Sen & Johnson, 1997), thus causing the status quo effect. Moreover, aversion to the omission/commission (Ritov & Baron, 1992), cognitive effort (Eidelman, Crandall, Goodman, & Blanchar,

2012), and openness to try may also be potential mediators that could be explored in future studies.

In addition, the difference between personal decision makers and advisors in the status quo effect may be caused by deciding or advising in addition to the role of decision makers. Although we did not distinguish the tasks of advising from deciding, previous research shows that people who advise others make similar decisions with those who deciding for others (Beisswanger, Stone, Hupp, & Allgaier, 2003). Anyway, future researches should strictly hold the tasks constantly and examine if the self–other decision-making difference still exists.

To our knowledge, no researcher had ever manipulated query content. As the first attempt, however, our manipulation seemed to be a little bit strong. Future studies may adopt better ways. For instance, researchers can ask one group of participants to list two disadvantages of the new option first and then one advantages of the new option, but ask the other group to list two disadvantages and then two advantages of the new options. A comparison between these two groups could reveal the role of query content.

Finally, the current findings are of practical significance. The importance of change has become increasingly salient nowadays. New policies of great desirability, transformation of organization, and novelty products in the high technology market are all in high demand. Nevertheless, change is not easily accepted due to a robust status quo effect. Several attempts derived from the current results may be beneficial. For change initiators, first, more attention should be given to the difference between personal decision makers and advisors. A guide from the perspective of an advisor may promote an intention to accept change. In addition, mentioning both the advantages and disadvantages of a new product in advertisements would be better, because boosting the advantages alone may exaggerate the advertisement, and disadvantages sometimes induce a positive attitude (Ein-Gar, Shiv, & Tormala, 2012). However, certain tactics in listing the advantages and disadvantages are useful; for example, listing the advantages of changing earlier than the disadvantages may increase the acceptability of change.

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