




# Working Hard to Take the Easy Way Out: How the Need for Cognitive Closure Shapes Strategic Effort Investment to Ease Future Decision Making

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Consumers make countless decisions each day that force them to determine the amount of effort they are willing to invest into the decision process. Due to their desire for immediate resolution and propensity to seize upon available options, individuals high in the need for cognitive closure make decisions that are traditionally associated with reduced effort investment. Counter to this traditional perspective, this research demonstrates that those seeking closure strategically invest effort into the decision process, so long as the initial effort investment is expected to simplify similar decisions in the future. Three experiments demonstrate that those motivated by closure put forth greater effort when they expect to repeat the decision (Experiment 1) and in contexts where a justifiable choice option is not readily available (Experiment 2). Furthermore, this effort investment is shown to payoff in terms of streamlining subsequent decision making (Experiment 3). These findings detail the strategic use of effort by those seeking closure to ease future decision making and thus provide a conceptual framework for when and why those seeking closure allocate effort in decision making.

**Keywords** Decision making; Effort; Information processing; Need for closure

## Introduction

Consumers are often faced with many scenarios in decision making in which they need to determine the amount of effort they are willing to put forth to come to a decision. Though various factors could influence the likelihood of consumers investing effort into decision making, effort investment becomes particularly relevant when considering making similar decisions in the future (e.g., deciding on a brand of shoes, gym, or insurance company that can be used in similar contexts in the future). In this work, we investigate this effort tradeoff in decision making through the lens of need for cognitive closure (Kruglanski & Webster, 1996). We find that though individuals seeking closure are often drawn to seize upon immediate solutions, they are willing to strategically invest effort into the decision process so long as the initial effort investment is expected to simplify similar decisions in the future.

## Conceptual Background

The need for cognitive closure is defined as a fundamental desire to arrive at a decision that reduces openness and achieves resolution (Kruglanski & Webster, 1996). The motivation for closure manifests as a preference for order and predictability, decisiveness, close-mindedness, and a discomfort with ambiguity (see Webster & Kruglanski, 1994). Individuals seeking closure desire immediate answers and are averse to the openness or uncertainty implicit in unresolved decisions (Kruglanski & Chun, 2008; Otto, Clarkson, & Kardes, 2016; Roets & van Hiel, 2008). The urge to achieve closure is so pressing it renders physiological distress (e.g., increased heart rate, blood pressure) in decision making (Roets & van Hiel, 2008).

Due to this fundamental need, those seeking closure engage in a systematic process to arrive at a decision. Specifically, they first “seize” on a solution that offers an immediate sense of closure (*urgency* phase) before then “freezing” on a solution that provides a lasting resolution (*permanency* phase) (Kruglanski, 2004; Kruglanski & Webster, 1996). A cornerstone example of the systematic decision-

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making process is their tendency to rely on options with a justifiable basis for choice (e.g., status quo, default options: Anderson, 2003; McKenzie, Liersch, & Finkelstein, 2006; see Otto et al., 2016). These justifiable options provide immediate solutions in decision contexts, allowing individuals motivated to achieve closure to swiftly resolve choice.

Yet, consumers encounter contexts where justifiable options do not readily exist. New stores, changed menus, different product categories, and novel purchase environments are a reality of decision making. As the literature stands, however, it remains unclear what individuals motivated to achieve closure will do in contexts void of justifiable options. Given their innate desire to seize on solutions that resolve the uncertainty of choice, one possibility is that these individuals come to a decision by passively selecting at random rather than meticulously reviewing available information. This solution is consistent with the intuition that individuals seeking closure invest minimal effort on an experience they deem psychologically taxing (see Kruglanski, 2004).

However, in the present research, we explore the alternative possibility: specifically, we propose that individuals seeking closure will invest greater effort into decision making as a means by which to reduce the effort necessary in similar future decisions. Consistent with this rationale, research has demonstrated that investing greater effort into a context allows individuals to acquire knowledge that can be applied to future decisions (Higgins, 1996; Wyer, Shen, & Xu, 2013). For example, consumers deciding between baby formulas may invest upfront effort by learning about the different formula options available as a means of easing future decisions related to baby formula. Thus, even though remaining in a state of uncertainty is innately bothersome for individuals seeking closure, we contend that investing effort in decision making is a tradeoff they are willing to make, so long as the effort is likely to expedite similar decisions in the future.

### Overview

A wealth of research demonstrates that individuals seeking closure are averse to the uncertainty of choice (see Kruglanski & Chun, 2008). Although this aversion often motivates those high in closure to quickly seize upon options that resolve that uncertainty (see Otto et al., 2016), we propose that those seeking closure are willing to strategically

invest effort as a means of streamlining future decisions. This working hard hypothesis is investigated across three experiments. Specifically, we test the predictions that: (a) those high in need for closure expend upfront effort when they expect to make similar decisions in the future (see Experiment 1), (b) this effort investment is bound to contexts in which a justifiable choice option is not readily available (see Experiment 2), and (c) this upfront effort pays off in the form of streamlined decision making in the future (see Experiment 3). By demonstrating when and why the motivation for closure can lead to greater decision effort in the interest of easing decision making in the future, these findings speak to the discriminate effort allocation of individuals seeking closure and, in turn, contribute to our understanding of the consequences of need for closure and how consumers make decisions.

Of importance, all studies used a paradigm that intentionally distinguished between high- and low-effort options; specifically, participants chose between either having an option randomly selected for them (low effort) or actively selecting their own option (high effort). Experimental stimuli are detailed in the MDA.

### Experiment 1

We conducted an initial experiment to test the core hypothesis that those seeking closure strategically invest effort to ease future decisions. Specifically, we varied the repeatability of the initial decision, with the expectation that those seeking closure would invest greater effort in decisions that have a greater opportunity to be repeated in the future.

#### Method

One hundred and seventy-three undergraduates (52% Male;  $M_{\text{age}} = 20.54$ ) participated in a study on decision making. Participants were told they would be asked their judgments toward the menu of an avant-garde restaurant called *NoTable*. Prior to presenting participants with the menu, we varied the repeatability of the context by telling participants that, during the course of the survey, they would make either multiple decisions (*high* repeatability) or one decision (*low* repeatability) based on the menu (manipulation adapted from Liberman & Förster, 2006).

Participants were then presented with the menu with the intent of identifying an entrée they would like to try before being informed that they could

indicate their own choice or to have the choice randomly selected for them. Following their decision, we assessed effort by having participants partake in a surprise recall task in which they were asked to recall as many menu options as possible (Craik & Lockhard, 1972).

Finally, participants completed an amended Need for Cognitive Closure Scale ( $\alpha = .77$ ; Kardes, Fennis, Hirt, Tormala, & Bullington, 2007), answered demographic questions, and were debriefed and thanked.

## Results

### Choice

The choice data (0 = random option, 1 = own choice) were submitted to a hierarchical logistic regression, with need for closure (continuous, mean-centered) and repeatability (0 = low, 1 = high) as predictors. Neither main effect was significant ( $p$ s > .56). However, the analysis revealed the repeatability  $\times$  closure interaction ( $B = 1.20$ , Wald's  $\chi^2 = 6.76$ ,  $p = .009$ ) (see Figure 1).

For those in the high repeatability condition, there was a significant effect of closure on choice ( $B = .75$ , Wald's  $\chi^2 = 4.84$ ,  $p = .027$ ), such that making one's own choice increased with the need for closure. For those in the low repeatability condition, there was no effect of closure on choice ( $p > .15$ ). Viewed differently, those high in need for closure (+1 SD) were more likely to make their own choice in the high (vs. low) repeatability condition ( $B = 1.30$ , Wald's  $\chi^2 = 4.46$ ,  $p = .035$ ), whereas those

low in need for closure ( $-1$  SD) showed no difference in choice as a function of repeatability ( $p > .12$ ).

### Effort

The number of menu items recalled was submitted to a hierarchical regression analysis, with need for closure and repeatability as predictors. There was a main effect of repeatability ( $p < .001$ ), but not closure ( $p > .30$ ). Importantly, the analysis revealed the predicted interaction ( $B = .80$ ,  $t(169) = 2.27$ ,  $p = .024$ ).

For those in the high repeatability condition, there was a significant effect of closure on recall ( $B = .57$ ,  $t(169) = 2.33$ ,  $p = .021$ ), such that recall increased with the need for closure. For those in the low repeatability condition, there was no effect of closure on recall ( $p > .36$ ). Viewed differently, those high in need for closure (+1 SD) recalled more information when the decision was repeatable (vs. not) ( $B = 1.81$ ,  $t(169) = 4.08$ ,  $p < .001$ ). Conversely, for those low in need for closure ( $-1$  SD), there was no difference in recall for when the decision was expected to be repeatable (vs. not) ( $p > .39$ ).

### Moderated-mediation analysis

Using bootstrapping procedures, we computed a 95% CI around the effect of closure  $\times$  repeatability on choice through recall (Model 8; Hayes, 2018). Consistent with expectations, the mediation pathway was significant for high repeatability decisions (indirect effect: .14; 95% CI: .006, .39) but not for low repeatability decisions (indirect effect:  $-.06$ ; 95% CI:  $-.22$ , .06).

### Discussion

Experiment 1 offers direct evidence for strategic effort investment by those seeking closure. Specifically, those high in need for closure showed greater reliance on their own choice (vs. a random option) and greater recall of menu items, though only when the decision was repeatable.

## Experiment 2

Central to the theoretical model is that those seeking closure invest effort as a means of easing future decisions. Yet, a caveat to this effect is that those seeking closure should only seek to invest effort

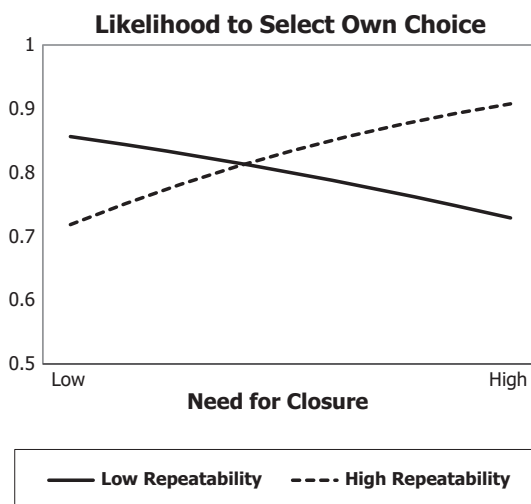


Figure 1. Probability of making own choice as a function of need for closure (at  $\pm 1$  SD) in Experiment 1.

when a justifiable choice option is not readily available, as previous research shows that those seeking closure streamline decision making by relying on options with a justifiable basis for choice (e.g., status quo, default options; see Otto et al., 2016). Indeed, when such solutions are available, those seeking closure should seek to seize upon such solutions (Kruglanski & Chun, 2008; Otto et al., 2016; Roets & van Hiel, 2008). Consequently, in such contexts, those seeking closure should invest less (vs. greater) effort into their own choice. However, in the absence of such options, then, those seeking closure should invest greater (vs. less) effort into their own choice (as in Experiment 1).

We examined the contingent nature of the strategic effort investment of those high in closure in Experiment 2 by testing the role of option validity in determining when decision makers seek closure by effortful means. We presented participants with a decision to invest effort or to rely on a random option. Here, however, we manipulated whether the random option was viewed as a status quo option, a default option, or simply an option selected at random. We expected individuals seeking closure to rely on the random option when the option was validated (i.e., labeled a status quo or default option) yet rely on their own choice when the random option was not validated (i.e., labeled random).

### Method

One hundred and sixty Mechanical Turk participants (54% Male;  $M_{\text{age}} = 35.17$ ) participated in a study about current events. They were presented with information on four news articles, each focusing on an issue that stated a position (e.g., light pollution is harmful to the environment). Participants were told they could either choose an article to read from the list or let the computer choose an article for them at random. Importantly, participants were randomly assigned to one of three conditions (adapted from Otto et al., 2016): one in which the random option represented the status quo (i.e., “this option was deemed the favorite choice among study participants in similar studies”), the default (i.e., “the default option that would be given to participants as an intentional design of the research”), or the control in which no further information was given. Upon indicating their choice and reading their selected articles, participants completed the closure scale ( $\alpha = .81$ ) and responded to demographics before being debriefed and thanked.

### Results

The choice data (0 = random option, 1 = own choice) were submitted to a hierarchical logistic regression, with random option and need for closure (continuous, mean-centered) as predictors. Given that the random option condition is a three-level independent variable (control, status quo, default), indicator coding was used to create a series of dummy variables by which to compare the control condition to the alternative conditions in the analysis (i.e., the control condition was the reference level; Hayes & Preacher, 2014).

The analysis revealed a significant need for closure  $\times$  random option interaction for the control relative to the status quo contrast ( $B = -1.97$ , Wald’s  $\chi^2 = 12.52$ ,  $p < .001$ ) and a significant need for closure  $\times$  random option interaction for the control relative to the default contrast ( $B = -1.90$ , Wald’s  $\chi^2 = 10.98$ ,  $p = .001$ ) (see Figure 2). Of note, the interaction for the status quo relative to the default contrast was non-significant ( $B = -.064$ , Wald’s  $\chi^2 = 0.12$ ,  $p = .91$ ), suggesting the two options were favored equally.

Consistent with Experiment 1, planned comparisons revealed that as the need for closure increased, so did the likelihood of making one’s own choice in the control condition ( $B = 1.02$ , Wald’s  $\chi^2 = 7.01$ ,  $p = .008$ ). However, as need for closure increased, the likelihood of making one’s own choice decreased when the random option was framed as either the status quo ( $B = -.94$ ,  $\chi^2 = 5.58$ ,  $p = .018$ ) or the default ( $B = -.88$ , Wald’s  $\chi^2 = 4.29$ ,  $p = .038$ ).

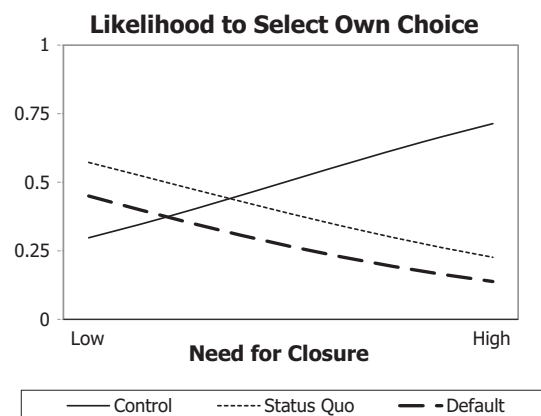


Figure 2. Probability of making own choice as a function of need for closure (at  $\pm 1$  SD) and random option condition in Experiment 2.

### Discussion

While the motivation to achieve closure can prompt individuals to invest greater effort into decisions, this effect is contingent on the absence of validated choice options; when such options are present, those seeking closure forgo effort in favor of those validated options. This finding is illustrative of the strategic nature of decision making for individuals seeking closure. When confronted with decisions, individuals seeking closure rely on options with a justifiable basis to streamline choice (i.e., *decision sidestepping*; Otto et al., 2016). Yet if these options do not exist, those seeking closure put forth greater effort to identify a solution by which to streamline similar choice in the future.

### Experiment 3

The experiments thus far demonstrate that those seeking closure invest greater effort in decision making, presumably as a means of simplifying future decisions. Experiment 3 tested this presumption directly by having participants make an initial choice prior to making a follow-up choice. We expected those seeking closure to put forth more effort into initial decision making and, as a consequence of that effort, to be more likely to make a subsequent decision that is consistent with their initial choice.

### Method

One hundred and fifty-one Mechanical Turk participants (53% Male;  $M_{\text{age}} = 31.25$ ) were welcomed to the study, presented with descriptions of four charities, and informed that the charity they selected would receive a \$1.00 donation by the researchers. As in prior experiments, participants were given a choice between selecting a charity of their liking for the donation or having the charity randomly selected for them. Following this choice, participants were subsequently informed that the researchers would donate an additional \$1.00 to a charity on their behalf. Importantly, participants were given the option to choose between donating to the *same* charity as in their previous choice or to a *new* charity from a list provided. The amount of time participants spent during the first and second choices was recorded, with the difference in decision time serving as an index of effort allocation across choices (Bettman, Johnson, & Payne, 1990). Finally, participants completed the closure scale

used in the prior experiments ( $\alpha = .76$ ), demographics and were debriefed and thanked.

### Results

#### Initial choice

*Choice.* The initial choice data (0 = random option, 1 = own choice) were submitted to a logistic regression with closure (continuous, mean-centered) as the predictor. The analysis revealed a main effect of closure ( $B = .70$ , Wald's  $\chi^2 = 7.97$ ,  $p = .005$ ); as scores on the closure scale increased, the likelihood for participants to make their own choice increased.

*Time.* There was a significant correlation between time spent on the initial choice and need for closure ( $r = .20$ ,  $p = .013$ ), such that as scores on the closure scale increased, so did the amount of time spent on making a decision.

#### Subsequent choice

*Choice.* The subsequent choice data (0 = new charity, 1 = same charity) revealed a main effect of closure ( $B = .56$ , Wald's  $\chi^2 = 7.74$ ,  $p = .005$ ); as closure increased, so did the likelihood of making the same (vs. new) choice.

*Time.* There was a marginal correlation between time spent on the subsequent choice and need for closure ( $r = -.14$ ,  $p > .09$ ), with those higher in need for closure taking less time to make their second choice.

#### Mediation analysis

To test for differences in effort allocation across choices, we calculated a difference score (time 1 – time 2) to assess changes in the amount of time spent on the initial choice relative to the subsequent choice. As predicted, the difference score was significantly correlated with closure ( $r = .24$ ,  $p = .003$ ); those higher in need for closure were more likely to spend *less* time on their subsequent choice relative to their initial choice. Importantly, the difference score data mediated the effect of closure on subsequent choice (indirect effect = .095; 95% CI: .003, .24).

### Discussion

As in prior experiments, those high in need for closure were more likely to rely on their own choice (vs. a random option). Here, however, those seeking closure were more likely to reap the rewards of

this effort by selecting subsequent options that were consistent with their initial choice. Thus, by putting forth initial effort, those seeking closure benefited by easing subsequent decision making.

### General Discussion

While consumers motivated by closure are often drawn to seize upon immediate solutions (e.g., Otto et al., 2016), we demonstrate across three experiments that these individuals will invest greater effort in choice in pursuit of expediting similar decisions in the future. Specifically, those seeking closure were likely to expend greater effort when similar decisions were expected to be made in the future (Experiment 1) and when credible options did not readily exist (Experiment 2). Furthermore, this upfront effort led to payoffs in the form of streamlining subsequent decision making (Experiment 3). Collectively, this work points to the role of cognitive closure in motivating the strategic allocation of resources to work hard in the immediate to take the easy way out in the future.

Though limited work supports the notion that individuals high in need for closure can put forth effort (Houghton & Grewal, 2000; Vermeir, Van Kenhove, & Hendrickx, 2002), the present findings offer a conceptual framework to understand both when and why individuals seeking closure invest effort in the decision-making process. Specifically, those seeking closure do not invest effort indiscriminately but rather intentionally: they will strategically invest effort when they perceive the context is repeatable and void of justifiable alternatives to effort allocation. Consequently, these findings provide a basis to understand and predict the strategic use of effort by those motivated by a need for cognitive closure.

By detailing the strategic nature of decision making by those seeking closure, this research also offers several implications for managers and practitioners. Indeed, though prior research speaks to the value consumers seeking closure place on streamlining decision making, these findings illuminate the circumstances under which these consumers are willing to invest effort to attain that future ease. As such, those high in need for closure would be expected to invest more effort when forming decisions about purchases perceived to be repeatable but less effort when forming decisions about purchases perceived to be singular. Similarly, those high in need for closure would be expected to invest more effort when evaluating novel product

categories (which are typically void of justifiable choice options) and thus would be a valuable segment for firms to target early in the product life cycle to facilitate the adoption of new ideas (Rogers, 2010) and capitalize on any potential pioneering advantage (Carpenter & Nakamoto, 1989).

Lastly, this research outlines several avenues for future research. For instance, while those seeking closure may strategically rely on both high- and low-effort decisions to attain closure, high-effort decisions may be more accessible, which could lead to greater stability over time (Barden & Petty, 2008; Petty, Haugvedt, & Smith, 1995). Indeed, this heightened accessibility might offer an alternative mechanism through which individuals high in closure are more susceptible to priming tasks (Ford & Kruglanski, 1995). Additionally, because those seeking closure are strategic in their effort investment, it raises the question of whether these consumers are better calibrated at identifying aspects of decisions that maximize future utility (e.g., factors that minimize regret: Cooke, Meyvis, & Schwartz, 2001). Finally, the demonstrated link between consumers' need for closure and their strategic effort investment may possess implications for a wide array of phenomena relevant to information processing and goal pursuit more broadly. For instance, those seeking closure may strategically invest greater effort to obtain knowledge related to basic learning processes (i.e., *procedural knowledge*: Tulving, 1985). Similarly, those seeking closure may invest greater effort to generate self-regulatory strategies that ease subsequent goal pursuit (i.e., *implementation intentions*: Gollwitzer, 1999).

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### Supporting Information

Additional supporting information may be found in the online version of this article at the publisher's website:

- Appendix S1.** Supplemental analyses.
- Appendix S2.** Methodological details.