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What does it mean to maximize? "Decision difficulty," indecisiveness, and the jingle-jangle fallacies in the measurement of maximizing

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Abstract

For two decades, researchers have investigated the correlates and consequences of individual differences in *maximizing*, the tendency to pursue the goal of making the best possible choice by extensively seeking out and comparing alternatives. In this time, many different conceptualizations of maximizing have been proposed, including several that incorporate a construct called "decision difficulty." We propose that including decision difficulty in measures of maximizing is problematic because the tendency to experience difficulty when making decisions is a separate individual difference construct already studied independently of maximizing — namely, *indecisiveness*. Across two studies (total N = 639), we find that scales measuring decision difficulty and indecisiveness are strongly correlated (r's ≥ .85), load on the same component in a principal component analysis, and show a very similar pattern of correlations with related variables. Moreover, decision difficulty and indecisiveness scales both show a divergent pattern of correlations when compared to measures of maximizing. We argue that decision difficulty scales are best interpreted as tapping the same underlying tendency as indecisiveness scales, and conclude that the tendency to experience difficulty in decision making is best conceptualized not as a component of maximizing, but rather a cause or consequence of it.

Keywords: maximizing, decision difficulty, indecisiveness, jingle fallacy, jangle fallacy

1 Introduction

Who seeks the best when making a choice? Traditional economic theories assumed that people were rational choosers who attempted to *maximize* by making the best possible choice after fully considering all available information and alternatives. In contrast, Simon (1955, 1956) argued that cognitive and logistical constraints made it impossible to maximize; he proposed that people *satisfice* by striving to make a "good enough" choice instead of an optimal one. Nearly two decades ago, Schwartz et al. (2002) integrated these perspectives with modern research on individual differences in decision making to suggest that people vary in the extent to which they seek the best during choice — some people are more likely to try to maximize, while others are content to satisfice.

A large body of research has examined the correlates and consequences of individual differences in maximizing using the scale developed by Schwartz et al. (2002) — the Maximization Scale. For example, researchers have argued that, relative to satisficers, maximizers are more likely to seek out additional alternatives during decision making, to expend more effort and time making decisions, to experience regret and dissatisfaction after choice, and to achieve objectively better decision outcomes (e.g., Cheek & Ward, 2019; Dar-Nimrod, Rawn, Lehman & Schwartz, 2009; Iyengar, Wells & Schwartz, 2006; Misuraca & Teuscher, 2013; Polman, 2010; Schwartz et al., 2002). Many researchers have also suggested that maximizing is related to a broad range of potentially maladaptive traits and tendencies, such as perfectionism, neuroticism, unhappiness, depression, attention deficit/hyperactivity disorder, and suicidality (e.g., Bruine de Bruin, Dombrovski, Parker & Szanto, 2016; Chang et al., 2011; Schepman, Weyandt, Schlect & Swentosky, 2012; Schwartz et al., 2002). Claims that maximizing is related to negative outcomes are controversial, however; indeed, there is substantial disagreement about how (mal)adaptive maximizing actually is (e.g., Cheek & Schwartz, 2016; Dalal, Diab, Zhu & Hwang, 2015; Diab, Gillespie & Highhouse, 2008; Schwartz et al., 2002). This disagreement largely revolves around the meaning and measurement of maximizing, because conclusions about its correlates largely depend on how researchers define and operationalize maximizing. In the present research, we address one aspect of disagreement — namely, whether or not decision difficulty should be considered part of maximizing.

1.1 What does it mean to maximize?

Since Schwartz et al.'s (2002) original development of the Maximization Scale, the literature has seen over a dozen new measures and definitions of maximizing. In an attempt to clarify the confusing measurement literature, Cheek and

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TABLE 1: Summary of constructs in maximizing definitions and scales. X's indicate the presence — whether explicit or implicit — of a particular construct in a given definition/operationalization.

Definition/operationalization	High standards	Alternative search	Decision difficulty	Regret
Maximization Scale (Schwartz et al., 2002)	X	X	X	
Short Form Maximization Scale (Nenkov et al., 2008)	X	X	X	
Maximization Tendency Scale (Diab et al., 2008)	X	X		
Modified Maximizing Scale (Lai, 2010)	X	X		
Maximization Inventory (Turner et al., 2012)		X	X	
Revised Short Form Maximization Scale (Weinhardt et al., 2012)	X	X	X	
Revised Maximizing Tendency Scale (Weindhardt et al., 2012)	X			
Relational Maximization Scale (Mikkelson & Pauley, 2013)	X	X	X	
Refined Maximization Scale (Richardson et al., 2014)	X	X	X	X
Maximizing mind-set (Ma & Roese, 2014)	X	X		
Maximizing Tendency Scale-7 (Dalal et al., 2015)	X			
Decision Making Tendency Inventory (Misuraca et al., 2015)	X	X	X	
Relational Maximization Scale (friendship version; Newman et al., 2018)	X	X	X	
Career Maximizing Scale (Voss et al., 2019)	X	X		

Schwartz (2016) reviewed and analyzed 11 existing scales, as well as the conceptualization of maximizing used in Ma and Roese's (2014) maximizing mind-set priming procedure. Their review illuminated four constructs that are specifically defined by at least one measure to be part of maximizing.[1] Table 1 summarizes the different definitions of maximizing and outlines which definitions include each of four relevant maximizing constructs, including the two maximizing scales of which we are aware that were published after Cheek and Schwartz's review (Newman, Schug, Yuki, Yamada & Nezlek, 2018; Voss, Lake & Chelvin-Thiele, 2019).

Two of the most common constructs are a goal construct (often labeled "high standards") that captures the goal of making the best possible choice and a strategy construct (often labeled "alternative search") that captures the strategy of extensively seeking out and comparing alternatives. Cheek and Schwartz (2016) proposed a two-component theoretical model of maximizing that comprises these two constructs, arguing that maximization can be best understood as the pursuit of the maximization goal of wanting the best[2] through the maximization strategy of alternative search. The two other constructs that have been included in maximizing definitions are decision difficulty and regret.

"Decision difficulty" was the label applied by Nenkov et al. (2008) to one of the factors that emerged from factor analyses of Schwartz et al.'s (2002) original Maximization Scale. This factor included four items that broadly described the tendency to find decisions challenging (e.g., "I often find it difficult to shop for a gift for a friend"). Schwartz et al. included these items because they theorized that maximizers would tend to find decisions more difficult than satisficers, which is a reasonable claim given that maximizers have a more challenging goal of choosing the very best alternative. Because of the presence of decision difficulty items in the original maximizing measure, and the formal establishment of decision difficulty as a component of maximizing in the Short Form Maximization Scale (Nenkov et al., 2008), the majority of definitions and measures of maximizing have included decision difficulty (see Table 1).

Yet, that maximizing is often related to experiencing decision difficulty does not mean that decision difficulty is inherently *part* of maximizing. In fact, maximizers need not always experience increased decision difficulty — for example, if there are only a few options, it may be relatively easy to identify the best one, and thus both maximizers and satisficers will have an easy decision process. Cheek and Schwartz (2016) argued that decision difficulty is more appropriately conceptualized as either a consequence of maximizing, such as when maximizers face greater cognitive load in complex decisions, or a cause of maximizing, such as when difficulty makes decisions seem more important and drives people to

[1]Two additional constructs, satisficing and minimizing, are typically assumed by proponents to be separate theoretical constructs (e.g., distinct decision strategies or goals) rather than part of maximizing (see Cheek & Schwartz, 2016); thus, we do not discuss them further in the present research.

[2]Cheek and Schwartz (2016) argued that the label "high standards" for the maximization goal is inappropriate and confusing because satisficers may also have high standards; what distinguishes maximizers is that they seek the *very best* choice, rather than a choice that may meet high standards but be suboptimal.

maximize (Sela & Berger, 2012). In addition to undermining construct validity, including decision difficulty in measures of maximizing is problematic because it is impossible to accurately study the relation between maximizing and decision difficulty when the latter is included in the measurement of the former. Moreover, it builds a negative outcome into measurement, which can then affect what maximizing appears to be related to (e.g., by making maximizing seem more problematic than it may actually be; Cheek & Schwartz, 2016; Dalal et al., 2015; Diab et al., 2008; Hughes & Scholer, 2017; Kim & Miller, 2017; Lai, 2010).

Although the inclusion of decision difficulty as part of the first measure of maximizing explains why it originally became a prominent component in many definitions and operationalizations, it is striking that decision difficulty *continues* to be so frequently considered part of maximizing despite several prominent calls to the contrary (e.g., Cheek & Schwartz, 2016; Dalal et al., 2015; Lai, 2010). Indeed, many recent studies of maximizing have measured decision difficulty as part of maximizing (e.g., French & Meltzer, 2019; Hsieh & Yalch, 2019; Luan & Li, 2017a, 2017b, 2019; Smallman & Becker, 2017; Oren, Dar & Liberman, 2018). What is also striking is how often researchers measure decision difficulty as part of maximizing compared to how rarely they measure regret as part of maximizing. To our knowledge, only one scale includes regret as part of maximizing (Richardson et al., 2014), and a December 2019 search on Google Scholar did not yield any articles except the original scale construction article that used that scale. Given arguments that neither decision difficulty nor regret should be considered part of maximizing, why is one inappropriately included so much more often than the other?

One essential difference between decision difficulty and regret may be that the latter is widely accepted to be its own, distinct construct. There is a large body of theory and research on regret independent of maximizing (e.g., Connolly & Zeelenberg, 2002; Gilovich & Medvec, 1995; Landman, 1993; Zeelenberg & Pieters, 2007), and even in their original article, Schwartz et al. (2002) constructed their Regret Scale separately from their Maximization Scale. Thus, using items that measure regret while instead calling them maximizing is a relatively obvious example of the *jingle fallacy* — conflating distinct constructs by measuring them with scales of the same name (Kelley, 1927; Thorndike, 1904). Because regret is well-known and well-studied outside of the maximizing literature, the fallacy in this case is relatively straightforward.

When it comes to decision difficulty, on the other hand, the problem may be obscured because "decision difficulty" is not a common term for an individual difference, except when studied as a component of maximizing. In the present paper, we aim to demonstrate that measuring decision difficulty as part of maximizing is an equally problematic instance of the jingle fallacy as measuring regret as part of maximizing. Specifically, we argue that, like regret, decision difficulty is *already* an individual difference that has been and continues to be studied outside of the maximizing literature. This fact, however, may not be obvious because individual differences in decision difficulty are typically referred to in the literature by another name — *indecisiveness*. Thus, measuring decision difficulty as part of maximizing is an instance of the jingle fallacy because it conflates maximizing and indecisiveness, whereas measuring decision difficulty and indecisiveness separately is instead an instance of the *jangle fallacy* — assuming two constructs are different because they are measured by scales with different names (Kelley, 1927; Thorndike, 1904).

1.2 Decision difficulty as indecisiveness

Indecisiveness is an individual difference that describes the general tendency to experience difficulty during decision making. This tendency includes specific features such as finding decisions challenging, taking a long time to make decisions, attempting to delay or avoid making decisions, frequently changing one's mind before a final decision has been made, and ruminating and worrying about decisions once they have been made (Crites, 1969; Frost & Shows, 1993; Germeijs & De Boeck, 2002; Rassin, 2007; Salomone, 1982; Van Matre & Cooper, 1984).[3] Indecisiveness tends to be positively related to maladaptive traits, lower well-being, and psychopathology, including neuroticism, impatience, perfectionism, worrying, dysfunctional impulsivity, stress, anxiety, depression, obsessive compulsive disorder (OCD), lower quality of life, lower life satisfaction, and lower self-esteem (Barkley-Levenson & Fox, 2016; Bavolar, 2018; Di Fabio, Palazzeschi, Asulin-Peretz & Gati, 2013; Effert & Ferrari, 1989; Frost & Shows, 1993; Gayton, Clavin, Clavin & Broida, 1994; Germeijs & Verscheuren, 2011a; Rassin & Muris, 2005a, 2005b; Rassin, Muris, Franken, Smit & Wong, 2007; Taillefer, Liu, Ornstein & Vickers, 2016). Indecisiveness also has a wide variety of consequences for decision making, such as greater information seeking and tunnel vision during choice; attribute-based comparison and compensatory decision making; delaying and avoiding decision making; greater distraction during choice; greater effort expense and working memory load during choice; lower choice commitment; less decision stability; lower decision confidence; more regret; and worse decision outcomes (Bavolar, 2018; Ferrari & Dovidio, 2000, 2001; Ferrari & Pychul, 2007; Frost & Shows, 1993; Germeijs & Verschueren, 2011b; Germeijs, Verschueren & Soenens, 2006; Patalano, Juhasz & Dicke, 2010; Patalano & LeClair, 2011; Patalano & Wengrovitz, 2007; Rassin & Muris, 2005a; Rassin et al., 2007; Rassin, Muris, Booster & Kolsloot, 2008). As this summary

[3] Following the convention in the literature, we use *indecisiveness* to refer to individual differences in the general tendency to find decisions difficult, whereas *indecision* describes one instance of decision difficulty.

shows, there is already an established and growing literature on indecisiveness as an individual difference.

We propose that indecisiveness and decision difficulty are two names for what is essentially the same construct. Indeed, both describe individual differences in the tendency to experience decision difficulty, and scales that seek to measure both constructs have extremely similar items. Table 2 presents a comparison of items from the Indecisiveness Scale developed by Germeijs and De Boeck (2002) and the Decision Difficulty Scale developed by Turner et al. (2012). Both scales not only share similar items in general, but specifically tap a very similar set of particular features, such as difficulty, delaying, and uncertainty. To our knowledge, there is no existing theory that specifically advances an argument for any conceptual distinctions between indecisiveness and decision difficulty. Rather, they have simply been assumed to be distinct because decision difficulty has been defined as part of maximizing, whereas indecisiveness has been separately studied as its own unique construct.

We are not the first to consider decision difficulty in relation to indecisiveness. Some authors (e.g., Barkley-Levenson & Fox, 2016; Dalal et al., 2015) have explicitly linked decision difficulty and indecisiveness as very related constructs, and others have also shown that indecisiveness is correlated with either decision difficulty specifically or with maximizing measures that include decision difficulty (Diab et al., 2008; Oren et al., 2018; Patalano & LeClair, 2011; Spunt et al., 2009; Weinhardt et al., 2012). However, this previous research has typically found only moderate correlations between decision difficulty and indecisiveness, including correlations of .40 in both Patalano and LeClair (2011) and Dalal et al. (2015), and .48 and .51 (depending on the scale) in Weinhardt et al. (2012). To our knowledge, the highest correlation that has been found between a decision difficulty scale and an indecisiveness scale is .63 in Barkley-Levenson and Fox (2016). Although these correlations suggest a meaningful relationship between indecisiveness and decision difficulty, they do not necessarily suggest that scales measuring each construct are really measuring the same underlying individual difference.

Why might decision difficulty and indecisiveness be only moderately correlated in previous studies? We suggest that previous findings have largely been limited by relying on the Decision Difficulty subscale from the Short Form of the Maximization Scale (Nenkov et al., 2008; Schwartz et al., 2002). The scale has low reliability and relatively few items; was originally developed to measure maximizing broadly instead of decision difficulty specifically; has outdated items (e.g., "Renting videos is really difficult. I'm always struggling to pick the best one."); and has domain-specific items in limited contexts. Each of these limitations may explain why previous research has not found larger relations between decision difficulty and indecisiveness. In the present research, we used Turner et al.'s (2012) Decision Difficulty Scale, which is domain-general and has better psychometric properties (Cheek & Schwartz, 2016; Turner et al., 2012). We hypothesized that correlations between decision difficulty measured with this scale and indecisiveness would be substantially higher than in previous research, as would be expected if decision difficulty and indecisiveness are really two names for the same individual difference.

1.3 The present research

We tested the relation between decision difficulty and indecisiveness in two studies. In Study 1, participants completed measures of the maximization goal of wanting the best and maximization strategy of alternative search, as well as measures of decision difficulty and indecisiveness. We expected that decision difficulty and indecisiveness would be very strongly correlated, both to an absolute degree and relative to their correlations with the two maximizing measures. We also conducted a principal component analysis to explore whether decision difficulty items would load on the same component as indecisiveness items, supporting our argument that they tap the same underlying dimension. In Study 2, participants completed these same measures as well as several other related measures to test the hypothesis that decision difficulty and indecisiveness would show a robust pattern of convergent correlations with related variables. Participants in Study 2 also made decisions and reported their decision difficulty to allow us to compare how decision difficulty and indecisiveness measures related to actual reported difficulty after making decisions. In both studies, we report all measures, manipulations, and exclusions, as well as how sample size was determined. Data, materials, and analysis code are available as online supplemental material.

2 Study 1

In the first study, participants completed measures of decision difficulty and indecisiveness, as well as measures of the maximizing goal of wanting the best and the maximizing strategy of alternative search. We expected that there would be a high correlation between decision difficulty and indecisiveness, and also explored whether they would load on the same component in a principal component analysis.

2.1 Method

2.1.1 Participants

We used TurkPrime (Litman, Robinson & Abberbock, 2017) to recruit 350 participants through Amazon's Mechanical Turk (MTurk). We recruited the largest sample possible given available funding, with the restriction that there be at least 250 participants, the sample size at which correlations stabilize (Schönbrodt & Perugini, 2013). To be included in

TABLE 2: Comparison of Decision Difficulty and Indecisiveness Scale Items

Specific Feature	Decision Difficulty Example Items	Indecisiveness Example Items
Difficulty	"I usually have a hard time making even simple decisions."	"It's hard for me to come to a decision."
Uncertainty	"I am usually worried about making the wrong decision."	"While making a decision, I feel uncertain."
Delay	"I often put off making a difficult decision until a deadline."	"I delay deciding."
Mind changing	"I often change my mind several times before making a decision."	"I often reconsider my decision."
Post-decision rumination	"I often think about changing my mind after I have already made my decision."	"After making a decision, I can't get it out of my mind."

analyses, participants had to pass two instructional manipulation checks (Oppenheimer, Meyvis & Davidenko, 2009) and indicate that they did not respond randomly. In total, 336 participants met these criteria and were included in analyses. The average age of participants was 37.46 (SD = 12.13) and there were 145 women, 189 men, and 2 who did not identify as men or women.[4]

2.1.2 Measures

Participants completed Turner et al.'s (2012) 12-item Decision Difficulty Scale from the Maximization Inventory (MI-DD; α = .91), which was designed to measure the decision difficulty component of maximizing, and Germeijs and De Boeck's (2002) 22-item Indecisiveness Scale (IS; α = .93), which was designed to measure domain-general indecisiveness. The IS was originally developed in Dutch and then translated into English, and we administered but did not analyze one idiom-based item that did not quite make sense in English ("I cut the knot myself in a decision instead of leaving the decision to others"). This item is included in the online data so that our analyses can be reconducted while including it.

Participants also completed the 7-item Maximizing Tendency Scale-7 (MTS, α = .90) developed by Dalal et al. (2015) to measure the goal of making the best possible choice and the 12-item Alternative Search Scale from Turner et al.'s Maximization Inventory (MI-AS, α = .88) developed to measure the strategy of searching extensively for alternatives and comparing them when making a choice. These latter two measures were recommended by Cheek and Schwartz (2016) to measure the maximizing goal and maximizing strategy, respectively.

[4]Additional demographic information (e.g., income, ethnicity) was collected in both studies and is available in the data in supplemental material; for brevity we report only age and gender. In Study 1, one missing decision difficulty item was imputed for one participant using the participant's average response on the other scale items. In Study 2, one missing indecisiveness item was imputed for one participant using the same method.

TABLE 3: Correlations among variables from Study 1.

	MI-DD	IS	MTS
IS	.85		
MTS	−.01	−.15	
MI-AS	.20	.08	.44

Note. $p < .01$ for $r > .14$ and $p < .001$ for $r > .19$.

2.2 Results

Table 3 presents the correlations among the measures from Study 1. In line with our proposal that decision difficulty and indecisiveness scales are largely measuring the same construct, the MI-DD and IS were highly correlated, r = .85. When Spearman's (1904) correction for attenuation is applied, the correlation between the MI-DD and IS becomes even higher, r = .93. The MI-DD was positively correlated with the MI-AS, whereas the IS was not. Neither the MI-DD nor the IS was correlated with the MTS. The MTS and MI-AS were moderately positively correlated, supporting the idea that people who tend to adopt the maximizing goal of choosing the best often also adopt the maximizing strategy of alternative search.

To further explore the similarities between decision difficulty and indecisiveness measures, we conducted a principal component analysis with a varimax rotation on the items from the MI-DD, IS, MTS, and MI-AS. Based on examination of the scree plot, eigenvalues, and theoretical interpretation components, we extracted three components.[5] As shown

[5]To transparently address potential disagreement about the proper number of components to extract, we present two- and four-component solutions in the Appendix. If two components are extracted, the MTS and MI-AS items load on one component, whereas the MI-DD and IS items load on the other. In other words, there is a maximizing component (comprising both the goal and strategy) and a decision difficulty-indecisiveness component (comprising decision difficulty and indecisiveness items). If four components are rotated, the reverse-coded items on the MI-DD and IS

TABLE 4: Principal component analysis with only MI-DD and IS items from Study 1. Loadings above .35 are bolded. (R) indicates a reverse-coded item.

Item	Component:	1	2
Decision Difficulty Scale (Maximization Inventory)			
I usually have a hard time making even simple decisions.		**.73**	.23
I am usually worried about making a wrong decision.		**.60**	**.38**
I often wonder why decisions can't be more easy.		**.67**	.18
I often put off making a difficult decision until a deadline.		**.68**	.28
I often experience buyer's remorse.		**.67**	.17
I often think about changing my mind after I have already made my decision.		**.72**	.26
The hardest part of making a decision is knowing I will have to leave the item I didn't choose behind.		**.69**	.16
I often change my mind several times before making a decision.		**.67**	.32
It's hard for me to choose between two good alternatives.		**.58**	.32
Sometimes I procrastinate in deciding even if I have a good idea of what decision I will make.		**.65**	.34
I find myself often faced with difficult decisions.		**.54**	−.01
I do not agonize over decisions. (R)		.23	**.72**
Indecisiveness Scale			
I find it easy to make decisions. (R)		.20	**.77**
It is hard for me to come to a decision.		**.66**	**.44**
I don't know how to make decisions.		**.64**	.13
I know which steps to take when making a decision. (R)		.24	**.50**
I would characterize myself as an indecisive person.		**.69**	**.39**
I don't hesitate much when I have to make a decision. (R)		.15	**.79**
While making a decision, I feel certain. (R)		.23	**.77**
While making a decision, I feel uncertain.		**.65**	**.40**
It takes a long time to weigh the pros and cons before making a decision.		**.57**	.24
I make decisions quickly. (R)		.09	**.72**
I delay deciding.		**.64**	.33
I don't postpone making decisions to a later date. (R)		.30	**.57**
I try to avoid making a decision.		**.70**	.28
I don't avoid situations where decisions have to be made.		.17	**.41**
I tend to leave decisions to someone else.		**.66**	.24
Once I have taken a decision, I stick to that decision. (R)		.27	**.54**
I often reconsider my decision.		**.65**	.34
Once I have made a decision, I stop worrying about it. (R)		.23	**.70**
After making a decision, I can't get it out of my head.		**.70**	.20
After I have decided something, I believe I took the wrong decision.		**.76**	.15
After making a decision, I don't regret the decision. (R)		.25	**.63**

break off from the other MI-DD and IS items to load on their own component, which appears to be largely a methodological result, rather than theoretically-meaningful one. The other three components then comprise the MTS items, the MI-AS items, and the remaining MI-DD and IS items, respectively. In our view, these other potential solutions are also consistent with the interpretation that the MI-DD and IS are essentially tapping the same underlying construct of indecisiveness.

in the Appendix (Table A1), the MTS items loaded on one component, the MI-AS items loaded on a second component, and the items from the MI-DD and the IS together loaded on a third component. Thus, one component represents the

maximizing goal, one component represents the maximizing strategy, and one component represents the tendency to find decisions difficult, which therefore includes the items from both the MI-DD and the IS. This result fits with our interpretation of decision difficulty measures as assessing the same underlying construct as indecisiveness measures.

Because our main goal is to explore the measurement of decision difficulty and indecisiveness specifically, we next conducted a second principal component analysis including only the items from those two scales. As shown in Table 4, the two-component solution that emerges from a varimax rotation is consistent with our proposal that the MI-DD and IS are tapping the same underlying construct. The second component consists entirely of reverse-coded items, suggesting that, but for a methodological feature of some items, the two scales do not appear to measure distinguishable constructs.

2.3 Discussion

The results of Study 1 provide preliminary support for our proposal that decision difficulty and indecisiveness scales largely measure the same underlying construct. The MI-DD and IS were highly correlated, and, once an attenuation correction is applied, the correlation between the two scales is essentially at ceiling. Moreover, items from both scales loaded on the same component in multiple principle component analysis solutions; only the methodological feature of reverse-coded items caused some items from the two scales to load on separate factors. Consistent with previous research (see Cheek & Schwartz, 2016, for a review), the MTS and MI-AS were positively correlated, and the MI-AS was related to decision difficulty, whereas the MTS was not. The maximizing strategy of alternative search is thus more related to decision difficulty than the maximizing goal of choosing the best.

If decision difficulty and indecisiveness measures are essentially measuring the same construct, then they should also show a robust pattern of convergent correlations with related measures. We set out to test this possibility in Study 2.

3 Study 2

The goal of Study 2 was to build on Study 1 by examining the correlates of measures of decision difficulty and indecisiveness. If the MI-DD and IS are really two measures of the same underlying construct, then they should have similar correlations with relevant variables. Accordingly, in this study we included several individual difference measures that we expected would be related to decision difficulty and indecisiveness (e.g., intolerance of uncertainty; see below for details). In addition, we again included the MTS and MI-AS to allow for comparisons among the two components of maximizing and decision difficulty and indecisiveness. For further comparison, participants additionally completed Schwartz et al.'s (2002) original Maximization Scale (MS), out of which we scored the three subscales — High Standards (MS-HS), Alternative Search (MS-AS), and Decision Difficulty (MS-DD) — from Nenkov et al. (2008). We expected the MTS to be most related to the MS-HS, the MI-AS to be most related to the MS-AS, and the MI-DD and IS to be most related to the MS-DD. Importantly, however, given our earlier suggestion that the MS-DD is less valid measure of decision difficulty than the MI-DD, we expected that the IS would be more strongly correlated with the MI-DD than with the MS-DD.

To investigate how decision difficulty and indecisiveness measures related to actual difficulty experienced during decisions, participants also made three decisions and reported how difficult they found them.[6]

3.1 Method

3.1.1 Participants

We aimed to recruit 300 participants from MTurk using the same sample size determination as in Study 1. In total, 303 participants completed the study, of whom 279 were included in analyses after meeting the inclusion criteria described in Study 1. The average age of participants was 36.63 (SD = 11.71), and there were 142 women and 137 men.

3.1.2 Measures

Participants completed the following measures in a randomly determined order.

Maximizing and indecisiveness As in Study 1, participants completed the MTS (α = .92), MI-AS (α = .92), MI-DD (α = .93), and IS (α = .94), as well as the 13-item MS (α = .76) developed by Schwartz et al. (2002). We scored the two-item subscales for high standards (MS-HS; α = .75), alternative search (MS-AS; α = .34), and decision difficulty (MS-DD; α = .51) out of the MS following Nenkov et al. (2008).

Regret Participants completed the 5-item Regret Scale (α = .86; Schwartz et al., 2002). We expected the MI-DD and IS to be positively correlated with the tendency to experience regret. Indeed, previous research and theory suggests that indecisive people are more likely to experience regret and that regret may also lead to future indecisiveness (Rassin, 2007; Spunt et al., 2009).

[6] After completing all relevant measures for the present research, participants in Study 2 completed a brief judgment task for an unrelated study that is not reported here.

Intolerance of uncertainty Participants completed the 12-item short form of the Intolerance of Uncertainty Scale (α = .92; Carleton, Norton & Asmundson, 2007). Previous research has found that indecisiveness correlates with intolerance of uncertainty (Rassin et al., 2007), and Rassin's (2007) theory of indecisiveness includes intolerance of uncertainty as a potential cause of indecisiveness. Thus, we expected the MI-DD and IS to both be positively related to intolerance of uncertainty.

Decisiveness Participants completed the revised 6-item Decisiveness Scale of the Need for Closure Scale (α = .87; Roets & Van Hiel, 2007). The decisiveness component of need for cognitive closure reflects the perceived need to quickly identity a solution or make a decision (i.e., "seize"; Webster & Kruglanski, 1993; Roets & Van Hiel, 2007). We expected that the need for decisiveness would be positively correlated with the MI-DD and IS, because feeling pressure to quickly make a decision should be related to a more difficult and unpleasant decision process.

Fear of negative evaluation Participants completed the 12-item brief Fear of Negative Evaluation Scale (α = .96; Leary, 1983). We thought that fear of negative evaluation might be positively correlated with the MI-DD and IS. For people who fear negative judgments from others, decisions have higher stakes — they can influence whether the fear of negative evaluation is realized. Thus, the decision process should be more stressful and perceived as more related to impression management goals for those higher in fear of negative evaluation, leading to greater decision difficulty and rumination about choices (i.e., indecisiveness; Schlenker, 1980; Watson & Friend, 1969).

Perfectionism and excellentism Participants completed the 10-item Scale of Perfectionism and Excellentism (Gaudreau & Schellenberg, 2018), 5 items of which measure perfectionism (α = .94) and 5 of which measure excellentism (α = .85). Whereas perfectionism is the tendency to strive for perfect performance and outcomes, excellentism is the tendency to strive for high-quality, but not necessarily perfect, performance and outcomes (Gaudreau, 2019; Wade, 2017). We anticipated that the MTS, which measures the goal of making the best choice, would be positively correlated with both of these traits, whereas the MI-DD and IS would be less strongly related to both. Furthermore, we expected that the MTS would be more related to perfectionism than to excellentism. Because the maximization goal is specifically striving for the *best*, rather than merely a high-quality but potentially suboptimal choice (as a satisficer with high standards would seek; Cheek & Schwartz, 2016), the MTS should, in theory, be more related to perfectionism and its shared focus on the optimal outcome than to excellentism.

Rational decision style Participants completed the 5-item Rational Decision Style Scale (α = .93; Hamilton, Shih & Mohammed, 2016). In this context, "rational decision style" describes the tendency to carefully deliberate about decisions after gathering all necessary information about the available alternatives. We expected that the MI-AS would be most related to a rational decision style, because the maximization strategy of alternative search largely involves this style of careful deliberation after seeking out alternatives (Hamilton et al., 2016; Cheek & Schwartz, 2016).

3.1.3 Experienced decision difficulty

Participants made three decisions about what to order from three fictional menus (one for an Italian restaurant, one for a salad restaurant, and one for a general American restaurant). After each decision, they answered two questions about how difficult they found the decision ("How difficult was your decision?" and "How hard was it to choose which option you wanted?"). Both questions were answered on scales ranging from 1 to 9, with higher numbers indicating greater difficulty. Participants' answers to each question after each decision were averaged to create an index of how much actual difficulty they experienced when making each decision.

3.2 Results

3.2.1 Correlations

Table 5 presents the correlations among the measures from Study 2.

As in Study 1, the MI-DD and IS were strongly correlated, r = .89, and this correlation increases when corrected for attenuation, r = .95. Both the MI-DD and IS were positively correlated with the MS-DD as well, though not as strongly as they were with each other. The MI-DD and IS were also both related to the MS-AS, regret, intolerance of uncertainty, the decisiveness facet of need for closure, and fear of negative evaluation, whereas they were both unrelated to the MTS, perfectionism, excellentism, and a rational decision style. The MI-DD was positively correlated with the MS-AS, whereas the correlation between the MS-AS and IS was smaller. On the other hand, the IS was negatively correlated with the MS-HS, whereas the correlation between the MS-HS and the MI-DD was smaller. In both of these cases, the correlations were in the same direction, and the MI-DD and IS were never meaningfully correlated in opposite directions with any variables.

As expected, the MI-AS was positively correlated with a rational decision style, whereas the MTS was positively correlated with both perfectionism and excellentism. However, contrary to expectations, the MTS was not more strongly related to perfectionism; rather, the MTS and excellentism were more strongly correlated than the MTS and perfectionism. Consistent with the suggestion that the maximization

TABLE 5: Correlations among variables from Study 2.

	MI-DD	IS	MTS	MI-AS	MS	MS-HS	MS-AS	MS-DD	Regret	IOU	Dec	FNE	Perf.	Ex.
IS	.89													
MTS	−.07	−.19												
MI-AS	.20	.08	.45											
MS	.58	.45	.37	.44										
MS-HS	−.05	−.14	.79	.39	.43									
MS-AS	.28	.19	.23	.22	.68	.22								
MS-DD	.63	.57	−.03	.18	.69	.02	.29							
Regret	.69	.65	−.04	.23	.51	.00	.31	.41						
IOU	.63	.54	.03	.33	.50	.10	.19	.47	.49					
Dec	.32	.25	−.06	−.12	.19	−.07	.06	.27	.14	.41				
FNE	.56	.51	−.21	−.01	.32	−.16	.18	.41	.46	.51	.41			
Perf.	.01	−.06	.50	.30	.30	.53	.17	.03	.10	.21	.08	.00		
Ex.	−.09	−.20	.59	.31	.28	.59	.19	−.05	.03	.03	−.03	−.11	.61	
RDS	.02	−.01	.30	.60	.20	.26	.12	.01	.10	.13	−.24	−.12	.13	.38

Note. IS = Indecisiveness Scale. MI-DD = Decision Difficulty Scale of Maximization Inventory. MTS = Maximizing Tendency Scale-7. MI-AS = Alternative Search Scale of Maximization Inventory. MS = Maximization Scale. MS-HS = High Standards subscale of Short Form Maximization Scale. MS-AS = Alternative Search subscale of Short Form Maximization Scale. MS-DD = Decision Difficulty subscale of Short Form Maximization Scale. IOU = Intolerance of Uncertainty Scale. Dec = Decisiveness Scale (need for cognitive closure). FNE = Fear of Negative Evaluation Scale. Perf. = Perfectionism Scale. Ex. = Excellentism Scale. RDS = Rational Decision Style Scale. $p < .05$ for $|r| \geq .12$. $p < .01$ for $|r| \geq .16$. $p < .001$ for $|r| \geq .21$.

TABLE 6: Correlations between decision difficulty, indecisiveness, and experienced difficulty

	Decision difficulty	Indecisiveness
Menu 1 decision difficulty	r=.34, p<.001	r=.27, p<.001
Menu 2 decision difficulty	r=.34, p<.001	r=.27, p<.001
Menu 3 decision difficulty	r=.20, p=.001	r=.14, p=.017

strategy of alternative search is potentially more maladaptive than the maximization goal of wanting the best, the MI-AS was correlated with regret and intolerance of uncertainty, whereas the MTS was unrelated to regret and intolerance of uncertainty and negatively correlated with fear of negative evaluation.

3.2.2 Experienced decision difficulty

Table 6 shows the correlation between the actual difficulty reported after making decisions from three menus and the MI-DD and IS. Both scales were related to greater experienced difficulty for all three decisions, though correlations were higher for the first two decisions than for the third.

3.3 Discussion

The results of Study 2 provide further evidence for our proposal that decision difficulty and indecisiveness scales measure the same underlying construct. The MI-DD and IS were again highly correlated, r = .89, and, as in Study 1, their correlation further increases when corrected for attenuation, r = .95. For reference, the MS-HS has been argued to measure the same construct as the MTS and is often used as evidence of construct validity (e.g., Diab et al., 2008; Dalal et al., 2015), and these two scales were correlated at r = .79. Thus, if researchers were developing the MI-DD as an indecisiveness scale, this high correlation between the MI-DD and IS would be compelling evidence of construct validity.

It is worth noting that while the MI-DD and IS were both correlated with the MS-DD, these correlations were somewhat smaller, r's = .63 and .57. This finding fits with our suggestion that previous research on maximizing and indecisiveness has obscured the extent to which decision difficulty and indecisiveness conceptually overlap because the MS-DD scale has limited validity and weaker psychometric properties — it does not capture the construct as well as the MI-DD. Many researchers have criticized the Schwartz et al.'s (2002) MS, while still using it in scale validation or scale comparison work, but this approach has important limitations

because of the very weaknesses of the original scale highlighted by critics. Thus, the MS and its subscales should not be used as the only means of validating or comparing maximizing and related constructs.

The MI-DD and IS also showed a convergent pattern of correlations: they were correlated in the same direction and at similar magnitudes with the other variables. Moreover, both the MI-DD and IS were positively correlated with actual difficulty experienced during decision making, providing evidence for the criterion validity of both measures. Interestingly, the correlation between the IS and other variables was always lower — not in magnitude, but numerically — than the correlation between the MI-DD and other variables. One possibility is that this difference arose because only 1 of the 12 items of the MI-DD is reverse-coded, whereas 10 of the 21 IS items we scored (leaving out one item that did not translate well) are reverse-coded. This possibility is supported by the results of the principal component analysis in Study 1, in which the reverse-coded items loaded on a separate, though theoretically uninteresting, component. Reverse-coded items can potentially weaken the psychometric properties of scales, even when respondents pay close attention, and can also cause confusion or mistakes (e.g., Netemeyer, Bearden & Sharma, 2003; Swain, Weather & Niedrich, 2008). Thus, the fact that half of the items in the IS are reverse-coded may account for the differences in correlations between the MI-DD and IS. Of course, the MI-DD and IS were also developed independently and it is therefore not surprising that they do not show *identical* patterns of correlations with other variables. Nonetheless, it may be worthwhile for future research to further examine the similarities and differences between the two scales with a particular focus on reverse-coded items. Indeed, the present research may suggest that, although the two scales are very similar, the MI-DD may be a slightly more useful measure of indecisiveness than the IS if the many reverse-coded items of the IS result in greater participant error or noise.

Although the maximizing goal and strategy are not the primary focus of the present research, one additional finding merits discussion. It was unexpected that the MTS was more correlated with excellentism than with perfectionism (though the latter two also correlated relatively strongly with each other). This finding fits with other findings on the relative adaptiveness of higher scores on the MTS (e.g., Diab et al., 2008; Dalal et al., 2015), but also suggests that the MTS may not be completely, or only, measuring the pursuit of the *very best possible* choice. Indeed, if the MTS is at least partly capturing the pursuit of a very good choice — that is, if it is capturing having "high standards" instead of wanting the best (Dalal et al., 2015) — then it may not fully capture what is specific to the maximizing goal. Future psychometric research may be needed into how best to distinguish having high standards, which may characterize satisficers and be adaptive like excellentism, from being happy with only the best choice, which characterizes only maximizers and may be less adaptative. For now, the MTS and MI-AS appear to be the highest-quality measures of, respectively, the maximization goal and strategy, but future research, such as work on developing a more specific measure of the goal of wanting the *very best*, should perhaps continue to rework and refine maximizing measures.

4 General discussion

Across two studies, we found that measures of the decision difficulty component of maximizing and indecisiveness are highly correlated, load on the same component in a principal component analysis, and show a convergent pattern of correlations with other variables — essentially, the two scales appear indistinguishable within the limits of error. Taken together, along with the lack of a compelling theoretical reason to distinguish between the two constructs, the present results support our proposal that the decision difficulty component of maximizing is actually indecisiveness by another name. In other words, considering decision difficulty to be part of maximizing, rather than simply being indecisiveness, is an instance of the jingle fallacy — incorrectly believing that two constructs (maximizing and indecisiveness) are the same because they are measured with scales of the same name. On the other hand, considering decision difficulty and indecisiveness to be two unique constructs is an instance of the jangle fallacy — incorrectly believing that two scales (decision difficulty and indecisiveness) measure different constructs simply because they have different names (Kelley, 1927; Thorndike, 1904).

Distinguishing between maximizing and the related but distinct construct of indecisiveness has at least three important implications for research. First, much of the debate around maximizing has focused on whether pursuing the goal of making the best possible choice has negative consequences (e.g., Cheek & Schwartz, 2016; Diab et al., 2008; Dalal et al., 2015; Lai, 2010; Kim & Miller, 2017; Schwartz et al., 2002; Zhu, Dalal & Hwang, 2017). One prominent approach to answering this question has been to suggest that, independent of decision strategies, the maximization goal of wanting the best is not necessarily negative, and may even be related to positive outcomes in some cases. When this goal is pursued through the maximization strategy of alternative search, however, the picture may be less positive, because this strategy is associated with more negative outcomes such as regret (e.g., Cheek & Schwartz, 2016; Cheek & Ward, 2019; Hughes & Scholer, 2017). To this first approach to understanding whether and how maximizing may be detrimental we seek to explicitly add another — properly measuring maximizing as a construct separate from indecisiveness. Measuring indecisiveness ("decision difficulty") as part of maximizing may serve to unintentionally build

in correlations with negative outcomes and individual differences because of the potential maladaptive correlates of indecisiveness (e.g., Bavolar, 2018; Frost & Shows, 1993; Rassin, 2007; Rassin et al., 2007). Maximizing may not seem as problematic when indecisiveness is not included in its measurement.

Previous calls to distinguish the measurement of maximizing from the measurement of more potentially negative or maladaptive constructs (e.g., Diab et al., 2008; Dalal et al., 2015; Lai, 2010) have not always been heeded in the past, and this may be due in part to ambiguity around the construct of decision difficulty. We hope that the present research magnifies the perceived importance of properly measuring maximizing by clearly demonstrating that "decision difficulty" is already a separate existing construct, much like regret. If researchers want to argue in favor of retaining decision difficulty as a component of maximizing, we suggest that the burden of proof now belongs to those wishing to argue that decision difficulty and indecisiveness are meaningfully distinguishable. Until and unless a new theory is proposed that provides a compelling case for their separation, the two should not be considered conceptually distinct.

A second benefit of properly distinguishing between maximizing and indecisiveness is that they can be accurately studied in relation to one another. Indecisiveness may be both a potential cause and a potential consequence of maximizing, and studying when and why they are related will advance the literature on both of these individual differences. Yet, it is impossible to study their relation if maximizing scales inappropriately include items measuring indecisiveness, and thus our proposal to interpret decision difficulty as indecisiveness also facilitates future research on how potentially related constructs are connected.

A third potential benefit of properly recognizing the overlap in the constructs of decision difficulty and indecisiveness is that the existing literatures on these constructs can now more clearly inform future research. For example, Kim and Miller (2017) found that the post-choice experience of maximizers is more vulnerable than that of satisficers to negative feedback about choices, but that this effect is mainly driven by the decision difficulty component of maximizing. Based on the present research, we suggest that this is really a novel and important finding about indecisiveness — people who are more indecisive may be more upset when they receive negative feedback about their choices. Thus, previous research on "decision difficulty" can inform our current and future understanding of indecisiveness. Similarly, the maximization strategy of alternative search is frequently found to be related to "decision difficulty" (Cheek & Schwartz, 2016), and these previous findings can now be interpreted as showing a relation between indecisiveness and alternative search. The literature on indecisiveness can inform our understanding of maximizing because of the relation between alternative search and indecisiveness — for instance, it would be interesting to examine how the greater distraction experienced by more indecisive people during choice is related to alternative search (Patalano et al., 2010). Much is known about maximizing, "decision difficulty," and indecisiveness, and these literatures can be better connected after properly understanding and correcting the jingle-jangle fallacies in previous research.

4.1 Cultural differences

There is only limited research comparing maximizing and indecisiveness across different cultural contexts, but previous findings may both provide further support for our interpretation of decision difficulty as indecisiveness and highlight important limitations to our conclusions. At the mean level, previous research has found that Japanese individuals tend to be higher in indecisiveness than U.S. individuals, whereas people from the U.S. and China may not differ in average levels of indecisiveness (Yates et al., 2010; see also Ng & Hynie, 2014, 2016). This pattern of variation is notably similar for the decision difficulty subscale of the Short Form of the Maximization Scale — people from Japan tend to have higher average levels of decision difficulty than people from the U.S. (Oishi, Tsutsui, Eggleston & Galinha, 2014), whereas people in the U.S. have similar average levels of decision difficulty as people in China (Roets, Schwartz & Guan, 2012). On the other hand, people from the U.S. tend to be higher than people from Japan in maximization goal and strategy (Oishi et al., 2014). These patterns of differences provide further convergent patterns of variation between decision difficulty scales and indecisiveness scale, as well as divergent patterns between those two scales and other maximizing measures.

Beyond mean differences across cultures, there appears to be important variation in the implications of maximizing. For instance, whereas the maximization goal may be related to positive outcomes in the U.S., it may be related to more negative outcomes in Western Europe and Japan (Roets, et al., 2012; Oishi et al., 2014). Oishi et al. (2014) suggested that, because, in Japan, making good personal decisions is not as important as adjusting to others' expectations, the maximization goal may not be related to positive outcomes. In fact, because seeking to make the best personal choice may run counter to cultural values, maximizing may be especially negative in a Japanese cultural context. Relatedly, the negative effects of indecisiveness may be particularly strong for individuals, such as people of East Asian descent living in a Canadian cultural context, whose cultural background may encourage indecisiveness through naïve dialecticism, but whose broader cultural context may instead value decisiveness (Ng & Hynie, 2014, 2016). On the other hand, maximizing may not be related to negative outcomes in a society lacking abundant choice and a cultural emphasis on the pursuit of self-determination through individual

choice, as Roets et al. (2012) argued when demonstrating no negative correlation between maximizing and well-being in Chinese participants.

These findings suggest that the meaning of maximizing and indecisiveness may be inherently shaped by cultural context. Thus, conclusions about whether maximizing is "positive" or "negative" are likely culturally bounded — limited by both empirical data and researchers' value-based interpretations of what is good and bad, adaptive and maladaptive. As one example, indecisiveness may account for some of the negative correlations between maximizing scales and well-being in the U.S., whereas it may not in Japan. Indeed, perhaps in Japan indecisiveness is valuable, fitting with a cultural emphasis on thoroughness (Yates et al., 2010), whereas individually seeking the best is frowned upon (Oishi et al., 2014). Even in the U.S., difficulty during decision making may be valuable at times, such as when it prompts reflections about and development of the self-concept (Newark, 2014). The implications of the present research for broader conclusions about maximizing and indecisiveness therefore need to be carefully contextualized in our particular research setting.

In addition, Patalano and Wengrovits (2006) found that the factor structure of indecisiveness scales may differ across cultures — they factor analyzed Frost and Shows' (1993) scale and found evidence for different factor structures in the U.S. and China. Hence, cultural variation may matter for more than outcomes — even the measures, and thus conceptualizations of constructs, may differ considerably. Within debates about the meaning and measurement of maximizing, an explicit interrogation of how cultural values shape understandings, interpretations, and consequences of decision making tendencies has played only a minimal role. In future research, it will be important to more carefully and thoroughly integrate cultural research into theories and investigations of maximizing and indecisiveness.

4.2 Conclusion

In the present research, we proposed that the "decision difficulty" component of maximizing scales and definitions actually captures the existing construct of indecisiveness. Thus, the tendency to experience difficulty in decision making is not part of maximizing, but rather a distinct construct, though it may be a cause or consequence of maximizing. Maximizing and indecisiveness are both important individual differences, but advancing research on either requires accurate conceptualizations of both.

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Appendix Table A1: Principal component analysis with all measures from Study 1. Loadings above .35 are bolded. (R) indicates a reverse-coded item.

Item	Component:	1	2	3
Maximizing Tendency Scale-7				
No matter what I do, I have the highest standards for myself.		−.14	.31	**.66**
I never settle for second best.		.04	.31	**.77**
No matter what it takes, I always try to choose the best thing.		−.13	**.48**	**.43**
I don't like having to settle for "good enough."		−.01	.29	**.61**
I am a maximizer.		−.01	.34	**.53**
I will wait for the best option, no matter how long it takes.		.14	**.43**	**.61**
I never settle.		.05	.25	**.75**
Alternative Search Scale (Maximization Inventory)				
I can't come to a decision unless I have carefully considered all of my options.		.12	**.67**	.15
I take time to read the whole menu when dining out.		.13	**.41**	.14
I will continue shopping for an item until it reaches all of my criteria.		−.02	**.70**	.13
I usually continue to search for an item until it reaches my expectations.		−.06	**.75**	.13
When shopping, I plan on spending a lot of time looking for something.		.19	**.57**	.14
When shopping, if I can't find exactly what I'm looking for, I will continue to search for it.		−.05	**.74**	.06
I find myself going to many different stores before finding the thing I want.		.20	**.49**	.18
When shopping for something, I don't mind spending several hours looking for it.		.14	**.49**	.21
I take the time to consider all alternatives before making a decision.		−.04	**.73**	−.01
When I see something that I want, I always try to find the best deal before purchasing it.		.01	**.65**	−.09
If a store doesn't have exactly what I'm shopping for, then I will go somewhere else.		−.10	**.73**	.01
I just won't make a decision until I am comfortable with the process.		.09	**.68**	.11
Decision Difficulty Scale (Maximization Inventory)				
I usually have a hard time making even simple decisions.		**.77**	.01	.11
I am usually worried about making a wrong decision.		**.68**	.23	−.11
I often wonder why decisions can't be more easy.		**.68**	.00	.09
I often put off making a difficult decision until a deadline.		**.73**	.05	−.04
I often experience buyer's remorse.		**.67**	.00	.03
I often think about changing my mind after I have already made my decision.		**.74**	.12	.01
The hardest part of making a decision is knowing I will have to leave the item I didn't choose behind.		**.69**	.09	.12
I often change my mind several times before making a decision.		**.71**	.15	−.11
It's hard for me to choose between two good alternatives.		**.62**	.21	−.14
Sometimes I procrastinate in deciding even if I have a good idea of what decision I will make.		**.70**	.13	−.16
I find myself often faced with difficult decisions.		**.47**	.08	.19
I do not agonize over decisions. (R)		**.53**	.19	−.36
Indecisiveness Scale				
I find it easy to make decisions. (R)		**.52**	.14	−.39
It is hard for me to come to a decision.		**.78**	.13	−.11
I don't know how to make decisions.		**.67**	−.24	.12
I know which steps to take when making a decision. (R)		**.48**	−.24	−.21
I would characterize myself as an indecisive person.		**.79**	.04	−.06
I don't hesitate much when I have to make a decision. (R)		**.48**	.25	−.50
While making a decision, I feel certain. (R)		**.55**	.01	−.47
While making a decision, I feel uncertain.		**.74**	.05	−.16
It takes a long time to weigh the pros and cons before making a decision.		**.59**	.32	−.03
I make decisions quickly. (R)		**.38**	.32	−.47
I delay deciding.		**.70**	.06	−.16
I don't postpone making decisions to a later date. (R)		**.51**	.09	−.32
I try to avoid making a decision.		**.75**	−.05	−.02
I don't avoid situations where decisions have to be made.		**.37**	−.12	−.17
I tend to leave decisions to someone else.		**.71**	−.12	.00
Once I have taken a decision, I stick to that decision. (R)		**.52**	−.23	−.27
I often reconsider my decision.		**.71**	.18	−.05
Once I have made a decision, I stop worrying about it. (R)		**.53**	.03	−.36
After making a decision, I can't get it out of my head.		**.71**	.02	.07
After I have decided something, I believe I took the wrong decision.		**.75**	−.06	.13
After making a decision, I don't regret the decision. (R)		**.52**	−.03	−.33

Appendix Table A2: Study 1 principal component analysis with 2 components rotated.

Item	Component:	1	2
Maximizing Tendency Scale-7			
No matter what I do, I have the highest standards for myself.		−.25	**.59**
I never settle for second best.		−.10	**.66**
No matter what it takes, I always try to choose the best thing.		−.18	**.62**
I don't like having to settle for "good enough."		−.11	**.56**
I am a maximizer.		−.10	**.56**
I will wait for the best option, no matter how long it takes.		.04	**.69**
I never settle.		−.08	**.60**
Alternative Search Scale (Maximization Inventory)			
I can't come to a decision unless I have carefully considered all of my options.		.15	**.66**
I take time to read the whole menu when dining out.		.13	**.43**
I will continue shopping for an item until it reaches all of my criteria.		.01	**.67**
I usually continue to search for an item until it reaches my expectations.		−.03	**.71**
When shopping, I plan on spending a lot of time looking for something.		.21	**.56**
When shopping, if I can't find exactly what I'm looking for, I will continue to search for it.		.00	**.66**
I find myself going to many different stores before finding the thing I want.		.20	**.52**
When shopping for something, I don't mind spending several hours looking for it.		.13	**.53**
I take the time to consider all alternatives before making a decision.		.03	**.63**
When I see something that I want, I always try to find the best deal before purchasing it.		.08	**.51**
If a store doesn't have exactly what I'm shopping for, then I will go somewhere else.		−.04	**.63**
I just won't make a decision until I am comfortable with the process.		.12	**.65**
Decision Difficulty Scale (Maximization Inventory)			
I usually have a hard time making even simple decisions.		**.73**	.09
I am usually worried about making a wrong decision.		**.71**	.17
I often wonder why decisions can't be more easy.		**.65**	.07
I often put off making a difficult decision until a deadline.		**.72**	.05
I often experience buyer's remorse.		**.64**	.03
I often think about changing my mind after I have already made my decision.		**.73**	.14
The hardest part of making a decision is knowing I will have to leave the item I didn't choose behind.		**.65**	.16
I often change my mind several times before making a decision.		**.73**	.10
It's hard for me to choose between two good alternatives.		**.65**	.13
Sometimes I procrastinate in deciding even if I have a good idea of what decision I will make.		**.73**	.06
I find myself often faced with difficult decisions.		**.43**	.18
I do not agonize over decisions. (R)		**.61**	.00
Indecisiveness Scale			
I find it easy to make decisions. (R)		**.60**	−.06
It is hard for me to come to a decision.		**.79**	.08
I don't know how to make decisions.		**.60**	−.13
I know which steps to take when making a decision. (R)		**.49**	−.30
I would characterize myself as an indecisive person.		**.79**	.04
I don't hesitate much when I have to make a decision. (R)		**.59**	−.02
While making a decision, I feel certain. (R)		**.64**	−.21
While making a decision, I feel uncertain.		**.76**	−.01
It takes a long time to weigh the pros and cons before making a decision.		**.61**	.28
I make decisions quickly. (R)		**.50**	.05
I delay deciding.		**.72**	.00
I don't postpone making decisions to a later date. (R)		**.57**	−.07
I try to avoid making a decision.		**.74**	−.03
I don't avoid situations where decisions have to be made.		**.38**	−.18
I tend to leave decisions to someone else.		**.68**	−.08
Once I have taken a decision, I stick to that decision. (R)		**.55**	−.31
I often reconsider my decision.		**.72**	.15
Once I have made a decision, I stop worrying about it. (R)		**.60**	−.14
After making a decision, I can't get it out of my head.		**.68**	.08
After I have decided something, I believe I took the wrong decision.		**.70**	.04
After making a decision, I don't regret the decision. (R)		**.58**	−.18

Appendix Table A3: Study 1 principal component analysis with 4 components rotated.

Item	Component:	1	2	3	4
Maximizing Tendency Scale-7					
No matter what I do, I have the highest standards for myself.		−.15	.17	−.12	**.78**
I never settle for second best.		.07	.19	−.18	**.84**
No matter what it takes, I always try to choose the best thing.		−.18	**.36**	.01	**.61**
I don't like having to settle for "good enough."		−.06	.14	.00	**.79**
I am a maximizer.		−.04	.21	−.02	**.67**
I will wait for the best option, no matter how long it takes.		.13	.32	−.05	**.72**
I never settle.		.08	.14	−.18	**.81**
Alternative Search Scale (Maximization Inventory)					
I can't come to a decision unless I have carefully considered all of my options.		.13	**.66**	.03	.21
I take time to read the whole menu when dining out.		.13	**.39**	.01	.17
I will continue shopping for an item until it reaches all of my criteria.		.02	**.72**	−.06	.15
I usually continue to search for an item until it reaches my expectations.		−.07	**.72**	.02	.22
When shopping, I plan on spending a lot of time looking for something.		.22	**.58**	.00	.14
When shopping, if I can't find exactly what I'm looking for, I will continue to search for it.		.00	**.77**	−.08	.05
I find myself going to many different stores before finding the thing I want.		.20	**.47**	.04	.23
When shopping for something, I don't mind spending several hours looking for it.		.20	**.51**	−.10	.16
I take the time to consider all alternatives before making a decision.		−.05	**.74**	.05	.07
When I see something that I want, I always try to find the best deal before purchasing it.		.01	**.68**	.05	−.05
If a store doesn't have exactly what I'm shopping for, then I will go somewhere else.		−.11	**.72**	.04	.10
I just won't make a decision until I am comfortable with the process.		.10	**.69**	.01	.15
Decision Difficulty Scale (Maximization Inventory)					
I usually have a hard time making even simple decisions.		**.75**	.00	.18	.10
I am usually worried about making a wrong decision.		**.59**	.20	**.37**	.00
I often wonder why decisions can't be more easy.		**.67**	.00	.16	.06
I often put off making a difficult decision until a deadline.		**.71**	.07	.21	−.06
I often experience buyer's remorse.		**.69**	.04	.09	−.07
I often think about changing my mind after I have already made my decision.		**.72**	.13	.21	.01
The hardest part of making a decision is knowing I will have to leave the item I didn't choose behind.		**.69**	.10	.13	.09
I often change my mind several times before making a decision.		**.68**	.17	.27	−.10
It's hard for me to choose between two good alternatives.		**.55**	.20	.32	−.06
Sometimes I procrastinate in deciding even if I have a good idea of what decision I will make.		**.66**	.15	.29	−.13
I find myself often faced with difficult decisions.		**.51**	.09	.00	.13
I do not agonize over decisions. (R)		.28	.08	**.71**	.00
Indecisiveness Scale					
I find it easy to make decisions. (R)		.24	.01	**.77**	.01
It is hard for me to come to a decision.		**.68**	.10	**.40**	.00
I don't know how to make decisions.		**.70**	−.22	.04	.01
I know which steps to take when making a decision. (R)		.34	−.31	**.42**	−.04
I would characterize myself as an indecisive person.		**.73**	.03	.32	−.01
I don't hesitate much when I have to make a decision. (R)		.21	.14	**.77**	−.10
While making a decision, I feel certain. (R)		.30	−.09	**.74**	−.13
While making a decision, I feel uncertain.		**.66**	.05	**.36**	−.09
It takes a long time to weigh the pros and cons before making a decision.		**.55**	.32	.24	.02
I make decisions quickly. (R)		.12	.22	**.73**	−.08
I delay deciding.		**.65**	.08	.28	−.14
I don't postpone making decisions to a later date. (R)		.34	.02	**.53**	−.09
I try to avoid making a decision.		**.74**	−.03	.19	−.07
I don't avoid situations where decisions have to be made.		.24	−.18	**.36**	−.01
I tend to leave decisions to someone else.		**.71**	−.10	.15	−.07
Once I have taken a decision, I stick to that decision. (R)		**.37**	−.28	**.46**	−.11
I often reconsider my decision.		**.65**	.16	.31	.02
Once I have made a decision, I stop worrying about it. (R)		.31	−.07	**.65**	−.05
After making a decision, I can't get it out of my head.		**.71**	.04	.15	.03
After I have decided something, I believe I took the wrong decision.		**.79**	−.03	.06	.03
After making a decision, I don't regret the decision. (R)		.33	−.11	**.57**	−.09