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Article in *Cyberpsychology, Behavior, and Social Networking* · April 2010

DOI: 10.1089/cpb.2009.0208 · Source: PubMed

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# Looking Online for the Best Romantic Partner Reduces Decision Quality: The Moderating Role of Choice-Making Strategies

Mu-Li Yang, Ph.D.,<sup>1</sup> and Wen-Bin Chiou, Ph.D.<sup>2</sup>

## Abstract

The Internet has become a means by which people expand their social networks and form close relationships. Wu and Chiou (2009) demonstrated that more search options triggered excessive searching, leading to poorer decision making and reduced selectivity in finding partners for online romantic relationships. Regarding the more-means-worse effect, they argued that more searching leads to worse choices by reducing users' cognitive resources, distracting them with irrelevant information, and reducing their ability to screen out inferior options. Expanding Simon's (1955) seminal theory, this research compared choice-making strategies of maximizers and satisficers on excessive searching, quality of final decisions, and selectivity. One hundred twelve adolescents with experiences of online romantic relationships participated in an experimental study. Participants were administered a scale that measured maximizing tendencies and were then assigned to receive either a small or a large number of options. Results indicated that the participants with high maximizing tendencies (i.e., maximizers) showed more pronounced searching than did those with low maximizing tendencies (i.e., satisficers). The negative effect of excessive searching on decision-making was more prominent for maximizers than for satisficers in terms of final choices and selectivity. These findings reveal that adopting maximizing strategies may increase vulnerability stemming from excessive searching when a large number of choices are available.

## Introduction

ONLINE SOCIAL INTERACTIONS have become one of the predominant reasons for Internet use.<sup>1</sup> As online social and personal relationships become more prevalent,<sup>2,3</sup> selecting and building interpersonal romantic relationships in cyberspace is an important issue. Previous studies have investigated the prevalence and demographics of Internet users,<sup>4,5</sup> the quality of relationships formed,<sup>6</sup> predictors of relationship satisfaction,<sup>7</sup> and the psychological correlates of users,<sup>8,9</sup> but they have rarely investigated how Internet users select cyber friends for romantic relationships from a cognitive perspective.<sup>10</sup>

Online social networking sites provide search tools to enable members to find and evaluate the cyber profiles of their friends and other people they might know. These tools appear to reduce the effort required by users to find potential partners and to help them make good predictions about the fit of any given individual to their romantic preferences. However, Wu and Chiou<sup>10</sup> demonstrated that more options triggered excessive searching and decreased the quality of

choices made. From a cognitive information-processing perspective, having access to more possible partners triggered additional searches, thus partially undoing the effort-saving benefit of search. Several reasons have been proposed for this "more-means-worse" effect in which more searching results in worse choices being made. First, considering a large set of options may increase cognitive load, leading individuals to make mistakes.<sup>11</sup> In addition, when searchers' cognitive resources are reduced by more searches, they may be less likely to ignore irrelevant information and more likely to be distracted or attracted by attributes that were not pertinent to their original preferences.<sup>12</sup> Moreover, searching through more options may lead users to accelerate processing by reducing the amount of time spent on each alternative profile. Such self-induced time pressure can lessen users' ability to distinguish between better and worse options.<sup>13</sup>

Half a century ago, Simon<sup>14,15</sup> introduced an important distinction between maximizing and satisficing as choice-making strategies. To maximize is to seek the best and requires an exhaustive search of all possibilities. To satisfice is to seek "good enough," searching until encountering an

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option that crosses the threshold of acceptability. Expanding on Simon's classic theory, Schwartz et al.<sup>16</sup> asked participants about recent purchasing decisions and used a maximization scale to measure individual differences in maximizing tendencies. Compared with satisficers, maximizers were more likely to engage in an exhaustive search of all available options. Such differences in the subjective choice-making experiences of maximizers and satisficers are attributed to the fact that maximizers create a more onerous choice-making process for themselves. Initially, maximizers focus on increasing their choice sets by exploring multiple options, presumably because expanded choice sets allow greater opportunity to seek out and find the elusive best option. Yet as the number of options proliferates, cognitive limitations prevent decision making because it becomes impossible to evaluate and compare all of the options.<sup>17</sup>

Given the principle that more options might lead to more searching and then result in worse choices,<sup>10</sup> we hypothesized that maximizers would be more likely than satisficers to employ excessive searching and that they would be more vulnerable to the negative effect of excessive searching on decision making. An experimental study was conducted to examine whether choice-making strategies would moderate the effects of available options on excessive searching and decision making in the context of finding partners for online romantic relationships.

## Methods

### *Participants and design*

Participants were 112 teenagers and late adolescents from southern Taiwan (58 males; aged 15 to 23 years,  $M = 17.49$ ,  $SD = 2.69$ ) who were single and members of an online-friends Web site. They were recruited from the participant pool of an online gaming-addiction survey supported by the National Science Council of Taiwan and were selected using a screening questionnaire.<sup>18</sup> Participants were submitted to a 2×2 (number of available options: large or small number of options by choice-making strategies: maximizers or satisficers) between-participants design.

### *Procedure*

The present study modeled Wu and Chiou's<sup>10</sup> study to investigate the moderating role of choice-making strategies on the more-means-worse effect. To disguise its actual purpose, the experiment was presented as a study on "Finding Your Best Partner for a Romantic Relationship." Participants were asked to search for their most desirable romantic partners using the search tool of an online-dating Web site, available through Yahoo Taiwan. Each participant first entered the characteristics of his or her ideal partner in terms of 16 conditions (i.e., age, height, weight, educational level, vocation, smoking habits, drinking habits, religion, geographical area, horoscope, blood type, appearance, personality, interests, travel preferences, food preferences). The data were used to compute the preference difference scores between desirable partners and final choices. Participants then completed a scale that measured maximizing strategies.

Later, participants saw a list of recommended partners given by the search engine. The list was characterized by brief titles and nicknames, forcing participants to view the entire

profile of each recommended partner to assess the goodness-of-match. Participants read the explanation of the search engine's ranked list of recommended partners. They were randomly assigned to view either small or large numbers of available profiles (i.e., the top 40 or the top 80 rankings from the recommended list). They were asked to review the available profiles to choose their target partner for a romantic relationship. After the choice was made, participants were given the background information about this experiment.

### *Maximizing strategies*

Participants completed 11 maximization items drawn from Schwartz et al.<sup>16</sup> (e.g., "When I am in the car listening to the radio, I often check other stations to see if something better is playing, even if I am relatively satisfied with what I'm listening to" and "When shopping, I have a hard time finding clothes that I really love"). Each item was rated on a scale from 1, *strongly disagree*, to 9, *strongly agree*. The Cronbach's alpha was 0.89 in the present study.

The median-split method was employed to classify participants into maximizers or satisficers in terms of their choice-making strategies. The median score on the maximizing tendencies scale was 5.30. Fifty-six participants were assigned to the maximizers group, and 56 were assigned to the satisficers group.

### *Number of available options*

The recommended list screened by the search engine always provided hundreds of profiles. However, a preliminary survey before the formal experiment ( $N = 78$ ) indicated that users of online-dating Web sites generally would not review more than 100 profiles during a single search session for online romantic relationships.<sup>10</sup> In addition, the study by Wu and Chiou<sup>10</sup> demonstrated a linear trend in the effect of the number of available options (i.e., the top 30 rankings, the top 60, or the top 90). Hence, this research only manipulated small (top 40 ranking subjects) and large (top 80 rankings) numbers of available options. Different numbers of options were employed as an independent variable in order to expand the generalizability of the findings. As a manipulation check, participants were asked to rate the perceived number of available options they received on a 9-point scale from 1, *very few*, to 9, *very many*. An independent *t* test showed that participants perceived the "large number" condition,  $M = 7.68$ ,  $SD = 0.77$ , to have more options than they did the "small number" condition,  $M = 2.29$ ,  $SD = 1.12$ ;  $t(110) = 29.69$ ,  $p < 0.001$ .

### *Dependent measures*

First, the search ratio was measured by dividing the number of available options by the number of unique profiles examined to determine whether providing more options triggered more searching. Second, the goodness-of-match of each target option was determined by measuring the differences between the scores of each participant's most desired characteristics and the characteristics of the selected option. Possible scores for this preference difference ranged from 0 to 16, because we employed a dichotomous scale (0 = match; 1 = mismatch) for each of the 16 characteristics. Greater preference differences represented worse choices. Finally, the

TABLE 1. MEANS AND STANDARD DEVIATIONS OF THE MEASURES

| Measures                                   | Maximizers                   |      |                              |      | Satisficers                  |      |                              |      |
|--|------------------------------|------|------------------------------|------|------------------------------|------|------------------------------|------|
|  | Small number of options (40) |      | Large number of options (80) |      | Small number of options (40) |      | Large number of options (80) |      |
|  | Mean                         | SD   | Mean                         | SD   | Mean                         | SD   | Mean                         | SD   |
| Searching ratio                            | 0.84                         | 0.03 | 0.89                         | 0.03 | 0.63                         | 0.06 | 0.66                         | 0.04 |
| Preference difference of the chosen option | 5.64                         | 1.37 | 10.71                        | 0.85 | 4.75                         | 1.32 | 6.64                         | 1.10 |
| Selectivity                                | 0.97                         | 0.15 | 0.70                         | 0.10 | 1.04                         | 0.14 | 0.96                         | 0.15 |

$n = 28$  for each experimental condition.

Search ratio ranged from 0 to 1.00. Preference difference scores for the chosen option ranged from 0 to 16 by the sum of the mismatch characteristics of the selected subject.

The selectivity measure was obtained by each participant's time spent inspecting a subject's profile regressed on the match score of that subject. More positive regression coefficients represent greater selectivity.

selectivity measure determined whether more attention was devoted to better alternatives and less attention to worse alternatives. The selectivity was computed for each participant according to the method employed by Wu and Chiou,<sup>10</sup> that is, the time spent reviewing an option (in minutes, recorded to two decimal places) was regressed on the "match score" for that option. The match score was computed by the sum of match characteristics of a subject rated on a dichotomous scale (0 = mismatch; 1 = match; possible scores ranged from 0 to 16). More positive unstandardized regression coefficients indicated that a participant spent more time evaluating the options with high goodness-of-match scores, implying better selectivity.

## Results

T1 ► Participants' performance in terms of the three dependent measures (searching ratio, the preference difference for the chosen option, and selectivity; see Table 1) were submitted to a 2×2 (number of available options: small or large number of options by choice-making strategies: maximizers or satisficers) between-participants model. ANOVAs were conducted on the three dependent variables separately. Regarding differences in the searching ratio of maximizers and satisficers, a robust main effect of choice-making strategies was observed,  $F(1, 108) = 820.02, p < 0.001, \eta^2 = 0.88$ . Participants with high maximizing tendencies exhibited a higher searching ratio,  $M = 0.86, SD = 0.04$ , than did participants with low maximizing tendencies,  $M = 0.65, SD = 0.05$ , regardless of the number of available options,  $F(1, 108) = 1.71, p > 0.05$ . This finding was congruent with the salient characteristics of maximizers in making decisions<sup>16,17</sup> and also indicated that the measure of maximizing tendencies was valid. In addition, a main effect of number of available options was observed,  $F(1, 108) = 820.02, p < 0.001, \eta^2 = 0.88$ , indicating that more profiles were examined as more options were provided; this also echoed the findings by Wu and Chiou.<sup>10</sup>

As to the preference difference score of the chosen subject, the main effect of number of available options indicated that more options led to worse choices,  $F(1, 108) = 244.74, p < 0.001, \eta^2 = 0.69$ , which also replicated the previous finding by Wu and Chiou.<sup>10</sup> More importantly, a significant interaction between choice-making strategies and number of available options was observed,  $F(1, 108) = 50.98, p < 0.01, \eta^2 = 0.32$ . Further analyses indicated that the preference dif-

ference scores were more affected by the number of available options for maximizers,  $M_{\text{large}} (10.71) > M_{\text{small}} (5.64); F(1, 54) = 277.20, p < 0.001, \eta^2 = 0.84$ , than for satisficers,  $M_{\text{large}} (6.65) > M_{\text{small}} (4.75); F(1, 54) = 33.99, p < 0.001, \eta^2 = 0.39$ .

Selectivity in the context of this experiment refers to whether greater attention is allocated to better alternatives and is indicated by more positive individual regression coefficients. In accordance with the finding by Wu and Chiou<sup>10</sup>, participants' selectivity was affected by the number of available options,  $F(1, 108) = 46.19, p < 0.001, \eta^2 = 0.30$ . This finding indicated that more available options led to reduced selectivity, revealing that participants' selectivity was better under the condition of a small number of available options,  $M = 1.01, SD = 0.15$ , and worse with a large number of options,  $M = 0.83, SD = 0.18$ . A similar pattern was observed in the interaction between choice-making strategies and number of available options,  $F(1, 108) = 14.63, p < 0.001, \eta^2 = 0.12$ . Further analyses indicated that the effect of number of available options on selectivity was more pronounced for maximizers,  $M_{\text{large}} (0.70) < M_{\text{small}} (0.97); F(1, 54) = 63.03, p < 0.001, \eta^2 = 0.54$ , whereas the effect was only marginally significant for satisficers,  $M_{\text{large}} (0.96) > M_{\text{small}} (1.04); F(1, 54) = 4.00, p < 0.05, \eta^2 = 0.07$ .

## Discussion

Search tools on social networking Web sites may allow users to find better preference matches from large datasets. However, our findings support earlier research by Wu and Chiou<sup>10</sup> and indicate that more options trigger additional searches, thus partially undoing the effort-saving benefit of search tools.<sup>19</sup> Furthermore, the more-means-worse effect was more prominent for maximizers than for satisficers. To maximize is to seek the best and requires an exhaustive search of all possibilities. When maximizers' cognitive resources are reduced by more searches, they may be less likely to ignore irrelevant information and more likely to be distracted by or attracted to attributes that are not pertinent to their original preferences.<sup>12</sup> Identifying the best from a large dataset of considerations becomes increasingly difficult, compelling maximizers to rely on external rather than internal standards to evaluate and select outcomes.<sup>20</sup> Furthermore, the inevitability of trade-offs among attractive options intensifies the sting of passing up one attractive alternative when choosing a more attractive one. The above reasons explain, from a

cognitive-processing perspective, why maximizers suffer from worse decision making than that of satisficers.

In considering the limitations of this study and possible future directions, it is noteworthy that maximizing tendencies were treated as a global individual difference measure. It may well be that maximizing search strategies are used for specific kinds of decision-making tasks and are not a general tendency for all decision-making tasks. Investigations of other decision-making tasks (e.g., a job-searching process) may determine whether maximizing tendencies are global or specific. Other factors that might also trigger more searching and lead to worse choices have not been examined. For example, accuracy motivation can lead to more systematic processing and decrease susceptibility to biases.<sup>13</sup> Future studies may examine whether accuracy motivation would produce even more excessive searching in seeking out romantic partners for online relationships. Finally, Schwartz et al.<sup>16</sup> demonstrated that maximizing tendencies were positively correlated with regret, depression, and decision difficulty. It would be interesting to examine whether maximizers are less satisfied than satisficers and experience greater negative affect with the partners they select through excessive searching.

The search tools of online-dating sites provide users with a convenient way to search for potential romantic partners with whom to build and develop online relationships. However, a large number of available options may induce more searches, and this may in turn lead to worse choices and poor selectivity. Moreover, adopting a maximizing strategy appears to expand the detrimental effect of excessive searching on information processing and decision making. Maximizers should pay more attention to the negative consequences that stem from search tools' providing too much choice and should use the search tools constructively to tailor their decision-making criteria. When more searching is carried out on online-dating sites, maximizers may neither get what they want nor want what they get.

#### Acknowledgments

The authors would like to thank the National Science Council of the Republic of China for financially supporting this research (contract No. NSC 98-2511-S-110-001-MY2).

#### Disclosure Statement

No competing financial interests exist.

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