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AN EXPLORATION OF THE EFFECTS OF SELF-GUIDE MATCHING AND SELF-DISCREPANCY MATCHING ON THE PROCESSING OF PERSUASIVE MESSAGES: DOES MATCHING INCREASE OR DECREASE THOUGHTFUL PROCESSING?

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By
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*****

The Ohio State University
1998

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ABSTRACT

Past research has suggested that matches between aspects of an individual’s self-concept and aspects of a persuasive message can lead to enhanced processing of the message. Self-discrepancy theory describes several aspects of the self-concept that could potentially affect the processing of persuasive messages. This dissertation presents two studies that explore the effects of matches between message framing and individuals’ stronger self-guides or stronger self-discrepancies on the thoughtful processing of persuasive messages. In addition, a new type of message framing, self-guide framing, is introduced.

Experiment 1 examined the effects of matching the self-guide framing and the outcome framing of persuasive messages to individuals’ active self-guides. Matches between self-guide framing and active self-guides led to more thoughtful processing of the persuasive message than mismatches. Matches between outcome framing and active self-guides led to more positive attitudes toward the persuasive message than mismatches.

Experiment 2 examined the effects of matching the self-guide framing of persuasive messages to individuals’ stronger self-guides and to individuals’ stronger self-discrepancies. Self-guide matches (matches between the framing of a message and an
individual's stronger self-guide) led to more careful processing of persuasive messages than mismatches. Self-guide matches led to greater scrutiny of the message arguments, resulting in more persuasion when the arguments were strong and less persuasion when the arguments were weak. Self-guide mismatches did not lead to as much scrutiny of the message arguments, so the amount of persuasion was not as dependent upon the quality of the message arguments. Self-discrepancy matches (matches between the framing of a message and an individual’s stronger self-discrepancy) led to less careful message processing than mismatches. Self-discrepancy matches led individuals to avoid thoughtful processing, resulting in attitudes that were not as dependent upon the quality of the message arguments. Self-discrepancy mismatches led to greater scrutiny of the message arguments than self-discrepancy matches.

Although self-guide framing affected thoughtful processing in both experiments, the potential other roles of self-guide framing in persuasion situations are also addressed. Future directions for research on self-guide framing are discussed, as such research will expand our understanding of the manner in which an individual’s self-concept affects the way that he or she interprets, evaluates, and processes persuasive messages.
Dedicated to my father.

Although he cannot be with me share in my joy,

I know that he is sharing his with all of heaven.
ACKNOWLEDGMENTS

I would like to thank my advisor, Dr. Richard Petty, for the enthusiasm that he has shown for this project and for all of the support, encouragement, and brilliant ideas that he brought to it. His guidance has been an indispensable part of my career at Ohio State, and he has set a wonderful example for me to follow.

I am also grateful to the other members of my committee, Dr. Robert Arkin, Dr. Curtis Haugtvedt, and Dr. Gifford Weary, for the helpful comments that they have given me at all stages of this project. I am thankful for their insight and advice.

I am indebted to Steve Smith for providing me with the persuasive messages on recycling that were used in Experiment 1 and to Chris Camacho for providing me with the self-guide strength measure that was used in Experiment 2.

I am especially thankful for the love and support that my mom and sister have given me, particularly over the last few weeks. Their smiles, hugs, and pep talks have made this time in my life a bit easier, and their willingness to listen to me talk about all aspects of this dissertation has been much appreciated.

My husband, Steve, has been invaluable – not only for his love and encouragement, which has been wonderful, but also for his great ideas about data analysis, his willingness to code thought listings, and his overall interest in the project. Without Steve, Figure 1.1
would have been ugly. I am grateful to him for making all aspects of our life together beautiful.

I owe my deepest thanks and most earnest gratitude to God, for giving me the confidence, ability, and courage to make it through this project and through every day that follows.

This material is based upon work supported under a National Science Foundation Graduate Fellowship. Any opinions, findings, conclusions or recommendations expressed in this publication are those of the author and do not necessarily reflect the views of the National Science Foundation.
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**FIELDS OF STUDY**

Major Field: Psychology

Minor Fields: Quantitative Psychology
Marketing
# TABLE OF CONTENTS

Abstract .............................................................................................................................. ii
Dedication ......................................................................................................................... iv
Acknowledgments .............................................................................................................. v
Vita................................................................................................................................... vii
List of Tables ................................................................................................................... xv
List of Figures ............................................................................................................... xvii
Chapters:

1. Introduction .................................................................................................................. 1
   Self-Discrepancy Theory ..................................................................................... 3
   Strength of Self-Guides ..................................................................................... 5
   The Principle of Regulatory Focus ....................................................................... 7
   The Elaboration Likelihood Model of Persuasion .............................................. 9
   The Effects of Matching and Mismatching on Persuasion ............................... 10
   Self-Discrepancy Theory and Matching Effects ................................................ 12
   A New Look at Matching and Persuasion: The Effects of Self-Discrepancies and Self-Guides on Message Processing .................................................................................. 16

2. Experiment 1 .............................................................................................................. 21
   Overview ........................................................................................................... 21
   Method ............................................................................................................. 22
   Participants ........................................................................................................ 22
   Procedure ......................................................................................................... 22
   Materials and Independent Variables .................................................................. 23
   Part One Materials .......................................................................................... 23
   Activated self-guide ...................................................................................... 23
Part Two Materials..................................................................................................................24
  Self-guide framing ..................................................................................................................24
  Outcome framing .....................................................................................................................26
  Argument quality ....................................................................................................................27
Dependent Measures and Manipulation Checks...........................................................................27
  Recycling attitude ..................................................................................................................27
  Flyer attitude ..........................................................................................................................28
  Argument quality ratings .........................................................................................................28
  Cognitive responses ................................................................................................................29
  Post-experimental questionnaire ............................................................................................29
Debriefing ..................................................................................................................................30
Results........................................................................................................................................30
  Manipulation Checks .............................................................................................................31
    Self-guide framing .................................................................................................................31
    Argument quality ..................................................................................................................32
  Awareness of Purpose of Experiment ......................................................................................32
    Awareness probe ..................................................................................................................32
  Attitudes ..................................................................................................................................32
    Recycling attitude ................................................................................................................32
    Flyer attitude ........................................................................................................................33
    Cognitive responses .............................................................................................................35
Discussion and Conclusions .......................................................................................................37
  Outcome Framing Matches .....................................................................................................37
  Self-Guide Framing Matches ..................................................................................................38
  Questions for Experiment 2 ....................................................................................................39
3. Experiment 2 ........................................................................................................................42
  Overview ..................................................................................................................................42
  Method ....................................................................................................................................43
  Participants ..............................................................................................................................43
  Procedure .................................................................................................................................43
R. Experiment 1 Debriefing.....................................................................................138
S. Experiment 2 Session 1 Verbal Instructions.......................................................140
T. Self-Guide Strength Measure..............................................................................142
U. Experiment 2 Session 2 Verbal Instructions.......................................................148
V. Experiment 2 Trustworthy Company Description.............................................150
W. Experiment 2 Ideal Self-Guide Framing.............................................................152
X. Experiment 2 Ought Self-Guide Framing...........................................................154
Y. Experiment 2 Strong Argument, Ideal Self-Guide Framing
   Persuasive Message ............................................................................................156
Z. Experiment 2 Weak Argument, Ought Self-Guide Framing
   Persuasive Message ............................................................................................158
AA. Experiment 2 Debriefing.....................................................................................160
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Recycling Attitude as a Function of Self-Guide Framing Match and Recycling Regularity</td>
<td>33</td>
</tr>
<tr>
<td>2.2 Flyer Attitude as a Function of Self-Guide Framing Match and Argument Quality</td>
<td>35</td>
</tr>
<tr>
<td>3.1 Fast-Break Attitude as a Function of Self-Guide Matching and Argument Quality</td>
<td>56</td>
</tr>
<tr>
<td>3.2 Presentation Attitude as a Function of Self-Guide Framing and Argument Quality</td>
<td>57</td>
</tr>
<tr>
<td>3.3 Presentation Attitude as a Function of Self-Guide Matching and Argument Quality</td>
<td>58</td>
</tr>
<tr>
<td>3.4 Low Need for Cognition Participants’ Presentation Attitude as a Function of Self-Guide Matching and Argument Quality</td>
<td>60</td>
</tr>
<tr>
<td>3.5 High Need for Cognition Participants’ Presentation Attitude as a Function of Self-Guide Framing and Argument Quality</td>
<td>61</td>
</tr>
<tr>
<td>3.6 Content Attitude as a Function of Self-Guide Matching and Argument Quality</td>
<td>62</td>
</tr>
<tr>
<td>3.7 Global Attitude as a Function of Self-Guide Matching and Argument Quality</td>
<td>63</td>
</tr>
<tr>
<td>3.8 Low Need for Cognition Participants’ Global Attitude as a Function of Self-Guide Matching and Argument Quality</td>
<td>64</td>
</tr>
<tr>
<td>3.9 Thought Positivity as a Function of Self-Guide Matching and Argument Quality</td>
<td>66</td>
</tr>
<tr>
<td>3.10 Low Need for Cognition Participants’ Thought Positivity as a Function of Self-Guide Matching and Argument Quality</td>
<td>67</td>
</tr>
</tbody>
</table>
3.11 Behavioral Intentions as a Function of Self-Guide Matching and Argument Quality ................................................................. 73
3.12 Presentation Attitude as a Function of Self-Discrepancy Matching and Argument Quality ............................................................. 76
3.13 Content Attitude as a Function of Self-Discrepancy Matching and Argument Quality ................................................................. 77
3.14 Global Attitude as a Function of Self-Discrepancy Matching and Argument Quality ................................................................. 78
3.15 High Need for Cognition Participants’ Thought Positivity as a Function of Self-Guide Matching and Argument Quality ......................... 79
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Psychological variables with distinct relations to promotion focus and prevention focus</td>
<td>8</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

Past research has suggested that matches between aspects of an individual's self-concept and aspects of a persuasive message can lead to enhanced processing of the message (e.g., Petty & Wegener, 1998). This enhanced processing has implications for attitude change and persuasion, as enhanced processing can lead to attitudes that are stronger, more persistent, more resistant to counterpersuasion, and more predictive of behavior than attitudes based on minimal processing (Petty, Haugtvedt, & Smith, 1995). An in-depth investigation of additional factors of the self-concept that might affect message processing is necessary for a full understanding of how an individual's self-concept affects the way he or she thinks about persuasive messages. Self-discrepancy theory (Higgins, 1987, 1989b) describes several aspects of the self-concept that could potentially affect the processing of persuasive messages. The purpose of this dissertation is to examine the links between aspects of the self-concept related to self-discrepancy theory and attitude change.

Self-discrepancy theory (Higgins, 1987, 1989b) describes the effects of failures of self-regulation on affect, attention, and motivation. Over the past decade, the theory has
evolved and expanded, and has become less focused solely on the failures of self-regulation and more focused on the general emotional and motivational consequences of holding certain self-beliefs (see Higgins, 1997). It is the premise of this dissertation that such self-beliefs could have effects on an individual’s motivation to elaborate upon a persuasive message and engage in careful information processing. The Elaboration Likelihood Model of persuasion (ELM; Petty & Cacioppo, 1981, 1986) suggests that the amount and valence of careful thought that an individual engages in will affect the strength and valence of the attitudes that he or she comes to hold. Although matches with some aspects of the self-concept might lead to greater motivation to engage in careful thought, matches with other aspects of the self-concept might lead individuals to refrain from careful thought. Thus, different aspects of the self-concept could lead individuals to think about and process persuasive messages in different ways.

Different components of self-discrepancy theory might lead to different predictions regarding the effect of self-beliefs on persuasion. For example, activating an individual’s self-discrepancies might arouse distress, leading to less careful thought regarding a persuasive message, but activating an individual’s self-guides might arouse interest, leading to more careful thought regarding a persuasive message. Tykocinski, Higgins, and Chaiken (1994) examined the effect of activating an individual’s self-discrepancies on subsequent persuasion; however, further work examining the influence of other factors related to self-discrepancy theory on persuasion processes has not yet been published. This dissertation will discuss the evolution of self-discrepancy theory and draw predictions, based on the ELM, regarding how components of self-discrepancy theory could affect persuasion processes.
Self-Discrepancy Theory

Self-discrepancy theory (Higgins, 1987, 1989b) addresses the way in which discrepancies between an individual’s self-state representations are related to various emotional vulnerabilities. Emotional consequences are predicted for failures to match one’s self-concept to specific self-guides. Three basic domains of the self, namely the actual, ideal, and ought selves, and two standpoints of the self, namely one’s own standpoint and the standpoint of an important other, combine to create six types of self-representations. Each individual possesses representations of his or her actual self from his or her own standpoint and from important others’ standpoints. These actual:own and actual:other self-guides make up an individual’s self-concept, or a mental representation of the traits or attributes that he or she actually possesses. The four self-representations that result from crossing the ideal and ought self-domains with the own and other standpoints constitute self-guides, or self-directive standards – what we would like to be like, in the case of the ideal self-guides, or what we think we should be like, in the case of the ought self-guides. Self-discrepancy theory assumes that self-guides are used for both self-regulation and self-evaluation. That is, people are assumed to use their self-guides both to regulate their actual self features in an attempt to match their self-concepts to their self-guides and to monitor their progress toward that goal.

Higgins and his colleagues focus primarily on the ideal:own and ought:own self-guides in their work on self-discrepancy theory; thus, this dissertation will also focus
primarily on the ideal:own and ought:own self-guides. The ideal:own self-guide represents an individual’s hopes, goals, wishes, and dreams for him or her self, and the ought:own self-guide represents an individual’s responsibilities, duties, and obligations for him or her self. If a person’s actual:own self-representation does not match her ideal:own self-guide, she possesses an actual:own/ideal:own discrepancy, and if a person’s actual:own self-representation does not match his ought:own self-guide, he possesses an actual:own/ought:own discrepancy. For the sake of simplicity, the ideal:own and ought:own self-guides will be referred to as ideal and ought self-guides, and the actual:own/ideal:own and actual:own/ought:own discrepancies will be referred to as ideal and ought self-discrepancies.

Ideal and ought self-discrepancies are said to lead to distinct emotional vulnerabilities and to sensitivity to specific outcome framings. According to Higgins (1987, 1989b), the activation of an ideal discrepancy results in dejection related feelings, such as depression, and increases an individual’s sensitivity to the presence or absence of

\footnotesize{Higgins and colleagues have also examined other domains of the self, such as the can self, the past self, and the future self. These domains of the self can lead to emotional responses that are different than would be observed if the ideal or ought selves were activated. In addition, research has examined standpoints on the self, such as one’s mother’s view of one’s self and one’s father’s view of one’s self. Compared to the own standpoint on the self, the other standpoint leads to different emotional responses. For example, the belief that one’s actual self does not match one’s mother’s representation of how one should be might lead to feelings of guilt, while the belief that one’s actual self does not match one’s own representation of how one should be might lead to feelings of anxiety. This dissertation is a starting point in the exploration of the effects of self-guide matching and self-discrepancy matching on message processing. Because the most relevant publication to this dissertation (Tykocinski, Higgins, & Chaiken, 1994) dealt solely with the ideal and ought selves, aggregated across own and other standpoints, this exploration will begin solely with the ideal:own and ought:own self-guides.}
positive outcomes. On the other hand, the activation of an ought discrepancy results in agitation related feelings, such as anxiety, and increases an individual’s sensitivity to the presence or absence of negative outcomes. Higgins and Tykocinski (1992) demonstrated that individuals with chronic ideal discrepancies were better able to remember events that reflected the presence and absence of positive outcomes. On the other hand, individuals with chronic ought discrepancies were better able to remember events that reflected the presence and absence of negative outcomes. Discrepancies between current self-representations and self-guides must be both available and accessible for these emotional consequences and outcome sensitivities to result.

Strength of Self-Guides

Much of the work by Higgins and his colleagues has focused on the effects of self-discrepancies; however, Higgins (1989a) cited self-guide strength as another important component of the theory. Individuals’ ideal and ought self-guides differ in terms of their strength. An individual with a strong ideal self-guide might think more frequently about her hopes, goals, and dreams, but an individual with a strong ought self-guide might think more frequently about his responsibilities, duties, and obligations.

Self-guide strength is defined in terms of three basic characteristics. First, strong self-guides are available and accessible. They are stored in long term memory and can be retrieved, and they are likely to be activated and applied. Second, strong self-guides are coherent. They have clear implications for behavior. Third, strong self-guides involve commitment. They are guides that an individual is motivated to use in his or her regulatory and evaluative processes. Ideal and ought self-guides are said to be strengthened through different types of caretaker-child interactions; however, an in-depth
description of the presumed origins of strong self-guides is beyond the scope of this dissertation.

Recent work by Higgins and his colleagues has looked separately at the effects of self-guide strength and self-discrepancies (Newman, Higgins, & Vookles, 1992; Higgins, Shah, & Friedman, 1997). Higgins, Shah, and Friedman (1997) found that self-discrepancies and self-guide strength, operationalized as self-guide accessibility, affected emotional and motivational responses in similar ways; however, self-guide strength was found to be independent of the magnitude of self-discrepancies.

Self-guide strength has been found to have important implications for emotional and motivational responses that are independent of the magnitude of self-discrepancies. In fact, Higgins et al. (1997) found that self-guide strength and self-discrepancies were uncorrelated as chronic variables. Strong self-guides may be associated with either large or small self-discrepancies. For example, if a self-discrepancy is large, more attention is likely to be given to reducing the discrepancy. Thus, the associated self-guide will be stronger and more accessible due to frequent activation. On the other hand, small self-discrepancies might also be related to strong self-guides. If a self-guide is strong, more attention will be given to reducing associated discrepancies. Thus, self-discrepancies associated with a strong self-guide should be smaller than those associated with a weak self-guide due to more frequent attempts to reduce the discrepancy. For these reasons, Higgins et al. (1997) suggested that it is unlikely that self-guide strength and magnitude of self-discrepancies will have a reliable relationship in a particular direction.

Strong self-guides can lead to increased motivation to attain the goal that the self-guide represents; however, they can also lead to increased negative affect if evaluations
suggest that the goal has not been met (Newman, Higgins, & Vookles, 1992). For this reason, strength of ideal and ought self-guides might be a better predictor of emotional and motivational consequences than self-discrepancies. Self-guide strength appears to influence emotion and motivation both more strongly and more generally than do self-discrepancies.

The Principle of Regulatory Focus

Recently, Higgins (1997) expanded his theory of self-discrepancy to encompass the principle of regulatory focus. The principle of regulatory focus distinguishes between two types of self-regulation: self-regulation with a promotion focus and self-regulation with a prevention focus. A separate measure of regulatory focus is currently being developed by Higgins and colleagues (C. Camacho, personal communication, March 5, 1998); however, links have been made between self-guide strength and regulatory focus. Self-regulation with a promotion focus is associated with strong ideal self-guides and “a concern with advancement, growth, and accomplishment” (pg. 1282). Self-regulation with a prevention focus is associated with strong ought self-guides and “a concern with protection, safety, and responsibility” (pg. 1282). According to Higgins, Shah, and Friedman (1997), “self-guide strength directly reflects strength of regulatory focus, whereas magnitude of self-discrepancy does not” (pg. 524). Strong ideal self-guides are said to lead to a promotion focus, which in turn leads to sensitivity to the presence or absence of positive outcomes and to cheerfulness-dejection emotions. Strong ought self-guides are said to lead to a prevention focus, which in turn leads to sensitivity to the absence or presence of negative outcomes and to quiescence-agitation emotions (see Figure 1.1).
Figure 1.1: Psychological variables with distinct relations to promotion focus and prevention focus (Higgins, 1997, pg. 1283)
The Elaboration Likelihood Model of Persuasion

The elaboration likelihood model of persuasion (ELM; Petty & Cacioppo, 1981, 1986) offers a framework for examining the effects of various dispositional and situational factors that affect an individual's motivation and/or ability to think carefully about a persuasive message. The ELM proposes that there are two processes that can affect judgments in various combinations along the elaboration likelihood continuum: careful, thoughtful processing (i.e., central route processing) or less careful, cue-driven processing (i.e., peripheral route processing).

The predominant route to persuasion that will be taken is a function of both the motivation and the ability of the perceiver. If an individual is highly motivated to think about a persuasive message, as a result of factors such as a personal tendency toward careful thought, a feeling that the information is personally relevant, or a belief that careful thought is both necessary and desirable, he or she may experience attitude change as a result of more careful consideration of the arguments in a persuasive message. Likewise, if an individual is highly able to think about a persuasive message, as a result of extensive knowledge on the topic of the message, high intelligence, or a clearly worded, simply phrased message, he or she may experience the same type of central route attitude change. That is, if motivation and ability to think carefully are both high, processing is expected to take place on the more thoughtful end of the elaboration likelihood continuum.

On the other hand, if one does not have the requisite motivation or ability to engage in careful processing of the persuasive message, attitude change might still occur via the less effortful peripheral route to persuasion. In this case, an individual might change his
or her attitude toward the topic as a result of factors such as his or her mood, a belief that
the source is trustworthy or expert, or even the number of arguments that are presented on
the topic. That is, if motivation and ability to think carefully are both low, processing is
expected to take place on the less thoughtful end of the elaboration likelihood continuum.

When motivation and ability are not constrained to be either very high or very low,
elaboration likelihood is more moderate. In this case, a factor such as the match between
one's self-concept and the content of the message might motivate people to engage in
more effortful consideration of the message arguments. That is, at moderate levels of
elaboration likelihood, when people are unsure of how much careful thought is required
of them, both dispositional factors, related to the person, and situational factors, related to
the message, may affect people's level of subsequent thought. For example, people may
engage in more careful thought when the content of a message matches the functional
basis of their attitudes than when the content mismatches (Petty & Wegener, 1998).

*The Effects of Matching and Mismatching on Persuasion*

Recent research has examined the effects of matching or mismatching persuasive
messages to the functional basis of high and low self-monitors' attitudes (Snyder &
suggested that a message that matched the functional basis of high or low self-monitors'
attitudes was more persuasive than a message that mismatched the functional basis of
their attitudes (Snyder & DeBono, 1985, Lavine & Snyder, 1996). Because high self-
monitors tend to hold attitudes that serve a social-adjustive function, they were typically
more persuaded by appeals that stressed the image associated with a product rather than
product quality. Because low self-monitors tend to hold attitudes that serve a value-
expressive function, they were typically more persuaded by appeals that stressed product quality rather than image. Lavine and Snyder (1996) hypothesized that messages that matched the functional basis of high and low self-monitors' attitudes were processed in a biased manner. Matching was hypothesized to lead to more favorable thoughts about the topic of the message and thus to more persuasion.²

Although the effects previously reported in the literature could have been due to biased processing, the ELM suggests that the persuasion effect could actually involve an underlying mechanism that is different from that of biased processing (Petty & Wegener, 1998). An ELM perspective suggests that at high levels of elaboration likelihood, matching could lead individuals to process messages in a biased manner; however, at low levels of elaboration likelihood, matching could lead individuals to evaluate messages based on peripheral cues. A message that matches the functional basis of a high self-monitor's attitude might simply be accepted due to the heuristic "if the product is image related, it must be good." Similarly, a message that matches the functional basis of a low self-monitor's attitude might simply be accepted due to the heuristic "if it speaks to my values, it must be good" (Petty & Wegener, 1998, pg. 229). These inferences could lead

² Research examining the effects of matching messages to the functional basis of high and low self-monitors' attitudes is merely one example of a number of research programs that have examined the effects of matching on persuasion. Other researchers have found increased persuasion when messages are matched to individuals' religious versus legalistic self-schemas (Cacioppo, Petty, & Sidera, 1982) or to individuals' preferred adjective-cluster schema sets (Brannon & Brock, 1994; Brock, Brannon, & Bridgwater, 1990). Researchers in consumer behavior and marketing have examined the effects of self-image and product image congruity (Sirgy, 1982, 1985, 1986) and personalized, or tailored, messages on persuasion (Brinberg & Axelson, 1990; Coupey & Brinberg, 1997; Price, 1997). The research on the functional basis of high and low self-monitors' attitudes is presented as the primary example of matching research because later research in this domain has examined the effects of matching on processing rather than simply persuasion. Thus, this area of matching research is most relevant to the current dissertation, as the processing of matched messages is under examination in this dissertation.
to acceptance of the message without any careful thought about the arguments contained in the message. Although the outcomes would appear identical (i.e., increased acceptance of matched messages), the underlying mechanism for the outcomes would be different.

The ELM also suggests an alternative possibility. At moderate levels of elaboration likelihood, matched messages might lead individuals to consider the merit of the message arguments more thoughtfully. In this case, individuals would be more accepting of a message if the arguments were strong, but less accepting of a message if the arguments were weak. Thus, if matched messages encourage greater scrutiny of message arguments, then matched messages containing weak arguments could lead to less acceptance of the message arguments than mismatched messages. Petty and Wegener (1998) found that individuals’ attitudes were indeed more affected by the quality of the message arguments when the focus of the message matched the function of their attitudes than when the focus of the message mismatched the function of their attitudes. High self-monitors who were exposed to an image-oriented advertisement, versus a quality-oriented advertisement, processed the arguments in the advertisement more carefully and based their attitudes on the quality of the arguments in the message. Low self-monitors exhibited the opposite effect. Thus, individuals’ attitudes were more affected by the quality of the message arguments when the message matched, rather than mismatched, the function of their attitudes.

Self-Discrepancy Theory and Matching Effects

Tykocinski, Higgins, and Chaiken (1994) attempted to examine the effects of matching individuals’ chronic self-discrepancies with the outcome framing of a
persuasive message on yielding to the message. Individuals with either chronic ideal or chronic ought self-discrepancies were presented with a persuasive message about eating breakfast that was framed in terms of either positive or negative outcomes. That is, the persuasive message addressed either the possible positive outcomes of eating breakfast regularly (positive outcome framing manipulation) or the possible negative outcomes of not eating breakfast regularly (negative outcome framing manipulation). Because individuals with chronic ideal discrepancies are more sensitive to the presence and absence of positive outcomes and individuals with chronic ought discrepancies are more sensitive to the presence and absence of negative outcomes (Higgins & Tykocinski, 1992), it was hypothesized that a positively framed persuasive message would arouse distress in individuals with chronic ideal discrepancies but that a negatively framed persuasive message would arouse distress in individuals with chronic ought discrepancies. That is, a match between chronic self-discrepancies and outcome framing was expected to activate participants' self-discrepancies and arouse distress in participants. This distress was then expected to lead to decreased motivation to yield to the message and increased counterarguing of the message. Thus, matches between self-discrepancies and outcome framing were expected to lead to less persuasion compared to mismatches.

The results supported the hypotheses. Participants who read a message that matched their discrepancies in terms of outcome framing were less likely to state that they intended to try to eat breakfast more often and listed more negative thoughts with regard to the message than participants who read a message that mismatched their discrepancies in terms of outcome framing. In addition, participants who read a
mismatched message exhibited more immediate behavioral commitment to change by requesting a sample breakfast menu than participants who read a matched message. This same pattern was observed to a weaker degree when actual breakfast eating behavior was assessed two weeks later. Finally, participants who read a matched message indicated that they were less energetic, confident, and alert, and more indecisive, lazy, listless, and unmotivated than participants who read a mismatched message.

Tykocinski, Higgins, & Chaiken (1994) suggested that the distress felt by participants in the matching conditions led to increased counterarguing; however, based on several aspects of the data, it seems unlikely that participants’ attitudes were due to careful thought with regard to the message. Participants in matched message conditions expressed decreased motivation after reading the persuasive message (in the form of increased feelings of laziness and listlessness, for example); thus, it seems unlikely that matches led to increased counterarguing or biased processing. The ELM suggests that counterarguing and biased processing will occur when elaboration likelihood is high. That is, counterarguing is most likely when individuals are both motivated and able to think, such as when a message is high in personal relevance (Petty & Cacioppo, 1979) and when an individual has extensive knowledge about the topic of the message (Evans, 1996). Because participants in matched message conditions indicated that they felt less motivated than participants in mismatched message conditions, attitude change as a result of thoughtful counterarguing or biased processing seems unlikely. Elaboration likelihood was probably low, due to low levels of motivation; thus, a peripheral route attitude change seems more likely. That is, participants’ negative affect may simply have been interpreted as a cue: “I feel bad, so I must not like this message.”
A second aspect of the data that gives rise to skepticism regarding Tykocinski et al.'s conclusions is the failure of participants' changed attitudes and behavioral intentions to persist over time. Tykocinski et al. suggested that the delayed effects might have been weaker than the immediate effects because other information might have interfered with participants' behavioral intentions during the two week delay. It seems possible, though, that participants' attitudes and intentions were also not very strong to begin with and simply decayed over time.

Although peripheral route processing and weak attitudes and intentions seem to be the most likely explanations for the Tykocinski, Higgins, and Chaiken (1994) data, the design of the study does not allow these conclusions to be made unequivocally, as clear measures of message processing were not included. The inclusion of an argument quality manipulation would have greatly aided the interpretation of their results, as an examination of level of message processing could have been conducted. That is, if participants who read matched messages containing strong arguments did not indicate more positive attitudes toward eating breakfast than participants who read matched messages containing weak arguments, the level of message processing would be low. On the other hand, if participants who read matched messages containing strong arguments did indicate more positive attitudes toward eating breakfast than participants who read matched messages containing weak arguments, the level of message processing would be high. A reconsideration of the Tykocinski et al. work, in light of both self-discrepancy theory's recent emphasis on self-guide strength and the Elaboration Likelihood Model of persuasion, helps to clarify several ways in which aspects of an individual's self-concept could affect message processing and attitude change.
Tykocinski, Higgins, and Chaiken (1994) examined the effect of a match between chronic self-discrepancies and outcome framing on persuasion. More recent work on self-discrepancy theory has moved away from simply looking at individuals' chronically active self-discrepancies and has begun to examine the broader effects of self-guide strength on emotions and motivation. This dissertation will explore the effects of matches between message framing and individuals' stronger self-guides and matches between message framing and individuals' stronger self-discrepancies on the thoughtful processing of persuasive messages. Tykocinski et al. suggested that the negative affect brought about by matches led to negative effects on persuasion; however, the broad theoretical framework of the Elaboration Likelihood Model of persuasion speaks to the importance of examining thoughtful message processing rather than simply examining persuasion. Thus, this dissertation will focus on the manner in which matches between message framing and individuals' stronger self-guides or stronger self-discrepancies affect the thoughtful processing of persuasive messages. In addition, a new type of message framing, self-guide framing, will be introduced. The self-guide framing paradigm is described in detail below.

The activation of an individual's stronger self-guide might bring to mind the attributes that are contained within the individual's self-guide. That is, a person with a strong ideal self-guide might be led to think about the traits and attributes that she would ideally like to possess if something in her environment activates her ideal self-guide. On the other hand, a person with a strong ought self-guide might be led to think about
traits and attributes that he ought to or should possess if something in his environment activates his ought self-guide. Because self-guide strength has been shown to be independent of the magnitude of self-discrepancies (Newman, Higgins, & Vookles, 1992; Higgins, Shah, & Friedman, 1997), it seems possible that an individual’s self-guide may be activated without activating any related self-discrepancies. If an individual’s stronger self-guide is activated, but his or her self-discrepancies are not, self-relevant information should come to mind, but the distressing feelings that are associated with self-discrepancies should not. The self-relevance of the information might motivate that individual to think more carefully about a persuasive message if elaboration likelihood is moderate (see Petty & Cacioppo, 1979).

A persuasive message framed in terms of ideals, hopes, and goals or oughts, duties, and responsibilities, could serve to activate an individual’s ideal or ought self-guide if his or her stronger self-guide matches the self-guide framing of the message. Thus, a self-guide framing match might activate an individual’s stronger self-guide and bring to mind the attributes that are contained within the individual’s self-guide. This match might increase interest in the message and motivate the individual to engage in careful scrutiny of the persuasive message. A mismatch between self-guide framing and stronger self-guide should not activate an individual’s self-guides and thus should not increase interest in the message. Thus, if a persuasive message is framed in terms of self-guides, a match between stronger self-guide and self-guide framing could lead to increased motivation to process the persuasive message compared to a mismatch between stronger self-guide and self-guide framing. This self-guide framing paradigm presents a new way of examining framing effects on persuasion and processing and is the focus of this dissertation.
The outcome framing match used by Tykocinski, Higgins, and Chaiken (1994) might lead to different motivational and emotional results than the self-guide framing match described above. As seems to have been demonstrated by Tykocinski, Higgins, and Chaiken (1994), an outcome framing match might activate an individual’s self-discrepancies and bring to mind the ways in which his or her actual self falls short of his or her stronger self-guide. If positive outcome framing leads a person with a strong ideal self-guide to think about the lack of fit between the traits and attributes of her actual self and the traits and attributes that she would ideally like to possess, dejection feelings should be aroused. If negative outcome framing leads a person with a strong ought self-guide to think about the lack of fit between the traits and attributes of his actual self and the traits and attributes that he ought to or should possess, agitation feelings should be aroused. Although outcome framing matches might activate an individual’s self-discrepancies and the corresponding negative feelings, a mismatch between outcome framing and stronger self-guide should not activate an individual’s self-discrepancies. If an individual’s stronger self-guide and his or her self-discrepancies are activated, self-relevant information should come to mind, and the distressing feelings that are associated with discrepancies should also be aroused. If elaboration likelihood is low, the distressing feelings could lead an individual to make simple affective judgments about a persuasive message rather than engage in increased message processing. If elaboration likelihood is high, due to personal relevance or extensive knowledge about the topic, for example, the distressing feelings could lead an individual to engage in biased thought about a persuasive message. This biased thought could lead to increased counterarguing of the persuasive message, as was hypothesized by Tykocinski, Higgins, and Chaiken
(1994) but not demonstrated. On the other hand, if elaboration likelihood is moderate, the distressing feelings aroused by matched messages could lead an individual to avoid the thoughtful processing of matched messages. This avoidance of processing could lead to decreased persuasion for matched messages with strong arguments and increased persuasion for matched messages with weak arguments compared to mismatched messages. The effect of outcome framing matches on message processing will be examined by extending the work of Tykocinski, Higgins, and Chaiken (1994).

This dissertation will present an in-depth exploration of the effects of matches between self-guide framing and stronger self-guides or stronger self-discrepancies on message processing. Self-guide framing may have more potential for interesting effects on message processing than outcome framing, as self-guide framing seems intuitively to be broader and more applicable than outcome framing. In addition, self-guide framing seems more likely than outcome framing to naturally elicit the self-relevant thoughts that lead to increased message processing. Experiment 1 will examine the effects of both self-guide framing and outcome framing on message processing to determine whether self-guide framing and outcome framing do, in fact, have different effects on processing. Matches between the self-guide framing of a persuasive message or the outcome framing of a persuasive message and individuals’ currently activated self-guides will be explored in Experiment 1. Individuals’ ideal or ought self-guides will be activated using an essay manipulation (Higgins, Roney, Crowe, & Hymes, 1994). Thus, the effects of self-guide matching (matching the framing of a message to an individual’s stronger or more accessible self-guide) on message processing will be examined using both self-guide framing and outcome framing.
In Experiment 2, both the effect of self-guide matching on processing and the effect of self-discrepancy matching (matching the framing of a message to an individual's stronger self-discrepancy) on processing will be examined. The strength of individuals' self-guides and self-discrepancies will be measured using a computerized assessment tool (see Higgins, Shah, & Friedman, 1997, Study 3) so that self-guide framing may be matched to either stronger self-guides or stronger self-discrepancies. It is expected that self-guide matches will not arouse distress. Rather, self-guide matches are expected to motivate more careful processing of a persuasive message. Thus, self-guide matches should lead to greater scrutiny of the message arguments, resulting in more persuasion if the arguments are strong and less persuasion if the arguments are weak. Self-guide mismatches are not expected to lead to greater scrutiny of the message arguments, so the amount of persuasion should not be dependent upon the quality of the message arguments. Although self-guide matches are not expected to arouse distress, self-discrepancy matches may arouse distress and lead to less careful message processing. Self-discrepancy matches may lead individuals to avoid thoughtful processing, resulting in attitudes that are not dependent upon the quality of the message arguments. Self-discrepancy mismatches may be less likely to arouse distress; thus, self-discrepancy mismatches may lead to greater scrutiny of the message arguments than self-discrepancy matches. The above hypotheses will be examined in two experiments, described below.
CHAPTER 2

EXPERIMENT 1

Overview

Experiment 1 investigated the hypothesis that the processing of a persuasive message will be enhanced when an individual’s activated self-guide matches the self-guide framing of the message. In addition, the effect of matches between an individual’s activated self-guide and the outcome framing of a message was examined. Participants spent the first part of the session writing an essay on either their past and present hopes and goals or their past and present duties and responsibilities. This essay served to activate either their ideal or ought self-guides, respectively. Next, participants looked at a publicity flyer for a [fictional] book on recycling. The flyer contained a quotation which served as either the ideal or ought self-guide framing, in addition to a persuasive message on recycling. The message contained either strong or weak arguments that were framed in terms of either positive or negative outcomes. Participants indicated their attitudes toward recycling, their attitudes toward the design, layout, and content of the flyer, and the thoughts that they had while reading the flyer.
Method

Participants

Two hundred eighty-three introductory psychology students participated in the 2
(Activated Self-Guide: ideal or ought) X 2 (Self-Guide Framing: ideal or ought) X 2
(Outcome Framing: positive or negative) X 2 (Argument Quality: strong or weak)
between-participants design in exchange for partial fulfillment of a research experience
course requirement. One male participant did not complete all of the relevant dependent
measures; thus, his data were not included in subsequent analyses. Therefore, data from
282 participants (169 females and 113 males) were available for statistical analyses.  

Procedure

Students participated in a large classroom in groups of 38 to 44. After all students
had turned in their experiment cards and were seated and comfortable, the experimenter
delivered the oral instructions, which presented the ostensible purposes of the study (see
Appendix A). Participants were told that they would be completing two separate
experiments during the 30 minute session. The first experiment was said to be part of a
psychology project that was looking at essays on how people’s standards change over
time, and the second experiment was said to be part of a journalism project looking at
responses to a publicity flyer for a new book. Participants were asked to bring the essay
assignment up to the experimenter when they were finished so that she could give them
the packet for the second experiment. Participants were asked to read the instructions
very carefully and to go through the packet one page at a time, from front to back. The

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3 Analyses including gender as a variable did not produce any significant interactions with gender; thus, all
data were collapsed across gender.
experimenter then asked if anyone had any questions, passed out pens or pencils to participants who needed them, and distributed the essay assignment. When participants were finished with the essay, they returned it to the experimenter and were given the packet containing the publicity flyer and dependent measures. A written debriefing was included at the end of the packet. After reading the debriefing, participants returned the packet to the experimenter. The experimenter answered any questions that the participants had, returned their signed experiment cards, and thanked them for participating in the study.

Materials and Independent Variables

Part One Materials

The first part of the experimental session required participants to write down their answers to an essay question. Each participant received a single sheet of paper that contained both the question and the space for the participant’s answer.

Activated self-guide. Participants’ ideal or ought self-guides were activated through the essay manipulation used by Higgins, Roney, Crowe, and Hymes (1994). Participants in both activated self-guide conditions read that the researchers were “interested in how people’s standards change over time.” Participants in the ideal activated self-guide condition were then asked to “briefly describe your current hopes and goals. Next, discuss how they differ from the hopes and goals that you had while you were growing up” (see Appendix B). Participants in the ought activated self-guide condition were instead asked to “briefly describe your current sense of duty and obligation. Next, discuss how this differs from the sense of duty and obligation that you had while you were growing up” (see Appendix C). Participants were asked to spend approximately
five minutes writing down their responses to the essay question, and to write their essays in the space available on the front and back of the page.

Part Two Materials

The second part of the experimental session required participants to complete a packet of materials that contained the persuasive message, various dependent measures, a follow-up questionnaire, and a written debriefing. The persuasive message contained the self-guide framing manipulation, outcome framing manipulation, and argument quality manipulation. Examples of the pages in this packet are contained in the Appendices, as specified below.

The first page of the packet provided the cover story for what was ostensibly the second experiment that participants would complete. Participants were told that “with the help of the Psychology Department, the Journalism Department is interested in getting feedback from students regarding the layout, design, and content of a publicity flyer for a new book.” The first page also contained instructions for completing the packet. Participants were asked to “look over the flyer on the next page and form an impression of the layout, design, and content of the flyer.” Participants were also asked to “answer the questions on the pages that follow” and to ask the experimenter if they had any questions. This page also contained part of the self-guide framing manipulation.

Self-guide framing. Participants were told that they would be reviewing a publicity flyer for a new book. Participants in the ideal self-guide framing condition read that they would be reviewing a flyer for a book entitled Recycling: It's Our Dream to Preserve Our World's Resources. In addition, participants read that the book “addresses our optimal dreams, desires, aims, and intentions – for ourselves and for the world we live in”
Participants in the ought self-guide framing condition read that they would be reviewing a flyer for a book entitled *Recycling: It's Our Responsibility to Preserve Our World's Resources*. In addition, participants read that the book "addresses our responsibilities; those things we ought to do and should do – for ourselves and for the world we live in" (see Appendix E).

The second page of the packet presented the publicity flyer for the [fictional] book and contained the continuation of the self-guide framing. The second part of the self-guide framing was a quotation by John D. Fulweather, Executive Director of the National Resources Defense Council, that was introduced as "high praise for Joseph S. Dixon’s" new book. Participants in the ideal self-guide framing condition read the following quotation:

"Like few books in this decade have ever done, Dr. Dixon’s masterpiece empowers individuals to get up and do something about global environmental problems. Ideally, everyone will get involved and even the most "intractable" environmental problems will march toward a solution. *Recycling: It's Our Dream to Preserve Our World's Resources* presents a picture of hope that we all can aspire to achieve. Dixon’s book addresses our optimal dreams, desires, aims, and intentions – for ourselves and for the world we live in."

On the other hand, participants in the ought self-guide framing condition read the following quotation:

"Like few books in this decade have ever done, Dr. Dixon’s masterpiece makes individuals feel that they should get up and do something about global environmental problems. Even the most "intractable" environmental problems march toward a solution when everyone exercises his or her responsibility to get involved. *Recycling: It's Our Responsibility to Preserve Our World's Resources*
presents a picture of responsibility that we should not ignore. Dixon’s book addresses our responsibilities; those things we ought to do and should do – for ourselves and for the world we live in.”

Examples of the ideal self-guide framing are contained in Appendices G, I, K, and M, and examples of the ought self-guide framing are contained in Appendices F, H, J, and L.

Outcome framing. The persuasive message, in the form of an excerpt from the book on recycling, appeared below the self-guide framing quotation. The message contained five arguments, was approximately 175 words long, and was in favor of recycling. The arguments in the persuasive message were framed either in terms of the possible positive outcomes of recycling (positive outcome framing) or in terms of the possible negative outcomes of not recycling (negative outcome framing). Within each argument quality condition, the arguments were factually similar. That is, within the strong argument condition, for example, the only difference between positively framed strong arguments and negatively framed strong arguments was the outcome framing. One of the strong arguments addressed the impact of recycling on the nation’s landfills. In the positive outcome framing condition, this argument stated that “recycling decreases the burden on our nation’s landfills, which are already close to capacity in most areas.” In the negative outcome framing condition, this argument stated that “failing to recycle increases the burden on our nation’s landfills, which are already close to capacity in most areas.” Examples of the positive outcome framing are contained in Appendices H, I, L, and M, and examples of the negative outcome framing are contained in Appendices F, G, J, and K.
**Argument quality.** The arguments contained in the persuasive message also varied in terms of quality. Within each outcome framing condition, participants read a persuasive message that contained either five strong arguments or five weak arguments in favor of recycling. The wording of the individual strong and weak arguments was similar; however, the strong arguments typically addressed a more important concern than the weak arguments. For example, strong arguments regarding the burden on our nation’s landfills were noted above. The comparable weak arguments were that “recycling decreases the burden on our nation’s garbage collectors, who are already overworked as it is” (positive outcome framing) and “failing to recycle increases the burden on our nation's garbage collectors, who are already overworked as it is” (negative outcome framing). Other strong arguments addressed the 2,500 U.S. businesses that rely on recycled goods, the need for mining new natural resources, the amount of air pollution generated by manufacturers, and the message that recycling sends to future generations. Other weak arguments addressed the five U.S. businesses that rely somewhat on recycled goods, the need for new magazine advertisements, the amount of air pollution generated by garbage trucks, and the message that recycling sends to our self-esteem. Examples of the strong arguments are contained in Appendices F, G, H, and I, and examples of the weak arguments are contained in Appendices J, K, L, and M.

**Dependent Measures and Manipulation Checks**

**Recycling attitude.** After reading the publicity flyer, participants were asked to indicate their attitudes toward recycling. Participants were told that “because your opinions on recycling may have an effect on your evaluation of the publicity flyer, we would first like for you to indicate your opinions on recycling. Do you think that
recycling is a good idea or a bad idea?” Five 9-point semantic differential attitude scales, with endpoint labels of extremely unfavorable-extremely favorable, extremely foolish-extremely wise, extremely good-extremely bad, extremely harmful-extremely beneficial, extremely positive-extremely negative, followed. Participants rated the issue of recycling by circling the number on each 9-point scale that best represented their opinions on the issue (see Appendix N, page one).

**Flyer attitude.** Participants were then asked to indicate their attitudes toward the design, layout, and content of the publicity flyer. These measures served to uphold the cover story and provided a more indirect measure of attitude toward recycling. Participants were told that “we are interested in your evaluation of the publicity flyer. What do you think of the design, layout, and content of the flyer?” Five 9-point semantic differential attitude scales, with endpoint labels of extremely unfavorable-extremely favorable, extremely unpleasant-extremely pleasant, extremely good-extremely bad, extremely harmful-extremely beneficial, extremely positive-extremely negative, followed. Participants rated the design, layout, and content of the flyer by circling the number on each 9-point scale that best represented their opinions (see Appendix N, page two).

**Argument quality ratings.** Participants were also asked to evaluate the strength of the message arguments on a series of 9-point scales, with endpoint labels of “very strong argument for NOT recycling” and “very strong argument for recycling.” Each of the five arguments contained in the message was presented along with a 9-point scale, and participants were asked to circle the number on each scale that best represented their opinions on the merits of the message arguments. Because the arguments contained in
the persuasive message varied across the eight conditions, eight versions of the argument quality rating scales were used, one per condition. (The argument quality rating scales for the ideal self-guide framing, positive outcome framing, strong argument condition are contained in Appendix O).

Cognitive responses. The fifth and sixth pages of the packet contained instructions for the thought listing measure and the thought listing measurement page, respectively (see Appendix P). Instructions for the cognitive response task were adapted from Petty and Cacioppo (1977). First, participants were told that "we are now interested in what you were thinking about while you were reading the publicity flyer for the book on recycling." Participants were asked to list all of the thoughts that had occurred to them while they were looking at the publicity flyer. They were instructed to use the next page to record their thoughts and ideas and to spend about two minutes writing down their thoughts. The next page contained nine blank boxes in which participants could record their thoughts, one thought per box.

Post-experimental questionnaire. The seventh page of the packet contained items designed to measure participants' level of interest in recycling and environmental issues, as well as a check on the self-guide framing manipulation and a suspicion probe (see Appendix Q). Participants first indicated how often they recycled on a 9-point scale with endpoint labels of never and always. Next, participants were asked whether they were members of any environmental preservation groups and responded by checking "yes" or "no."4 Participants then completed a multiple choice question which asked participants to

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4 Out of 282 participants, only seven (2.5%) indicated that they were members of environmental preservation groups. Thus, no further analyses involving group membership were conducted.
complete the following sentence: "The author of the book described in the flyer thinks...”
Response options were a) “It’s our responsibility to recycle,” b) “It’s our decision to recycle,” or c) “It’s our dream to recycle.” Finally, participants were asked if they thought there was another purpose to the experiment not told to them by the experimenter and if so, what that purpose might be. In addition, participants were asked to provide any comments about the experiment.

Debriefing

Once they had completed all of the dependent measures, participants were able to turn the page and read a debriefing that described the true purpose of the study. The debriefing provided some educational background information regarding attitude and persuasion research and thanked students for participating. Participants were asked not to discuss the study with others who might also be participating and were told to ask the experimenter any questions they might have (see Appendix R).

Results

Messages that matched the activated self-guide in terms of self-guide framing (i.e., ideal self-guide framing when ideal self-guide was activated and ought self-guide framing when ought self-guide was activated) were classified as self-guide framing matches, and messages that mismatched the activated self-guide in terms of self-guide framing (i.e., ideal self-guide framing when ought self-guide was activated and ought self-guide framing when ideal self-guide was activated) were classified as self-guide framing mismatches. Likewise, messages that matched the activated self-guide in terms of outcome framing (i.e., positive outcome framing when ideal self-guide was activated and negative outcome framing when ought self-guide was activated) were classified as
outcome framing matches, and messages that mismatched the activated self-guide in terms of outcome framing (i.e., positive outcome framing when ought self-guide was activated and negative outcome framing when ideal self-guide was activated) were classified as outcome framing mismatches.

The result was a 2 (Self-Guide Framing Match: match or mismatch) X 2 (Outcome Framing Match: match or mismatch) X 2 (Argument Quality: strong or weak) between-participants design. Participants were also classified as either regular recyclers or less regular recyclers via a median split on the item asking how often they typically recycled. Manipulation checks and dependent measures were submitted to a 2 (Self-Guide Framing Match) X 2 (Outcome Framing Match) X 2 (Argument Quality) X 2 (Recycling Regularity) analysis of variance (ANOVA). Comparisons between means were calculated using the Newman-Keuls test.

**Manipulation Checks**

*Self-guide framing*. Participants’ responses to the item regarding the beliefs of the author of the book described in the flyer served as a check on the self-guide framing manipulation. Participants were given three choices: (1) It’s our responsibility to recycle, (2) It’s our decision to recycle, and (3) It’s our dream to recycle. Participants’ responses to the item were classified as either correct (66.0%) or incorrect (34.0%). Although the proportion of participants choosing the correct answer was relatively low, the percentages did not vary significantly across self-guide framing conditions, outcome framing conditions, or argument quality conditions.

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5 Analyses including activated self-guide as an additional variable produced several higher-order interactions and will be recorded in the footnotes.
**Argument quality.** The five argument quality ratings were averaged to create a composite measure of argument quality (α = .78), which served as a check on the argument quality manipulation. The 2 X 2 X 2 X 2 ANOVA revealed the expected main effect of argument quality, F (1, 281) = 102.04, p < .001. Participants who read strong arguments rated the arguments more favorably (M = 7.58) than participants who read weak arguments (M = 6.17). No other main effects or interactions were significant at p < .05.  

**Awareness of Purpose of Experiment**

**Awareness probe.** Participants' responses to the awareness probe, "Do you think there is another purpose to the experiment not told to you by the experimenter? If yes, what?" were classified into one of five categories: (1) no (54.6%), (2) I don’t know (7.4%), (3) yes, with no purpose listed (11.3%), (4) yes, with a purpose not related to the true purpose of the experiment listed (25.9%), (5) yes, with a purpose close to that of the true purpose of the experiment indicated (0.7%). The percentage of participants who guessed the true purpose of the experiment was extremely low; thus, awareness of the purpose of the experiment did not appear to be a problem in this experiment.

**Attitudes**

**Recycling attitude.** Five semantic differential scales that measured participants' attitudes toward recycling were averaged to create a composite measure of recycling attitude (α = .84). The 2 X 2 X 2 X 2 ANOVA revealed a main effect of recycling

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6 A 2 X 2 X 2 X 2 ANOVA (including activated self-guide) on argument quality ratings revealed a five way interaction between self-guide framing match, outcome framing match, argument quality, recycling regularity, and activated self-guide, F (1, 281) = 4.37, p < .04. The pattern of means was slightly different for participants with an active ideal self guide compared to participants with an active ought self guide.
regularity, $F(1, 281) = 10.57, p = .001$. Not surprisingly, participants who recycled regularly indicated more positive attitudes toward recycling ($M = 8.46$) than participants who recycled less often ($M = 8.09$). In addition, this effect was qualified by an interaction of recycling regularity with self-guide framing match, $F(1, 281) = 10.56, p = .001$. Participants who were regular recyclers expressed more positive attitudes toward recycling after reading a self-guide framing match message ($M = 8.66$) than after reading a self-guide framing mismatch message ($M = 8.29$). Participants who were not regular recyclers did not differ in their attitudes toward recycling as a result of reading the self-guide framing match message ($M = 7.94$) or mismatch message ($M = 8.26$; see Table 2.1). No other main effects or interactions were significant at $p < .05$.

<table>
<thead>
<tr>
<th>Recycling Regularity</th>
<th>Self-Guide Framing Match</th>
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<tbody>
<tr>
<td></td>
<td>Match</td>
<td>Mismatch</td>
</tr>
<tr>
<td>Often</td>
<td>8.66$^b$</td>
<td>8.29$^a$</td>
</tr>
<tr>
<td>Less Often</td>
<td>7.94$^a$</td>
<td>8.26$^a$</td>
</tr>
</tbody>
</table>

$^a$, $^b$ Cell means with different superscripts are significantly different from each other at $p < .05$

Table 2.1: Recycling Attitude as a Function of Self-Guide Framing Match and Recycling Regularity

*Flyer attitude.* Five semantic differential scales that measured participants’ attitudes regarding the layout, design, and content of the flyer were averaged to create a composite measure of flyer attitude ($\alpha = .90$). The $2 \times 2 \times 2 \times 2$ ANOVA revealed a main effect of outcome framing match, $F(1, 281) = 4.96, p = .03$. Participants who read
a message with outcome framing that mismatched their activated self-guide indicated
more positive attitudes toward the flyer ($M = 6.76$) than participants who read a message
with outcome framing that matched their activated self-guide ($M = 6.44$). This main
effect would be expected if an outcome framing match increases distress and decreases
message processing. In addition, the expected interaction between self-guide framing
match and argument quality was obtained, $F(1, 281) = 3.87, p = .05$. When participants
read a message with self-guide framing that matched their activated self-guide, their
attitudes toward the flyer were more favorable if the flyer presented strong arguments ($M
= 6.85$) than if the flyer presented weak arguments ($M = 6.31$). When participants read a
message with self-guide framing that mismatched their activated self-guide, their
attitudes toward the flyer did not differ with respect to exposure to strong or weak
arguments ($Ms = 6.60$ and 6.64, respectively; see Table 2.2). This interaction suggests
that a self-guide framing match increases message processing. No other main effects or
interactions were significant at $p < .05.$

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7 A 2 X 2 X 2 X 2 X 2 ANOVA (including activated self-guide) on flyer attitude revealed a four way
interaction between self-guide framing match, argument quality, recycling regularity, and activated self-
guide, $F(1, 281) = 7.76, p = .006$. The self-guide framing match by argument quality interaction was
strongest for participants with an active ideal self-guide who were regular recyclers.
Table 2.2: Flyer Attitude as a Function of Self-Guide Framing Match and Argument Quality

Cognitive responses. The primary coder, who was blind to experimental condition, coded all participants' cognitive responses. A second coder, who was also blind to experimental condition, coded a random sample of 30 thought listings. The two coders reached 82.2% agreement on the thought classifications. As the secondary coder had validated the thought classifications of the primary coder, the primary coder's classifications were used for analysis.

Cognitive responses were classified into three categories based on the type of thought listed: recycling relevant, flyer relevant, or irrelevant. Recycling relevant and flyer relevant thoughts were also classified as positive, negative or neutral. Recycling relevant thoughts were related to the issue of recycling and somehow added to, or elaborated on, the message statements. These thoughts were related either specifically to the topic of recycling or, more generally, to other environmental preservation. Flyer relevant thoughts were related to the design, layout, and content of the flyer. Thoughts were coded as irrelevant if they had no connection to the message whatsoever, or if it was unclear whether the thought pertained to the message or to the experiment itself. 44.8%
of all thoughts listed were classified as recycling relevant thoughts, 49.8% of all thoughts listed were classified as flyer relevant thoughts, and 5.4% of all thoughts listed were classified as irrelevant thoughts. Therefore, both the recycling relevant category and the flyer relevant category contained enough thoughts for further analysis.

Thought positivity indices with regard to either the issue of recycling or the publicity flyer were created by subtracting the number of negative recycling or flyer relevant thoughts from the number of positive recycling or flyer relevant thoughts then dividing by the total number of positive and negative recycling or flyer relevant thoughts. Positive values on the thought positivity indices indicate a predominance of positive thoughts related to either recycling or the flyer; whereas negative values on the thought positivity indices indicate a predominance of negative thoughts related to either recycling or the flyer. A value of zero was obtained if a participant listed an equal number of positive and negative thoughts. In addition, a value of zero was assigned if the participant did not list any positive or negative message relevant thoughts.

2 X 2 X 2 X 2 ANOVAs were conducted on both the recycling relevant thought positivity index and the flyer relevant thought positivity index. No main effects or interactions were significant on either index at \( p < .05 \).

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* Similar analyses were conducted using positivity indices that did not correct for the total number of recycling or flyer relevant thoughts listed by each participant. These uncorrected indices consisted simply of the number of negative recycling or flyer relevant thoughts subtracted from the number of positive recycling or flyer relevant thoughts. Because the results obtained using these uncorrected indices were nearly identical to the corrected results, only the results obtained from the corrected indices will be presented here.
Discussion and Conclusions

*Outcome Framing Matches*

The main effect of outcome framing match on attitudes toward the flyer suggests that participants' attitudes could have been affected by a low elaboration, peripheral route process. Attitude change was enhanced when an individual's activated self-guide mismatched the positive or negative outcome framing of a persuasive message. Although the outcome framing match effect might have been expected to occur on both attitudes toward recycling and attitudes toward the flyer, the effect was only obtained on attitudes toward the flyer. Participants with an active ideal self-guide indicated more positive attitudes toward the flyer when the persuasive message was framed in terms of negative outcomes. Participants with an active ought self-guide indicated more positive attitudes toward the flyer when the persuasive message was framed in terms of positive outcomes. Thus, participants' attitudes toward the flyer were more positive when the outcome framing mismatched their active self-guide.

However, the outcome framing manipulation used in Experiment 1 did not provide an ideal test of the outcome framing hypotheses. The positive outcome framing used in Experiment 1 included both positive framing representing the presence of positive outcomes and positive framing representing the absence of negative outcomes. Specifically, two of the five primary arguments represented the presence of positive outcomes and three of the five primary arguments represented the absence of negative outcomes. Although self-discrepancy theory predicts that positive framing representing the presence of positive outcomes will activate individuals' ideal discrepancies, the theory also predicts that positive framing representing the absence of negative outcomes
will activate individuals' ought discrepancies. Thus, the positive outcome framing used in Experiment 1 was less than ideal for testing the matching hypotheses. The negative outcome framing included only negative framing representing the presence of negative outcomes and thus should only have activated individuals' ought discrepancies. Although the outcome framing manipulation was not perfect, it is clear that outcome framing and self-guide framing are different constructs, as the results obtained for the two types of framing manipulations were different.

Self-Guide Framing Matches

The hypothesis that message processing would be enhanced when an individual’s activated self-guide matched the ideal or ought self-guide framing of the message was partially supported. Although the self-guide framing match by argument quality interaction was expected on both attitudes toward recycling and attitudes toward the flyer, the interaction was only obtained on the latter. With respect to attitudes toward the flyer, participants with an active ideal self-guide processed the ideal self-guide framed message more carefully than the ought self-guide framed message. Participants with an active ought self-guide exhibited the opposite effect. Thus, matched messages that contained strong arguments led to more positive attitudes toward the flyer than matched messages that contained weak arguments. Participants’ attitudes toward mismatched messages did not differ based on argument quality. Although participants’ attitudes toward the flyer were affected by the self-guide framing match, this measure is more indirect than the measure of individuals’ attitudes toward recycling. Experiment 2 will examine whether this processing difference can be obtained on more direct attitude measures.
Questions for Experiment 2

Analyses of cognitive responses did not provide insight into the mechanisms behind either of the framing effects, as no differences on the thought positivity indices were observed between conditions. Experiment 2 will examine the mechanisms behind the self-guide framing processing effect more fully. Tykocinski, Higgins, and Chaiken (1994) posited that their results were in part due to the distress that was aroused by the activation of an individual's chronic self-discrepancy. A match between an individual's chronic self-discrepancy and the outcome framing of the persuasive message was said to produce distress that reduced the motivation to yield to the message. Although Tykocinski et al. (1994) included a number of items that measured participants' general motivation state, these items did not measure the types of distress that would be expected as a result of the activation of self-discrepancies (i.e., depression when an ideal self-discrepancy is activated and anxiety when an ought self-discrepancy is activated). In addition, Experiment 1 did not include any measures of affect or distress. Thus, it is not clear whether affect might have mediated participants' responses. Experiment 2 will include the Differential Emotions Scale (DES; see Cacioppo, Martske, Petty, & Tassinary, 1988), an eight item scale that assesses an individual's current mood state, so that mediational hypotheses can be more fully examined.

Experiment 1 explored the effects of self-guide framing and outcome framing on processing simultaneously. Because it is now clear that these different types of framing have separate and distinct effects on persuasion and processing, they would best be examined separately. Self-guide framing appears to be the most likely candidate to affect thoughtful processing, the concern of this dissertation. Thus, Experiment 2 will examine
only the effects of self-guide framing to determine whether the self-guide framing processing effect for matched messages is reliable. Further examinations of the effect of outcome framing on persuasion and processing are left to future research.

If matches between self-guide framing and stronger self-guides do increase thoughtful processing compared to mismatches, then this increase should be most apparent when elaboration likelihood is moderate to low. If elaboration likelihood is already high due to other factors such as a participant's general motivation to engage in careful thought, then any increase in processing brought about by self-guide matching should be less apparent. The need for cognition scale (Cacioppo & Petty, 1982) provides a measure of an individual's tendency to enjoy thoughtful processing. High need for cognition individuals tend to operate at high levels of elaboration likelihood and engage in careful processing of persuasive messages regardless of message factors such as self-guide framing. In contrast, low need for cognition individuals tend to operate at lower levels of elaboration likelihood. Although low need for cognition individuals are just as able to process messages as high need for cognition individuals, they tend to avoid thoughtful processing, engaging in thoughtful processing primarily when there is some particular reason to do so. Need for cognition was found to be a moderator of the self-monitoring and attitude function match processing effect (Petty & Wegener, 1998); thus, it seems likely that need for cognition may also moderate the self-guide framing match processing effect. If self-guide framing matches motivate message processing, then low need for cognition individuals should be more susceptible to this effect than high need for cognition individuals. High need for cognition individuals should process the persuasive
message regardless of self-guide framing. The need for cognition scale will be included in Experiment 2 so that these hypotheses can be examined.

Finally, Experiment 1 used a method of temporarily activating self-guides. Participants wrote essays about either their hopes and goals or their duties and obligations. These essays temporarily activated participants' ideal and ought self-guides, respectively. Because Tykocinski, Higgins, and Chaiken (1994) used a measure of chronic discrepancies between actual and ideal or ought selves rather than manipulating the activation of self-guides, it is important to examine the effects of matches and mismatches of self-guide framing with chronically strong self-guides and self-discrepancies. Recent research by Higgins and his colleagues has made use of new ways of measuring the strength of participants' self-guides and the extremity of their self-discrepancies (Shah & Higgins, 1997; Shah, Higgins, & Friedman, 1998). These new methods will be used in Experiment 2.
CHAPTER 3

EXPERIMENT 2

Overview

Experiment 2 investigated the hypothesis that the processing of a persuasive message would be enhanced when an individual’s stronger self-guide matched the self-guide framing of the message. All measures were taken by computer in two experimental sessions, using MediaLab software (Jarvis, 1998). In the first session, participants completed the self-guide strength measure (SGS), as well as other individual difference measures included for exploratory purposes. Approximately one week later, participants returned to the laboratory for the second session. Participants viewed a presentation for a [fictional] new breakfast product. The presentation contained a quotation that served as either the ideal or ought self-guide framing and a persuasive message on the new product. The message contained either strong or weak arguments. Participants indicated their attitudes toward the product, their attitudes toward the design and layout of the presentation, their attitudes toward the content of the presentation, and the thoughts that they had while reading the presentation. In addition, participants answered questions regarding their current emotional state.
Method

Participants

Two hundred ten introductory psychology students participated in the 2 (Stronger Self-Guide: ideal or ought) X 2 (Self-Guide Framing: ideal or ought) X 2 (Argument Quality: strong or weak) X 2 (Need for Cognition: high or low) between-participants design in exchange for partial fulfillment of a research experience course requirement. Seventeen participants failed to return for the second session, thus their data were not included in subsequent analyses. Therefore, data from 193 participants (107 females and 86 males) were available for statistical analysis. Participants were categorized as either high or low in need for cognition via a median split on the 18-item need for cognition scale (Cacioppo, Petty, & Kao, 1984). The median score for participants on the need for cognition scale was 62.00, with scores ranging from 32.00 to 90.00. The mean score for participants classified as low in need for cognition was 52.19 (N = 96), and the mean score for participants classified as high in need for cognition was 70.09 (N = 97).

Procedure

Students participated in a small computer laboratory room in groups of one to four. Each computer terminal was separated from neighboring terminals by a dividing screen. At the start of the first session, the experimenter delivered the oral instructions, which described the way that participants should use the keyboard to enter their responses (see Appendix S). Each participant was then seated at a computer terminal. During the first session, participants completed various individual difference measures as part of what

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9 Several analyses including gender as a variable did suggest moderation of the main self-guide matching by argument quality interaction. Where necessary, details regarding gender effects will be noted.
was said to be a psychology project that was examining people’s self-concepts.

Approximately one week later, students returned to the laboratory for the second session. Participants were told that the purpose of the second experiment was to gather feedback regarding a marketing presentation for a new breakfast product called Fast-Break.

Participants viewed two screens, which included both the self-guide framing manipulation and the persuasive message, then completed various dependent measures. Participants then read the debriefing, asked the experimenter any questions that they had, received their signed experiment cards, and were dismissed.

Materials and Independent Variables

Session One

Self-guide strength measure. First, participants completed the self-guide strength measure (SGS; Higgins, Shah, & Friedman, 1997, Study 3; provided by C. Camacho, personal communication, March 5, 1998). The self-guide strength measure is purported to assess the chronic strength of an individual’s ideal and ought self-guides using a computerized reaction time program. That is, the accessibility of an individual’s ideals, hopes, goals, and wishes and the accessibility of his or her oughts, responsibilities, duties, and obligations are assessed. Individuals list an attribute of the type of person they hope to be or ought to be, then rate the extent to which they would ideally like to or ought to possess the attribute and the extent to which they believe they actually possess the attribute. Reaction times are taken on the attribute listing and both extent measures. Faster reaction times on ideal attributes and extents than ought attributes and extents indicates a stronger ideal self-guide, and faster reaction times on ought attributes and extents than ideal attributes and extents indicates a stronger ought self-guide.
Participants were asked to list four attributes that described their ideal self-guides and four attributes that described their ought self-guides from their own standpoint. Participants read instructions that defined the actual, ideal, and ought selves and were told that they would be listing attributes that were part of their ideal and ought self-guides. Participants were told that each attribute must consist of only one word and that they must not list an attribute more than once. In addition, participants were instructed to enter their responses as quickly and accurately as possible. After listing each ideal attribute, participants were asked to “rate the extent to which you would IDEALLY LIKE TO possess the attribute” on a 4-point rating scale with labels of “Slightly,” “Moderately,” “A Great Deal,” and “Extremely” (ideal extent rating). After listing each ought attribute, participants were asked to “rate the extent to which you believe you OUGHT TO possess the attribute” on the same 4-point rating scale (ought extent rating). Participants were also asked to “rate the extent to which you believe you ACTUALLY possess the attribute” on the 4-point rating scale after listing each attribute (actual extent rating). Participants listed attributes and extents in the following order: ideal, ought, ought, ideal, ought, ideal, ideal, ought. (See Appendix T for specific instructions.)

Self-guide strength was calculated using response times. For each attribute listed, the time it took participants to type the self-guide attribute, the time it took to make the

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10 There is some potential for confusion with the extent ratings. An example will illustrate this confusion. Suppose a participant lists “kind” as an attribute of the type of person she hopes to be. She is then asked to “rate the extent to which you would IDEALLY LIKE TO possess the attribute.” If she chooses “2” on the rating scale, according to the wording of the extent question she has just indicated that she would “moderately ideally like to be kind.” According to Higgins, though, the wording is actually meant to refer to “I would ideally like to be moderately kind” (C. Camacho, personal communication, April 28, 1998). Although the actual wording may not capture the intended meaning, this wording has been used consistently by Higgins and his colleagues. Thus, this wording will be used in Experiment 2.
self-guide extent rating, and the time it took to make the actual extent rating was combined as part of a measure of self-guide strength. All three response time measures for each attribute were transformed by means of a logarithmic transformation to control for the expected positive skew in the latency distributions. For each attribute, a total response time was calculated by adding the three times noted above. Ideal self-guide strength was represented by the sum of the response times for the last three ideal attributes, and ought self-guide strength was represented by the sum of the response times for the last three ought attributes. Each sum was then multiplied by -1 so that larger numbers represented faster response times or greater self-guide strength. Participants were then classified as either having a stronger ideal self-guide, if their ideal response times were faster than their ought response times (N = 100, ideal self-guide strength $M = -75.29$, ought self-guide strength $M = -77.12$), or a stronger ought self-guide, if their ought response times were faster than their ideal response times (N = 93, ought self-guide strength $M = -76.15$, ideal self-guide strength $M = -77.93$).

**Self-discrepancy measure.** In addition to assessing self-guide strength, the SGS also incorporates a more traditional measure of chronic self-discrepancies. The “Selves Questionnaire” that is typically used to assess self-discrepancies involves the same extent ratings as the SGS (See Higgins, 1987, 1989b and Higgins & Tykocinski, 1992). Chronic ideal and ought self-discrepancy scores were calculated by subtracting the actual extent

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11 Higgins, Shah, & Friedman (1997) used the sum of the response times for the first three ideal and ought attributes to calculate ideal and ought self-guide strength, respectively. However, in the current research the last three ideal and ought reaction time sets were used for calculation. Participants spent substantially more time on the first attribute and extent set of the series, thus artificially inflating their overall reaction times for the ideal self-guide. Calculating self-guide strength using the last three reaction time sets eliminated this problem. Thus, in the current research, the first ideal and ought reaction time sets were viewed as practice sets.
rating from the ideal or ought extent rating for each ideal or ought attribute, respectively, then summing the difference scores. Thus, the difference scores for each of the four ideal and ought attributes listed by participants while completing the SGS were summed to create ideal and ought self-discrepancy scores, respectively. Participants were then classified as either having a stronger ideal self-discrepancy, if the ideal self-discrepancy score was higher than the ought self-discrepancy score (N = 95, ideal self-discrepancy score M = 5.12, ought self-discrepancy score M = 2.72), a stronger ought self-discrepancy, if the ought self-discrepancy score was higher than the ideal self-discrepancy score (N = 50, ought self-discrepancy score M = 3.90, ideal self-discrepancy score M = 2.04), or equally strong ideal and ought self-discrepancies, if the ideal and ought self-discrepancy scores were equal (N = 48, ideal and ought self-discrepancy scores M = 3.08).

Other measures. Following the self-guide strength measure, participants completed several individual difference measures for exploratory purposes, as well as the 8-item Differential Emotions Scale (DES; see Cacioppo, Martske, Petty, & Tassinary, 1988). Finally, participants completed the 18-item Need for Cognition Scale (NCS; Cacioppo, Petty, & Kao, 1984). Each of these measures was administered on the computer.

Session Two

During the second session of Experiment 2, participants listened to instructions delivered by the experimenter, viewed the persuasive message, completed various dependent measures and a post-experimental questionnaire, and read a debriefing. At the start of the second session, the experimenter delivered the oral instructions, which reminded participants of the way that they should use the keyboard to enter their
responses (see Appendix U). After being seated at a computer terminal, participants read a screen that welcomed them to the second session and briefly described the upcoming study. Participants learned that the researchers were “interested in getting feedback from students regarding the layout, design, and content of a marketing presentation for a new product” and that “the product will be test-marketed this summer on the West Coast.” The manufacturer of the product was then described as a trustworthy producer of outstanding breakfast products (see Appendix V). Following the description of the company, participants read that the presentation would begin on the next screen.

*Self-guide framing.* The first screen of the presentation included the self-guide framing manipulation. The self-guide framing manipulation consisted of both a headline and a quotation by Commissioner John A. Kessler, M.D., US FDA. In the ideal self-guide framing condition (see Appendix W), the headline read “Fast-Break: The Ideal Breakfast Solution!” and the quotation was as follows:

> “Like few new breakfast products in this decade have ever done, Fast-Break empowers individuals to get up and do something about their own health and nutrition. Ideally, everyone will try Fast-Break and even the most "intractable" breakfast problems will march toward a solution. Those who have tried Fast-Break present a picture of hope that we all can aspire to achieve. This product addresses our optimal dreams, desires, aims, and intentions – for ourselves and for the world we live in.”

In the ought self-guide framing condition (see Appendix X), the headline read “Fast-Break: The Responsible Breakfast!” and the quotation was as follows:

> “Like few new breakfast products in this decade have ever done, Fast-Break makes individuals feel that they should get up and do something about their own health and nutrition. Even the most "intractable" breakfast problems march toward a
solution when everyone exercises his or her responsibility to try Fast-Break. Those who have tried Fast-Break present a picture of responsibility that we should not ignore. This product addresses our responsibilities; those things we ought to do and should do – for ourselves and for the world we live in.”

The self-guide framing manipulation continued onto the next screen, which contained the persuasive message. In the ideal self-guide framing condition, the message began by stating that “researchers have found that people who eat a well-balanced breakfast tend to be more successful throughout the day.” In the ought self-guide framing condition, the message began by stating that “researchers have found that people who eat a well-balanced breakfast tend to be more responsible throughout the day.”

Argument quality. The persuasive message was presented in two paragraphs containing approximately 375 words and 12 arguments in favor of purchasing and using Fast-Break. One strong argument for Fast-Break was that “9 out of 10 college students said that Fast-Break was the perfect breakfast for them – it’s quick, convenient, healthy, and tastes great!” A comparable weak argument for Fast-Break was that “3 out of 10 college students said that Fast-Break was a good breakfast for them – it’s easy, tastes pretty good, and doesn’t take that much time to prepare.”¹² (See Appendices Y and Z for the complete strong and weak messages, respectively.)

¹² Twenty-four introductory psychology students participated in an argument quality pilot test. After reading either the strong or weak argument message, participants indicated their attitudes toward the content of the message on a series of six 9-point semantic differential scales, with endpoint labels of unfavorable-favorable, unpleasant-pleasant, foolish-wise, bad-good, harmful-beneficial, and negative-positive. A one-way ANOVA revealed a main effect of argument quality, $F(1, 23) = 10.95, p = .003$. The strong argument message was rated more favorably ($\bar{M} = 6.03$) than the weak argument message ($\bar{M} = 3.51$).
Dependent Measures and Manipulation Checks

*Fast-Break attitude.* After looking over the presentation, participants were asked to indicate their attitudes toward trying Fast-Break for breakfast. Participants were told that "because your opinions on the product, Fast-Break, may have an effect on your evaluation of the presentation, we would first like for you to indicate your opinions regarding Fast-Break. Based on the information that you saw in the presentation, what are your opinions regarding Fast-Break? Do you think that trying Fast-Break for breakfast is a good idea or a bad idea?" Six 9-point semantic differential attitude scales, with endpoint labels of unfavorable-favorable, unpleasant-pleasant, foolish-wise, bad-good, harmful-beneficial, and negative-positive, followed. Participants rated the idea of trying Fast-Break for breakfast by pressing the number key that best represented their opinions for each scale item.

*Presentation attitude.* Participants were then asked to indicate their attitudes toward the design and layout of the presentation. These measures served to uphold the cover story and also provided an indirect measure of participants' attitudes toward Fast-Break. Participants were told that "now we are interested in your evaluation of the presentation. What do you think of the design and layout of the presentation?" Six 9-point semantic differential attitude scales, with endpoint labels of unfavorable-favorable, unpleasant-pleasant, foolish-wise, bad-good, harmful-beneficial, and negative-positive, again followed. Participants rated the design and layout of the presentation by pressing the number key that best represented their opinions for each scale item.

*Content attitude.* Participants were also asked to evaluate the content of the persuasive message. Participants were told that "now we are interested in your
evaluation of the content of the presentation. What do you think of the reasons that were
given for purchasing and consuming Fast-Break?” Six 9-point semantic differential
attitude scales, with endpoint labels of unfavorable-favorable, unpleasant-pleasant,
foolish-wise, bad-good, harmful-beneficial, and negative-positive, followed. Participants
rated the quality of the reasons presented in the presentation by pressing the number key
that best represented their opinions for each scale item.

Cognitive responses. Next, participants were asked to list the thoughts that had
occurred to them while they were looking at the presentation. Participants were told that
“we are now interested in what you were thinking about while you were looking at the
Fast-Break presentation.” Participants were given two minutes to list up to eight thoughts
that occurred to them while they were looking at the presentation. If they ran out of
thoughts to list before the two minutes were up, they could press the “Esc” key to
continue. After listing their thoughts, participants were asked to rate their own thoughts.
Each of the thoughts that a participant listed were presented to him or her on the
computer to be rated as either positive, negative, neutral, or not related to Fast-Break.

Differential emotions scale. Following the attitude and cognitive response
measures, participants completed the 8-item Differential Emotions Scale (DES; see
Cacioppo, Martske, Petty, & Tassinary, 1988), which measures current mood state.
Participants were asked to indicate how Merry/Gleeful/Amused,
Warmhearted/Joyful/Elated, Sad/Downhearted/Blue, Irritated/Angry/Mad,
Fearful/Scared/Afraid, Tense/Anxious/Nervous, Disgusted/Turned-Off/Repulsed, and
Contemptuous/Scornful/Disdainful they felt at that moment on 7-point scales with
endpoint labels of not at all-very strongly.
*Post-experimental questionnaire.* Finally, participants were asked to complete items that measured how often they ate breakfast and their behavioral intentions with regard to Fast-Break. Participants also completed manipulation checks and an open-ended suspicion probe. Participants were asked to rate how often they typically ate breakfast on an 8-point rating scale with endpoint labels of never and always. In addition, participants were asked to type in a number from zero to seven to indicate the number of days per week that they typically ate breakfast. Participants were also asked to indicate, on a 9-point rating scale with endpoint labels of no, definitely not and yes, definitely, whether they would try Fast-Break if it were made available. In addition, as an immediate behavioral measure, participants were asked to type in their addresses if they wanted to try a sample of Fast-Break before it was available throughout the United States.

Next, participants completed several manipulation checks on the self-guide framing manipulation. Participants were asked to identify the headline of the Fast-Break presentation and to describe, in general, what Dr. Kessler said about Fast-Break in the quote on the first screen of the presentation. Participants were also asked to describe where Fast-Break would be test-marketed. Next, participants were asked to indicate how carefully they read the information in the Fast-Break presentation, on a 9-point rating scale with endpoint labels of not at all carefully and extremely carefully. Finally, participants were asked if they believed there was another purpose to the study not told to them by the experimenter and if so, what that purpose might be.

*Debriefing.* Once participants had completed all of the dependent measures, a written debriefing appeared on the computer screen. The debriefing described the true
purpose of the study, provided some educational background information regarding attitude and persuasion research, and thanked students for participating. Participants were asked not to discuss the study with others who might also participate and were told to ask the experimenter any questions they might have (see Appendix AA).

Results

Manipulation Check

Self-guide framing. Participants' responses to the items regarding the headline of the Fast-Break presentation and the content of the quotation in the presentation served as checks on the self-guide framing manipulation. In the check on the headline, participants were given four choices: (1) Fast-Break: The Responsible Breakfast, (2) If You Don't Have Fast-Break for Breakfast You Might Fail, (3) Fast-Break: The Ideal Breakfast Solution, or (4) Have Fast-Break for Breakfast and Be Successful. Participants' responses to the item could be classified into one of four categories: (1) correct (71.0%), (2) incorrect, opposite self-guide framing chosen (23.8%), (3) incorrect, matching outcome framing chosen (4.1%), or (4) incorrect, opposite outcome framing chosen (1.0%). Although the majority of participants identified the correct headline in all conditions, the percentage of participants who chose the correct headline in the self-guide match conditions (78.3%) was significantly higher than the percentage of participants who chose the correct headline in the self-guide mismatch conditions (64.4%). The
percentage of participants who chose the correct headline did not vary significantly by argument quality or self-discrepancy matching.\textsuperscript{13}

In the check on the quotation, participants’ responses were classified into one of four categories: (1) correct, the answer was closely related to the self-guide framing introduction (22.3%), (2) incorrect, the answer was relevant to an introduction other than the self-guide framing (11.4%), (3) unclassifiable, the answer was too vague to be classified (51.3%), or (4) no answer given (15.0%). Because the majority of participants either misunderstood the question, provided an unclassifiable answer, or provided no answer, no further analyses were conducted on the quotation check.

\textit{Awareness of Purpose of Experiment}

\textit{Awareness probe.} Participants’ responses to the awareness probe, "Do you think there is another purpose to the experiment not told to you by the experimenter? If yes, what?" were classified into one of five categories: (1) no (13.9%), (2) I don’t know (11.6%), (3) yes, with no purpose listed (2.9%), (4) yes, with a purpose not related to the true purpose of the experiment listed (70.5%), (5) yes, with a purpose close to that of the true purpose of the experiment indicated (1.2%).\textsuperscript{14} The percentage of participants who guessed the true purpose of the experiment was extremely low; thus, awareness of the purpose of the experiment did not appear to be a problem in this experiment.

\textsuperscript{13} All reported analyses were conducted using participants’ responses to the check on the headline as a covariate. Because the results obtained using the headline check as a covariate were essentially identical to the results obtained without using the headline check as a covariate, only the results obtained without the covariate will be presented below.

\textsuperscript{14} Due to a computer error, the awareness data for twenty participants were lost. Thus, the percentages listed correspond to the number of participants out of 173 whose responses fit each classification.
**Self-Guide Matching Analyses**

Messages that matched a participant's stronger self-guide in terms of self-guide framing (i.e., ideal self-guide framing when ideal self-guide was stronger and ought self-guide framing when ought self-guide was stronger) were classified as self-guide matches, and messages that mismatched a participant’s stronger self-guide in terms of self-guide framing (i.e., ideal self-guide framing when ought self-guide was stronger and ought self-guide framing when ideal self-guide was stronger) were classified as self-guide mismatches.

The result was a 2 (Self-Guide Matching: match or mismatch) X 2 (Argument Quality: strong or weak) X 2 (Need for Cognition: high or low) X 2 (Self-Guide Framing: ideal or ought) between-participants design. Dependent measures were submitted to a 2 X 2 X 2 X 2 analysis of variance (ANOVA). Comparisons between means were calculated using the Newman-Keuls test.

**Primary Dependent Measures**

*Fast-Break attitude.* Six semantic differential scales that measured participants' attitudes toward Fast-Break were averaged to create a composite measure of Fast-Break attitude ($\alpha = .90$). The 2 X 2 X 2 X 2 ANOVA revealed a main effect of argument quality, $F (1, 192) = 100.44, p < .001$. Messages containing strong arguments led to more favorable attitudes toward Fast-Break ($M = 6.64$) than messages containing weak arguments ($M = 4.67$). In addition, the expected interaction between self-guide matching and argument quality was marginally significant, $F (1, 192) = 2.38, p = .13$. When

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15 Analyses including gender as an additional factor were also conducted and significant findings will be recorded in the footnotes.
participants read a message with self-guide framing that matched their stronger self-guide, their attitudes toward Fast-Break were more strongly affected by argument quality than when they read a message with self-guide framing that mismatched their stronger self-guide. That is, participants' attitudes in the matched conditions were more favorable toward Fast-Break if the message presented strong arguments ($M = 6.79$) than if the message presented weak arguments ($M = 4.51$). Participants' attitudes in the mismatched conditions were less strongly affected by the strong and weak argument quality manipulations ($Ms = 6.50$ and $4.83$, respectively; see Table 3.1).  

<table>
<thead>
<tr>
<th>Argument Quality</th>
<th>Match</th>
<th>Mismatch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong</td>
<td>6.79&lt;sup&gt;b&lt;/sup&gt;</td>
<td>6.50&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Weak</td>
<td>4.51&lt;sup&gt;a&lt;/sup&gt;</td>
<td>4.83&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a, b</sup> Cell means with different superscripts are significantly different from each other at $p < .05$

Table 3.1: Fast-Break Attitude as a Function of Self-Guide Matching and Argument Quality

<sup>16</sup> A 2 X 2 X 2 X 2 ANOVA (including gender) on Fast-Break attitudes revealed the argument quality main effect, $F(1, 192) = 84.53$, $p < .001$, and self-guide matching and argument quality interaction, $F(1, 192) = 3.77$, $p = .05$. In addition, three-way interactions between self-guide matching, argument quality, and gender, $F(1, 192) = 12.09$, $p = .001$, and argument quality, self-guide framing, and gender, $F(1, 192) = 5.63$, $p = .02$, were obtained. Results for men and women were examined separately. Men demonstrated the main effect of argument quality, $F(1, 85) = 32.27$, $p < .001$. In addition, the two way interaction between self-guide matching and argument quality was significant for men, $F(1, 85) = 14.34$, $p < .001$. Men's attitudes in the matched conditions were more favorable toward Fast-Break if the message presented strong arguments ($M = 6.80$) than if the message presented weak arguments ($M = 4.15$). Men's attitudes in the mismatched conditions did not differ with regard to strong and weak argument quality manipulations ($Ms = 6.00$ and $5.47$, respectively). In addition, the two way interaction between argument quality and self-guide framing was significant for men, $F(1, 85) = 7.21$, $p = .01$. Men's attitudes in the ideal self-guide framing conditions were more favorable toward Fast-Break if the message presented strong arguments ($M = 6.71$) than if the message presented weak arguments ($M = 4.36$). Men's attitudes in the ought self-guide framing conditions were less dependent upon strong and weak argument quality manipulations ($Ms = 6.10$ and $5.26$, respectively). Women demonstrated only the main effect of argument quality, $F(1, 106) = 55.80$, $p < .001$.  

56
**Presentation attitude.** Six semantic differential scales that measured participants' attitudes toward the layout and design of the presentation were averaged to create a composite measure of presentation attitude (α = .93). The 2 X 2 X 2 X 2 ANOVA revealed a main effect of argument quality, \( F(1, 192) = 15.82, p < .001 \). Messages containing strong arguments led to more favorable attitudes toward the presentation (\( M = 6.14 \)) than messages containing weak arguments (\( M = 5.22 \)). An interaction between argument quality and self-guide framing was also obtained, \( F(1, 192) = 5.44, p = .02 \). Participants' attitudes in the ought self-guide framing conditions were more favorable toward the presentation if the message presented strong arguments (\( M = 6.18 \)) than if the message presented weak arguments (\( M = 4.72 \)). Participants' attitudes in the ideal self-guide framing conditions did not differ as a result of the strong and weak argument quality manipulations (\( Ms = 6.09 \) and 5.71, respectively, see Table 3.2).

<table>
<thead>
<tr>
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<th>Self-Guide Framing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ideal</td>
</tr>
<tr>
<td>Strong</td>
<td>6.09(^{b,c})</td>
</tr>
<tr>
<td>Weak</td>
<td>5.71(^{b})</td>
</tr>
</tbody>
</table>

\(^{a, b, c}\) Cell means with different superscripts are significantly different from each other at \( p < .05 \)

Table 3.2: Presentation Attitude as a Function of Self-Guide Framing and Argument Quality
In addition, the expected interaction between self-guide matching and argument quality was significant, $F (1, 192) = 3.84, p = .05$. When participants read a message with self-guide framing that matched their stronger self-guide, their attitudes toward the presentation were affected by argument quality; however, when participants read a message with self-guide framing that mismatched their stronger self-guide their attitudes toward the presentation were not affected by argument quality. That is, participants' attitudes in the matched conditions were more favorable toward the presentation if the message presented strong arguments ($M = 6.36$) than if the message presented weak arguments ($M = 4.98$). Participants' attitudes in the mismatched conditions did not differ as a result of strong and weak argument quality ($Ms = 5.92$ and $5.45$, respectively; see Table 3.3).$^{17}$

<table>
<thead>
<tr>
<th>Argument Quality</th>
<th>Match</th>
<th>Mismatch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong</td>
<td>6.36$^c$</td>
<td>5.92$^{bc}$</td>
</tr>
<tr>
<td>Weak</td>
<td>4.98$^a$</td>
<td>5.45$^{ab}$</td>
</tr>
</tbody>
</table>

$^a, b, c$ Cell means with different superscripts are significantly different from each other at $p < .05$

Table 3.3: Presentation Attitude as a Function of Self-Guide Matching and Argument Quality

$^{17}$ A 2 X 2 X 2 X 2 ANOVA on presentation attitudes revealed the argument quality main effect, $F (1, 192) = 14.48, p < .001$, the argument quality by self-guide framing interaction, $F (1, 192) = 4.31, p = .04$, the self-guide framing match by argument quality by need for cognition interaction, $F (1, 192) = 5.17, p = .02$, and a gender main effect, $F (1, 192) = 6.69, p < .01$. Women's attitudes toward the presentation were more favorable ($M = 5.94$) than men's attitudes ($M = 5.32$). In addition, the self-guide matching and argument quality interaction was marginally significant, $F (1, 192) = 3.20, p < .08$. No other interactions were obtained.
The interaction between self-guide matching and argument quality was qualified by a three way interaction between self-guide matching, argument quality, and need for cognition, $F(1, 192) = 5.23, p = .02$. Results for high and low need for cognition participants were examined separately. Low need for cognition participants demonstrated a main effect of argument quality, $F(1, 95) = 13.69, p < .001$. Low need for cognition participants’ attitudes toward the presentation were more favorable when the message contained strong arguments ($M = 6.40$) than when the message contained weak arguments ($M = 5.20$). In addition, low need for cognition participants demonstrated a main effect of self-guide framing, $F(1, 95) = 4.30, p = .04$. Low need for cognition participants’ attitudes toward the presentation were more favorable when the message was framed in terms of ideals ($M = 6.14$) than when the message was framed in terms of oughts ($M = 5.46$). Finally, the self-guide matching by argument quality interaction was significant, $F(1, 95) = 9.10, p = .003$. Low need for cognition participants’ attitudes in the matched conditions were more favorable toward the presentation if the message presented strong arguments ($M = 7.03$) than if the message presented weak arguments ($M = 4.84$). Low need for cognition participants’ attitudes in the mismatched conditions did not differ as a result of strong and weak argument quality ($Ms = 5.77$ and $5.55$, respectively; see Table 3.4).
Table 3.4: Low Need for Cognition Participants’ Presentation Attitude as a Function of Self-Guide Matching and Argument Quality

<table>
<thead>
<tr>
<th>Argument Quality</th>
<th>Match</th>
<th>Mismatch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong</td>
<td>7.03(^b)</td>
<td>5.77(^a)</td>
</tr>
<tr>
<td>Weak</td>
<td>4.84(^a)</td>
<td>5.55(^a)</td>
</tr>
</tbody>
</table>

\(^{a, b}\) Cell means with different superscripts are significantly different from each other at \(p < .05\)

High need for cognition participants demonstrated a marginal main effect of argument quality, \(F(1, 96) = 3.74, p < .06\). High need for cognition participants’ attitudes toward the presentation were more favorable when the message contained strong arguments \((M = 5.88)\) than when the message contained weak arguments \((M = 5.24)\). An interaction between argument quality and self-guide framing was also obtained, \(F(1, 96) = 4.94, p < .03\). High need for cognition participants’ attitudes in the ought self-guide framing conditions were more favorable toward the presentation if the message presented strong arguments \((M = 6.13)\) than if the message presented weak arguments \((M = 4.76)\). High need for cognition participants’ attitudes in the ideal self-guide framing conditions did not differ as a result of the strong and weak argument quality manipulations \((Ms = 5.62\) and 5.72, respectively, see Table 3.5).
Table 3.5: High Need for Cognition Participants’ Presentation Attitude as a Function of Self-Guide Framing and Argument Quality

**Content attitude.** Six semantic differential scales that measured participants’ attitudes toward the content of the presentation were averaged to create a composite measure of content attitude ($\alpha = .94$). The 2 X 2 X 2 X 2 ANOVA revealed a main effect of argument quality, $F (1, 192) = 128.16, p < .001$. Messages containing strong arguments led to more favorable attitudes toward the content of the presentation ($M = 7.18$) than messages containing weak arguments ($M = 4.72$). In addition, the expected interaction between self-guide matching and argument quality was significant, $F (1, 192) = 6.12, p = .01$. When participants read a message with self-guide framing that matched their stronger self-guide, their attitudes toward the content of the presentation were more strongly affected by argument quality than when they read a message with self-guide framing that mismatched their stronger self-guide. That is, participants’ attitudes in the matched conditions were more favorable toward the content of the presentation if the message presented strong arguments ($M = 7.44$) than if the message presented weak arguments ($M = 4.44$). Participants’ attitudes in the mismatched conditions were less...
strongly affected by the strong and weak argument quality manipulations ($M$s = 6.92 and 4.99, respectively; see Table 3.6).  

<table>
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<th>Mismatch</th>
</tr>
</thead>
<tbody>
<tr>
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<td>6.92$^b$</td>
</tr>
<tr>
<td>Weak</td>
<td>4.44$^a$</td>
<td>4.99$^a$</td>
</tr>
</tbody>
</table>

$^a, ^b$ Cell means with different superscripts are significantly different from each other at $p < .05$

Table 3.6: Content Attitude as a Function of Self-Guide Matching and Argument Quality

*Global attitude measure.* Participants’ scores on the Fast-Break attitude composite measure, presentation attitude composite measure, and content attitude composite measure were standardized and summed to create a global attitude measure ($\alpha = .80$). The $2 \times 2 \times 2 \times 2$ ANOVA revealed a main effect of argument quality, $F(1, 192) = 103.28, p < .001$. Messages containing strong arguments led to more favorable attitudes ($M = 1.47$) than messages containing weak arguments ($M = -1.57$). In addition, the expected interaction between self-guide matching and argument quality was significant, $F(1, 192) = 6.09, p < .02$. When participants read a message with self-guide framing that matched their stronger self-guide, their attitudes were more strongly affected by argument quality.

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$^{18}$ A $2 \times 2 \times 2 \times 2$ ANOVA on content attitudes revealed the argument quality main effect, $F(1, 192) = 107.09, p < .001$, and a marginal gender main effect, $F(1, 192) = 3.43, p < .07$. Women’s attitudes toward the content of the presentation were more favorable ($M = 6.10$) than men’s attitudes ($M = 5.68$). In addition, the self-guide matching and argument quality interaction was significant, $F(1, 192) = 6.44, p < .01$. No other interactions were obtained.
quality than when they read a message with self-guide framing that mismatched their stronger self-guide. That is, participants’ attitudes in the matched conditions were more favorable if the message presented strong arguments ($M = 1.83$) than if the message presented weak arguments ($M = -1.96$). Participants’ attitudes in the mismatched conditions were less strongly affected by the strong and weak argument quality manipulations ($Ms = 1.12$ and $-1.19$, respectively; see Table 3.7).

<table>
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<tr>
<td></td>
<td>Match</td>
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<tr>
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</tr>
<tr>
<td>Weak</td>
<td>-1.96&lt;sup&gt;a&lt;/sup&gt;</td>
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<sup>a, b</sup> Cell means with different superscripts are significantly different from each other at $p < .05$

Table 3.7: Global Attitude as a Function of Self-Guide Matching and Argument Quality

In addition, the interaction between self-guide matching and argument quality was qualified by a marginal three way interaction between self-guide matching, argument quality, and need for cognition, $F (1, 192) = 3.48, p = .06$. Results for high and low need quality, and need for cognition, $F (1, 192) = 3.48, p = .06$. Results for high and low need

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<sup>19</sup> A $2 \times 2 \times 2 \times 2 \times 2$ ANOVA on global attitudes revealed the argument quality main effect, $F (1, 192) = 85.99, p < .001$, and self-guide matching and argument quality interaction, $F (1, 192) = 6.66, p = .01$. In addition, a marginal gender main effect was obtained, $F (1, 192) = 3.72, p < .06$, with women expressing more favorable attitudes ($M = 0.15$) than men ($M = -0.44$). Finally, a three-way interaction between self-guide matching, argument quality, and gender was obtained, $F (1, 192) = 3.83, p = .05$. Results for men and women were examined separately. Men demonstrated the main effect of argument quality, $F (1, 85) = 35.47, p < .001$. The two way interaction between self-guide matching and argument quality was also significant for men, $F (1, 85) = 8.33, p = .005$. Men's attitudes in the matched conditions were more favorable if the message presented strong arguments ($M = 1.51$) than if the message presented weak arguments ($M = -2.77$). Men's attitudes in the mismatched conditions were less affected by the strong and weak argument quality manipulations ($Ms = 0.49$ and $-1.00$, respectively). Women demonstrated only the main effect of argument quality, $F (1, 106) = 51.91, p < .001$. 

63
for cognition participants were examined separately. Low need for cognition participants demonstrated a main effect of argument quality, $F(1, 95) = 60.02, p < .001$. Low need for cognition participants' attitudes were more favorable when the message contained strong arguments ($M = 1.65$) than when the message contained weak arguments ($M = -1.60$). In addition, low need for cognition participants demonstrated a marginal main effect of self-guide framing, $F(1, 95) = 3.46, p < .07$. Low need for cognition participants' attitudes were more favorable when the message was framed in terms of ideals ($M = 0.41$) than when the message was framed in terms of oughts ($M = -0.37$). Finally, the self-guide matching by argument quality interaction was significant, $F(1, 95) = 9.58, p = .003$. Low need for cognition participants' attitudes in the matched conditions were more favorable if the message presented strong arguments ($M = 2.37$) than if the message presented weak arguments ($M = -2.18$). Low need for cognition participants' attitudes in the mismatched conditions were less affected by the strong and weak argument quality manipulations (Ms = 0.92 and -1.03, respectively; see Table 3.8).

<table>
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<th>Argument Quality</th>
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</thead>
<tbody>
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<td>Weak</td>
<td>-2.18a</td>
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</tbody>
</table>

a, b, c Cell means with different superscripts are significantly different from each other at $p < .05$

Table 3.8: Low Need for Cognition Participants' Global Attitude as a Function of Self-Guide Matching and Argument Quality
High need for cognition participants demonstrated only a main effect of argument quality, $F(1, 96) = 44.05, p < .001$. High need for cognition participants’ attitudes were more favorable when the message contained strong arguments ($M = 1.30$) than when the message contained weak arguments ($M = -1.55$).

**Cognitive responses.** Participants coded their cognitive responses as positive, negative, or neutral with regard to Fast-Break, or as irrelevant to Fast-Break. A thought positivity index with regard to Fast-Break was created by subtracting the number of negative thoughts from the number of positive thoughts then dividing by the total number of positive and negative thoughts. Positive values on the thought positivity index indicate a predominance of positive thoughts related to Fast-Break; whereas negative values on the thought positivity index indicate a predominance of negative thoughts related to Fast-Break. A value of zero was obtained if a participant listed an equal number of positive and negative thoughts. In addition, a value of zero was assigned if the participant did not list any positive or negative message relevant thoughts.

The $2 \times 2 \times 2 \times 2$ ANOVA revealed a main effect of argument quality, $F(1, 192) = 17.97, p = .001$. Participants who read messages containing strong arguments listed thoughts that were more positive with regard to Fast-Break ($M = 0.14$) than participants who read messages containing weak arguments ($M = -0.26$). In addition, the expected interaction between self-guide matching and argument quality was significant, $F(1, 192) = \ldots$

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20 Similar analyses were conducted using a positivity index that did not correct for the total number of positive or negative Fast-Break relevant thoughts listed by each participant. This uncorrected index consisted simply of the number of negative thoughts subtracted from the number of positive thoughts. Because the results obtained using the uncorrected index were nearly identical to the corrected results, only the results obtained from the corrected index are presented here.
When participants read a message with self-guide framing that matched their stronger self-guide, the thoughts that they listed were affected by argument quality; however, when participants read a message with self-guide framing that mismatched their stronger self-guide the thoughts that they listed were not affected by argument quality. That is, participants' thoughts in the matched conditions were more positive with regard to Fast-Break if the message presented strong arguments ($M = 0.26$) than if the message presented weak arguments ($M = -0.36$). Participants’ thought positivity in the mismatched conditions did not differ as a result of strong and weak argument quality ($Ms = 0.02$ and $-0.17$, respectively; see Table 3.9).

<table>
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<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td>Weak</td>
<td>-0.36$^a$</td>
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</tbody>
</table>

$^a, ^b, ^c$ Cell means with different superscripts are significantly different from each other at $p < .05$.

Table 3.9: Thought Positivity as a Function of Self-Guide Matching and Argument Quality

The interaction between self-guide matching and argument quality was qualified by a three way interaction between self-guide matching, argument quality, and need for cognition, $F (1, 192) = 16.58, p < .001$. Results for high and low need for cognition participants were examined separately. Low need for cognition participants demonstrated a main effect of argument quality, $F (1, 95) = 18.02, p < .001$. Low need
for cognition participants’ thoughts were more positive when the message contained
strong arguments ($M = 0.28$) than when the message contained weak arguments ($M = -0.27$). The self-guide matching by argument quality interaction was also significant, $F(1, 95) = 21.26, p < .001$. Low need for cognition participants’ thoughts in the matched conditions were more positive if the message presented strong arguments ($M = 0.55$) than if the message presented weak arguments ($M = -0.60$). Low need for cognition participants’ thoughts in the mismatched conditions did not differ as a result of strong and weak argument quality ($Ms = 0.01$ and $0.06$, respectively; see Table 3.10).

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<tr>
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</table>

$^a, ^b, ^c$ Cell means with different superscripts are significantly different from each other at $p < .05$

Table 3.10: Low Need for Cognition Participants’ Thought Positivity as a Function of Self-Guide Matching and Argument Quality

High need for cognition participants demonstrated a marginal main effect of argument quality, $F(1, 96) = 3.41, p < .07$. High need for cognition participants’ thoughts were more positive when the message contained strong arguments ($M = 0.004$) than when the message contained weak arguments ($M = -0.25$).
Mediation Analyses

Mediated moderation. The similar pattern of results for thought positivity and the global attitude measure suggests that participants' thoughts may have mediated the effects of argument quality on participants' global attitudes (the composite measure incorporating Fast-Break attitude, presentation attitude, and content attitude). Because the effects of argument quality on global attitudes varied systematically as a function of self-guide matching, an examination of the mediation by thought positivity required a test of mediated moderation (see Baron & Kenny, 1986).

First, global attitude was regressed on self-guide matching, argument quality, and the self-guide matching by argument quality interaction. Argument quality significantly predicted global attitudes ($\beta = .46, p < .001$), as did the self-guide matching by argument quality interaction ($\beta = .19, p < .02$). Second, thought positivity was regressed on self-guide matching, argument quality, and the self-guide matching by argument quality interaction. The self-guide matching by argument quality interaction significantly predicted thought positivity ($\beta = .21, p < .03$), suggesting that thought positivity could be a mediator of the argument quality – global attitude relationship. Third, global attitude was regressed on self-guide matching, argument quality, the self-guide matching by argument quality interaction, and centered thought positivity. Argument quality significantly predicted global attitudes ($\beta = .43, p < .001$), as did thought positivity ($\beta = .26, p < .001$). However, the self-guide matching by argument quality interaction was no
longer a significant predictor ($\beta = .14, p = .07$). Goodman's test (1960)$^{21}$ was conducted, and results established that the reduction in the path from the self-guide matching by argument quality interaction to global attitudes was, in fact, significant when thought positivity was included in the regression equation ($Z = 1.98, p < .05$). The results of the above analyses suggest that thought positivity does mediate the relationship between argument quality and global attitudes, but that the mediation differs for self-guide matches and mismatches. Mediation by thought positivity was thus examined separately for self-guide matches and self-guide mismatches.

**Mediational analyses for self-guide matches.** First, global attitude was regressed on argument quality. Argument quality was found to be a significant predictor of global attitudes ($\beta = .68, p < .001$). Second, thought positivity was regressed on argument quality. Argument quality was found to be a significant predictor of thought positivity ($\beta = .38, p < .001$). Third, global attitude was regressed on argument quality and thought positivity. Thought positivity significantly predicted global attitudes ($\beta = .26, p < .002$). In addition, although argument quality was still a significant predictor, the standardized coefficient was reduced ($\beta = .58, p < .001$). Goodman's test (1960) was conducted, and results established that the reduction in the path from argument quality to global attitudes was, in fact, significant when thought positivity was included in the regression equation ($Z = 2.56, p < .05$). The results of the above analyses suggest that thought positivity does

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$^{21}$ Goodman's test (1960) was used because it provides a sample-based estimate of the indirect effect. In contrast, the test published by Baron and Kenny (1986) is a population formula. A third commonly used test, published by Sobel (1982), provides an approximation of the effect. All three tests provide approximately the same results (see http://nw3.nai.net/~dakenny/mediate.htm for more information).
mediate, at least in part, the relationship between argument quality and global attitudes for self-guide matches.

Mediation analyses for self-guide mismatches. First, global attitude was regressed on argument quality, and argument quality was found to be a significant predictor of global attitudes ($\beta = .50, p < .001$). Second, thought positivity was regressed on argument quality. Argument quality was not found to be a significant predictor of thought positivity for self-guide mismatches ($\beta = .08, p = .43$), suggesting that thought positivity does not mediate the relationship between argument quality and global attitudes for self-guide mismatches. Thus, no further regression equations were calculated.

Other Dependent Measures

Current mood state. Higgins (1987, 1989b) noted that the activation of an ideal discrepancy results in dejection related feelings, such as sadness or depression and that the activation of an ought discrepancy results in agitation related feelings, such as anxiety or nervousness. Two items from the Differential Emotions Scale (DES; see Cacioppo, Martske, Petty, & Tassinary, 1988) were used to create an index of current mood state. Participants' ratings of how Tense/Anxious/Nervous they felt after reading the message were subtracted from their ratings of how Sad/Downhearted/Blue they felt. Thus, positive scores on the mood index refer to greater feelings of sadness than anxiety and negative scores on the mood index refer to greater feelings of anxiety than sadness. A score of zero was obtained if the participant indicated that he or she felt equal levels of
sadness and anxiety. The $2 \times 2 \times 2 \times 2$ ANOVA revealed no significant main effects or interactions.\textsuperscript{22}

*Typical breakfast consumption.* Participants’ responses to the items regarding how often they typically ate breakfast were averaged to create a measure of typical breakfast consumption ($\alpha = .94$). The $2 \times 2 \times 2 \times 2$ ANOVA revealed a main effect of self-guide matching, $F(1, 192) = 6.41, p = .01$. Participants who read messages that matched their stronger self-guides indicated that they typically ate breakfast more frequently ($M = 4.30$) than participants who read messages that mismatched their stronger self-guides ($M = 3.52$). In addition, an interaction between self-guide matching and argument quality was obtained, $F(1, 192) = 4.57, p < .03$. Participants in the weak argument, matched message condition indicated that they typically ate breakfast marginally more frequently ($M = 4.75$) than participants in the strong argument, matched message condition ($M = 3.84$) and significantly more frequently than participants in strong or weak argument, mismatched message conditions ($Ms = 3.72$ and 3.33, respectively).\textsuperscript{23}

*Behavioral intentions.* Participants’ responses to the question “Would you try Fast-Break if it were made available?” served as a measure of behavioral intentions. The $2 \times 2 \times 2 \times 2$ ANOVA revealed a main effect of argument quality, $F(1, 192) = 94.63, p < \ldots$

\textsuperscript{22} A regression of current mood state on self-guide matching, argument quality, and the interaction between self-guide matching and argument quality revealed no significant effects for low or high need for cognition participants. This analysis suggests that current mood state is not a mediator of the argument quality effect on global attitudes, thus further analyses examining mediation by current mood state were not conducted.

\textsuperscript{23} A median split of participants’ responses regarding typical breakfast consumption was included as an additional factor in all reported analyses. No significant interactions with typical breakfast consumption were revealed. In addition, all reported analyses were conducted using participants’ typical breakfast consumption as a covariate. Because the results obtained using breakfast consumption as a covariate were essentially identical to the results obtained without using breakfast consumption as a covariate, only the results obtained without the covariate are presented.
Participants who read messages containing strong arguments expressed greater interest in trying Fast-Break ($M = 6.80$) than did participants who read messages containing weak arguments ($M = 3.58$). In addition, the expected interaction between self-guide matching and argument quality was marginally significant, $F(1, 192) = 2.43, p = .12$. When participants read a message with self-guide framing that matched their stronger self-guide, their interest in trying Fast-Break was more strongly affected by argument quality than when they read a message with self-guide framing that mismatched their stronger self-guide. That is, participants' behavioral intentions in the matched conditions were more favorable with regard to trying Fast-Break if the message presented strong arguments ($M = 7.03$) than if the message presented weak arguments ($M = 3.30$). Participants' behavioral intentions in the mismatched conditions were less strongly affected by the strong and weak argument quality manipulations ($M_s = 6.56$ and $3.86$, respectively; see Table 3.11).^24

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^24 A $2 \times 2 \times 2 \times 2 \times 2$ ANOVA on behavioral intentions revealed the argument quality main effect, $F(1, 192) = 82.68, p < .001$, and a marginal self-guide matching and argument quality interaction, $F(1, 192) = 2.47, p < .12$. In addition, the three-way interaction between self-guide matching, argument quality, and gender was marginal, $F(1, 192) = 3.20, p < .08$. Results for men and women were examined separately. Men demonstrated the main effect of argument quality, $F(1, 85) = 56.11, p < .001$. The two way interaction between self-guide matching and argument quality was also significant for men, $F(1, 85) = 6.07, p < .02$. Men's behavioral intentions in the matched conditions were more favorable toward trying Fast-Break if the message presented strong arguments ($M = 7.59$) than if the message presented weak arguments ($M = 2.93$). Men's behavioral intentions in the mismatched conditions were less affected by the strong and weak argument quality manipulations ($M_s = 6.78$ and $4.42$, respectively). Women demonstrated only the main effect of argument quality, $F(1, 106) = 31.76, p < .001$. 
Table 3.11: Behavioral Intentions as a Function of Self-Guide Matching and Argument Quality

Immediate behavioral measure. Participants were given the option of providing their addresses in order to receive free samples of Fast-Break. This option served as an immediate behavioral measure. The 2 X 2 X 2 X 2 ANOVA revealed a main effect of argument quality, $F(1, 192) = 36.50, p < .001$. Participants who read messages containing strong arguments were significantly more likely to request a sample of Fast-Break ($M = 0.67$) than participants who read messages containing weak arguments ($M = 0.26$). In addition, a main effect of self-guide framing was obtained, $F(1, 192) = 3.13, p < .08$. Participants who read a message with ought self-guide framing were significantly more likely to request a sample of Fast-Break ($M = 0.53$) than participants who read a message with ideal self-guide framing ($M = 0.41$).

Effort. Participants' responses to the question "How carefully did you read the information in the Fast-Break presentation?" served as a self-report measure of participants' effort. The 2 X 2 X 2 X 2 ANOVA revealed a main effect of need for cognition, $F(1, 192) = 4.62, p = .03$. High need for cognition participants indicated that
they read the information more carefully ($M = 4.80$) than did low need for cognition participants ($M = 4.32$).

**Self-Discrepancy Matching Analyses**

Messages that matched a participant’s stronger self-discrepancy in terms of self-guide framing (i.e., ideal self-guide framing when ideal self-discrepancy was stronger and ought self-guide framing when ought self-discrepancy was stronger) were classified as self-discrepancy matches, and messages that mismatched a participant’s stronger self-discrepancy in terms of self-guide framing (i.e., ideal self-guide framing when ought self-discrepancy was stronger and ought self-guide framing when ideal self-discrepancy was stronger) were classified as self-discrepancy mismatches.

The result was a 2 (Self-Discrepancy Matching: match or mismatch) X 2 (Argument Quality: strong or weak) X 2 (Need for Cognition: high or low) X 2 (Self-Guide Framing: ideal or ought) between-participants design. Dependent measures were submitted to a 2 X 2 X 2 X 2 analysis of variance (ANOVA). Because analyses including self-guide framing as a variable did not produce any significant interactions with self-guide framing, all data were collapsed across self-guide framing. Thus, the analyses presented are based on 2 X 2 X 2 ANOVAs. Comparisons between means were calculated using the Newman-Keuls test.

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25 The following analyses examine the effects of a match between a participant’s stronger self-discrepancy and the self-guide framing of a persuasive message. Because the concern is with stronger self-discrepancies, the data from 48 participants who had equally strong ideal and ought self-discrepancies were excluded from these analyses. Thus, the following analyses were conducted using the data from only 145 participants.

26 Analyses including gender as an additional factor were also conducted and significant findings will be recorded in the footnotes.
Primary Dependent Measures

Fast-Break attitude. The 2 X 2 X 2 ANOVA revealed a main effect of argument quality, $F(1, 144) = 58.34, p < .001$. Messages containing strong arguments led to more favorable attitudes toward Fast-Break ($M = 6.54$) than messages containing weak arguments ($M = 4.76$). No other significant main effects or interactions were obtained.\(^{27}\)

Presentation attitude. The 2 X 2 X 2 ANOVA revealed a main effect of self-discrepancy matching, $F(1, 144) = 5.77, p < .02$. Self-discrepancy matches led to more favorable attitudes toward the presentation ($M = 5.91$) than self-discrepancy mismatches ($M = 5.30$). A main effect of argument quality was also obtained, $F(1, 144) = 14.14, p < .001$. Messages containing strong arguments led to more favorable attitudes toward the presentation ($M = 6.08$) than messages containing weak arguments ($M = 5.13$). In addition, the interaction between self-discrepancy matching and argument quality was marginally significant, $F(1, 144) = 2.54, p < .12$. When participants read a message with self-guide framing that mismatched their stronger self-discrepancy, their attitudes toward the presentation were affected by argument quality; however, when participants read a

\(^{27}\) A 2 X 2 X 2 X 2 ANOVA (including gender) on Fast-Break attitudes revealed the argument quality main effect, $F(1, 144) = 60.31, p < .001$, and a three way interaction between self-discrepancy matching, need for cognition, and gender, $F(1, 144) = 8.94, p = .003$. This interaction appears to be driven by the low need for cognition, mismatched cells. Low need for cognition women who read mismatched messages had the least favorable attitudes ($M = 5.05$), but low need for cognition men who read mismatched messages had the most favorable attitudes ($M = 6.21$). Attitudes in all other cells fell between these two points. In addition, a three-way interaction between self-discrepancy matching, argument quality, and gender was obtained, $F(1, 144) = 3.91, p = .05$. Results for men and women were examined separately. Men demonstrated only the main effect of argument quality, $F(1, 65) = 23.13, p < .001$. Women demonstrated the main effect of argument quality, $F(1, 78) = 38.56, p < .001$, as well as a marginal two way interaction between self-discrepancy matching and argument quality, $F(1, 78) = 3.34, p = .07$. Women's attitudes in the mismatched conditions were more favorable toward Fast-Break if the message presented strong arguments ($M = 6.77$) than if the message presented weak arguments ($M = 4.23$). Women's attitudes in the matched conditions were less strongly affected by strong and weak argument quality manipulations ($Ms = 6.39$ and $5.00$, respectively).
message with self-guide framing that matched their stronger self-discrepancy their attitudes toward the presentation were not affected by argument quality. That is, participants' attitudes in the mismatched conditions were more favorable toward the presentation if the message presented strong arguments ($M = 5.98$) than if the message presented weak arguments ($M = 4.63$). Participants' attitudes in the matched conditions did not differ as a result of strong and weak argument quality ($Ms = 6.18$ and 5.63, respectively; see Table 3.12).

<table>
<thead>
<tr>
<th>Argument Quality</th>
<th>Self-Discrepancy Matching</th>
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<tbody>
<tr>
<td></td>
<td>Match</td>
</tr>
<tr>
<td>Strong</td>
<td>6.18b</td>
</tr>
<tr>
<td>Weak</td>
<td>5.63ab</td>
</tr>
</tbody>
</table>

^a, b^ Cell means with different superscripts are significantly different from each other at $p < .05$

Table 3.12: Presentation Attitude as a Function of Self-Discrepancy Matching and Argument Quality

*Content attitude.* The 2 X 2 X 2 ANOVA revealed a main effect of argument quality, $F (1, 144) = 83.79, p < .001$. Messages containing strong arguments led to more favorable attitudes toward the content of the presentation ($M = 7.08$) than messages containing weak arguments ($M = 4.73$). In addition, the interaction between self-discrepancy matching and argument quality was marginally significant, $F (1, 144) = 3.83, p = .05$. When participants read a message with self-guide framing that mismatched their stronger self-discrepancy, their attitudes toward the content of the presentation were more
strongly affected by argument quality than when they read a message with self-guide framing that matched their stronger self-discrepancy. That is, participants’ attitudes in the mismatched conditions were more favorable toward the content of the presentation if the message presented strong arguments ($M = 7.22$) than if the message presented weak arguments ($M = 4.37$). Participants’ attitudes in the matched conditions were less strongly affected by the strong and weak argument quality manipulations ($Ms = 6.93$ and 5.09, respectively; see Table 3.13).

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<tr>
<th>Argument Quality</th>
<th>Self-Discrepancy Matching</th>
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<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td>Strong</td>
<td>6.93$^b$</td>
</tr>
<tr>
<td>Weak</td>
<td>5.09$^a$</td>
</tr>
</tbody>
</table>

$^a, ^b$ Cell means with different superscripts are significantly different from each other at $p < .05$

Table 3.13: Content Attitude as a Function of Self-Discrepancy Matching and Argument Quality

*Global attitude measure.* The 2 X 2 X 2 ANOVA revealed a main effect of argument quality, $F (1, 144) = 66.63, p < .001$. Messages containing strong arguments led to more favorable evaluations toward Fast-Break ($M = 1.32$) than messages containing weak arguments ($M = -1.57$). In addition, the interaction between self-discrepancy matching and argument quality was marginally significant, $F (1, 144) = 2.78, p < .10$. When participants read a message with self-guide framing that mismatched their stronger self-discrepancy, their attitudes were more strongly affected by argument quality
than when they read a message with self-guide framing that matched their stronger self-discrepancy. That is, participants' attitudes in the mismatched conditions were more favorable if the message presented strong arguments ($M = 1.37$) than if the message presented weak arguments ($M = -2.10$). Participants' attitudes in the matched conditions were less strongly affected by the strong and weak argument quality manipulations ($Ms = 1.26$ and $-1.04$, respectively; see Table 3.14).

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<tr>
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<th>Self-Discrepancy Matching</th>
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<tbody>
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<td>Match</td>
</tr>
<tr>
<td>Strong</td>
<td>1.26$c$</td>
</tr>
<tr>
<td>Weak</td>
<td>-1.04$b$</td>
</tr>
</tbody>
</table>

$a, b, c$ Cell means with different superscripts are significantly different from each other at $p < .05$

Table 3.14: Global Attitude as a Function of Self-Discrepancy Matching and Argument Quality

Cognitive responses. The $2 \times 2 \times 2$ ANOVA revealed a main effect of argument quality, $F (1, 144) = 4.40, p < .04$. Participants who read messages containing strong arguments listed thoughts that were more positive with regard to Fast-Break ($M = 0.08$) than participants who read messages containing weak arguments ($M = -0.16$). A main effect of need for cognition was also obtained, $F (1, 144) = 5.32, p < .02$. Low need for cognition participants listed thoughts that were more positive with regard to Fast-Break ($M = 0.09$) than high need for cognition participants ($M = -0.18$). In addition, the three way interaction between self-discrepancy matching, argument quality, and need for
cognition was significant, $F(1, 144) = 6.45, p = .01$. Results for high and low need for cognition participants were examined separately. Low need for cognition participants demonstrated no significant main effects or interactions. However, for high need for cognition participants, the interaction between self-discrepancy matching and argument quality was significant, $F(1, 71) = 4.31, p = .04$. High need for cognition participants’ thoughts in the mismatched conditions were more positive if the message presented strong arguments ($M = 0.09$) than if the message presented weak arguments ($M = -0.46$). High need for cognition participants’ thoughts in the matched conditions did not differ as a result of strong and weak argument quality ($Ms = -0.23$ and $-0.10$, respectively; see Table 3.15).

<table>
<thead>
<tr>
<th>Argument Quality</th>
<th>Self-Discrepancy Matching</th>
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<tbody>
<tr>
<td></td>
<td>Match</td>
</tr>
<tr>
<td>Strong</td>
<td>-0.23&lt;sup&gt;a,b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Weak</td>
<td>-0.10&lt;sup&gt;a,b&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a, b</sup> Cell means with different superscripts are significantly different from each other at $p < .05$

Table 3.15: High Need for Cognition Participants’ Thought Positivity as a Function of Self-Discrepancy Matching and Argument Quality
**Mediation Analyses**

Because the global attitude and thought positivity patterns were similar for high need for cognition participants but different for low need for cognition participants, separate mediational analyses were conducted.

*Low need for cognition.* A regression of thought positivity on self-discrepancy matching, argument quality, and the interaction between self-discrepancy matching and argument quality revealed no significant effects. This analysis suggests that thought positivity is not the mediator of the argument quality effect on global attitudes for low need for cognition participants. Further analyses examining mediation by thought positivity were not conducted for low need for cognition participants.

*High need for cognition: Mediated moderation.* The similar pattern of results for thought positivity and the global attitude measure for high need for cognition participants suggests that high need for cognition participants’ thoughts may have mediated the effects of argument quality on participants' global attitudes. Because the effects of argument quality on global attitudes varied systematically as a function of self-discrepancy matching, an examination of the mediation by thought positivity required a test of mediated moderation (see Baron & Kenny, 1986).

First, global attitude was regressed on self-discrepancy matching, argument quality, and the self-discrepancy matching by argument quality interaction. Argument quality significantly predicted global attitudes ($\beta = .67, p < .001$); however, the self-discrepancy matching by argument quality interaction was not a significant predictor ($\beta = -.18, p < .25$). Second, thought positivity was regressed on self-discrepancy matching, argument quality, and the self-discrepancy matching by argument quality interaction. Argument
quality significantly predicted thought positivity ($\beta = .40, p < .03$), as did the self-discrepancy matching by argument quality interaction ($\beta = -.37, p = .04$), suggesting that thought positivity could be a mediator of the argument quality – global attitude relationship. Third, global attitude was regressed on self-discrepancy matching, argument quality, the self-discrepancy matching by argument quality interaction, and centered thought positivity. Argument quality significantly predicted global attitudes ($\beta = .52, p < .001$), as did thought positivity ($\beta = .38, p < .001$). In addition, the self-discrepancy matching by argument quality interaction was not a significant predictor of global attitudes ($\beta = -.04, p = .78$). Goodman’s test (1960) was conducted, and results established that the reduction in the path from the self-discrepancy matching by argument quality interaction to global attitudes was marginally significant when thought positivity was included in the regression equation ($Z = -1.89, p < .06$). The results of the above analyses suggest that thought positivity does mediate the relationship between argument quality and global attitudes, but that the mediation may differ for self-discrepancy matches and mismatches. Mediation by thought positivity for high need for cognition participants was thus examined separately for self-discrepancy matches and self-discrepancy mismatches.

**Mediational analyses for high need for cognition self-discrepancy matches.** First, global attitude was regressed on argument quality, and argument quality was found to be a significant predictor of global attitudes ($\beta = .49, p = .001$). Second, thought positivity was regressed on argument quality. Argument quality was not found to be a significant predictor of thought positivity for high need for cognition self-discrepancy matches ($\beta = -.09, p = .58$), suggesting that thought positivity does not mediate the relationship between
argument quality and global attitudes for high need for cognition self-discrepancy matches. Thus, no further regression equations were calculated.

**Mediational analyses for high need for cognition self-discrepancy mismatches.**

First, global attitude was regressed on argument quality. Argument quality was found to be a significant predictor of global attitudes ($\beta = .58, p = .001$). Second, thought positivity was regressed on argument quality. Argument quality was found to be a significant predictor of thought positivity ($\beta = .40, p < .03$). Third, global attitude was regressed on argument quality and thought positivity. Thought positivity significantly predicted global attitudes ($\beta = .51, p = .001$). In addition, although argument quality was still a significant predictor, the standardized coefficient was reduced ($\beta = .37, p = .01$). Goodman’s test (1960) was conducted, and results established that the reduction in the path from argument quality to global attitudes was, in fact, significant when thought positivity was included in the regression equation ($Z = 2.04, p < .05$). The results of the above analyses suggest that thought positivity does mediate, at least in part, the relationship between argument quality and global attitudes for high need for cognition self-discrepancy mismatches.

**Other Dependent Measures**

**Current mood state.** The 2 X 2 X 2 ANOVA on the current mood state measure revealed no significant main effects or interactions.\(^{28}\)

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\(^{28}\) A regression of current mood state on self-discrepancy matching, argument quality, and the interaction between self-discrepancy matching and argument quality revealed no significant effects for low or high need for cognition participants. This analysis suggests that current mood state could not be the mediator of the argument quality effect on global attitudes, thus further analyses examining mediation by current mood state were not conducted.
**Typical breakfast consumption.** The 2 X 2 X 2 ANOVA revealed a main effect of self-discrepancy matching, $F (1, 144) = 4.32, p = .04$. Participants who read messages that matched their stronger self-discrepancies indicated that they typically ate breakfast more frequently ($M = 4.23$) than participants who read messages that mismatched their stronger self-discrepancies ($M = 3.50$). No other significant main effects or interactions were obtained.\(^{29}\)

**Behavioral intentions.** The 2 X 2 X 2 ANOVA revealed a main effect of argument quality, $F (1, 144) = 53.22, p < .001$. Participants who read messages containing strong arguments expressed greater interest in trying Fast-Break ($M = 6.53$) than did participants who read messages containing weak arguments ($M = 3.67$). No other significant main effects or interactions were obtained.

**Immediate behavioral measure.** The 2 X 2 X 2 ANOVA on the immediate behavioral measure revealed a main effect of argument quality, $F (1, 144) = 16.75, p < .001$. Participants who read messages containing strong arguments were significantly more likely to request a sample of Fast-Break ($M = 0.63$) than participants who read messages containing weak arguments ($M = 0.30$). No other significant main effects or interactions were obtained.

**Effort.** The 2 X 2 X 2 ANOVA on the self-report measure of effort revealed a main effect of need for cognition, $F (1, 144) = 4.04, p < .05$. High need for cognition

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\(^{29}\) A median split of participants' responses regarding typical breakfast consumption was again included as an additional factor in all reported analyses. No significant interactions with typical breakfast consumption were revealed. In addition, all reported analyses were conducted using participants' typical breakfast consumption as a covariate. Because the results obtained using breakfast consumption as a covariate were essentially identical to the results obtained without using breakfast consumption as a covariate, only the results obtained without the covariate are presented.
participants indicated that they read the information more carefully ($M = 4.72$) than did low need for cognition participants ($M = 4.22$).

Discussion and Conclusions

Self-Guide Matching

The hypothesis that message processing would be enhanced when an individual’s stronger self-guide matched the ideal or ought self-guide framing of the message was consistently supported. Participants who read messages that matched their stronger self-guides in terms of self-guide framing engaged in greater message processing, as evidenced by the larger discrepancy between Fast-Break attitudes, presentation attitudes, content attitudes, and thought positivity in strong and weak argument quality conditions. Matched messages that contained strong arguments led to more positive attitudes and thoughts than matched messages that contained weak arguments. Mismatched messages led to attitudes and thoughts that were not as dependent upon argument quality. Furthermore, this effect was more apparent for low need for cognition participants than for high need for cognition participants, as expected.

Although the greater processing of matched messages was consistent across the primary dependent measures, typically participants also processed mismatched messages. However, mediational analyses suggested that the mechanism behind the argument quality effect for matched messages was different from the mechanism behind the argument quality effect for mismatched messages. Thought positivity mediated the argument quality effect on attitudes for matched messages but not for mismatched messages. This differential mediation by thought positivity suggests a greater depth of processing for matched messages than for mismatched messages.
However, mismatched messages did still lead to an argument quality effect on attitudes. Although thought positivity does not appear to mediate the effect for mismatched messages, it is unclear what the mediator might be. It is possible that the argument quality effect on attitudes is mediated by a different variable for self-guide mismatches than for self-guide matches — one that was not measured in the current study. The attitudes that are formed in the self-guide match and self-guide mismatch conditions may differ in terms of whether they are the result of on-line or memory-based attitude formation processes (Mackie & Asuncion, 1990, see also Hastie & Park, 1986).

Attitudes formed in the self-guide match conditions appear to have been based on the thoughts that participants had while reading the message. These attitudes are the result of an on-line attitude formation process, where individuals evaluate the message as the information is received. Attitudes formed in the self-guide mismatch conditions do not appear to have been based on the thoughts that participants had while reading the message. Instead, participants may have formed an attitude only when they were asked to do so, based on the information that they could recall from the message. These attitudes would be the result of a memory-based attitude formation process, where individuals evaluate the message based on information that they can retrieve from memory. On-line attitude formation is exhibited in the correspondence between thought positivity and attitude, whereas memory-based attitude formation is exhibited in the correspondence between recall and attitude. Because recall of the message content was not measured in Experiment 2, firm conclusions about the way that attitudes were formed in the self-guide mismatch condition cannot be drawn. It is possible that the argument quality effect on attitudes for self-guide mismatches was mediated by recall. Future
research examining self-guide matching effects on thoughtful processing should include such recall measures.

Tykocinski, Higgins, and Chaiken (1994) postulated that the mechanism behind the mismatch persuasion effect that they observed was increased emotional distress. The lack of effects on current mood state in the current study suggest that mood is not, in fact, a mediator of the self-guide match processing effect. Instead, matches between stronger self-guide and self-guide framing appear to increase participants' motivation to think carefully and deeply about the message. Self-guide matches may increase the perceived self-relevance of the message without increasing emotional distress; thereby motivating increased thoughtful processing. The marginal self-guide matching effect on self-reported effort also supports this notion. Participants who read self-guide match messages indicated that they read the message more carefully than did participants who read self-guide mismatch messages.

Self-Discrepancy Matching

The effects of matches versus mismatches between participants' stronger self-discrepancies and the self-guide framing of persuasive messages were also explored. Self-discrepancy matching does appear to have different effects on message processing than self-guide matching. Participants' attitudes and thoughts were primarily dependent upon argument quality; however, participants' presentation attitudes and content attitudes were slightly suggestive of a greater processing effect for self-discrepancy mismatches. Mismatched messages that contained strong arguments led to more positive attitudes than mismatched messages that contained weak arguments. Matched messages led to attitudes that were slightly less dependent upon argument quality.
Although the self-discrepancy matching effect on participants’ attitudes was not moderated by need for cognition as might have been expected, need for cognition did moderate the self-discrepancy matching effect on thought positivity. High need for cognition participants’ thought positivity was dependent upon argument quality for mismatched messages but not for matched messages. Low need for cognition participants’ thought positivity was not affected by self-discrepancy matching, argument quality, or the interaction of self-discrepancy matching and argument quality. These findings were unexpected. Mediation analyses suggested that for high need for cognition participants, thought positivity mediated the argument quality effect for mismatched messages but not for matched messages. This suggests a greater depth of processing by high need for cognition participants for mismatched messages than for matched messages. However, Experiment 2 does not clearly suggest a mediator for matched messages. In addition, it is not clear what mediates the self-discrepancy matching effect for low need for cognition participants. It is possible that self-discrepancy matches led to increased emotional distress in the form of sadness or anxiety or to decreased motivation to think carefully; however, the current data do not clearly suggest a mechanism for the slightly decreased processing of self-discrepancy matches by high and low need for cognition participants.

A New Look at Self-Discrepancy Matching Research

A notable finding of the current study is that different results were obtained when the self-guide framing of a persuasive message matched an individual’s stronger self-guide than when the self-guide framing of a persuasive message matched an individual’s
stronger self-discrepancy. Self-guide matching increased thoughtful processing, but self-discrepancy matching appeared to decrease thoughtful processing.

Although the current study examined the effects of both self-guide matching and self-discrepancy matching on message processing, past work by Tykocinski, Higgins, and Chaiken (1994) investigated only the effects of self-discrepancy matching on persuasion. Participants who had either stronger ideal self-discrepancies or stronger ought self-discrepancies read messages that were framed in terms of either positive or negative outcomes. Matches between participants’ stronger self-discrepancies and the outcome framing of the persuasive message led to decreased persuasion compared to mismatches. Participants who read self-discrepancy matched messages reported less favorable attitudes than participants who read self-discrepancy mismatched messages. However, Tykocinski et al. (1994) presented a message that contained only strong arguments. Although they did not pilot test the quality of the arguments in the message, they concluded that the message contained strong arguments because “the message we used contained medically based, clearly stated arguments and was very effective overall in motivating subjects to change their eating habits” (p. 113). Regrettably, because Tykocinski et al. did not use an argument quality manipulation, their data tell only half of the story.

The inclusion of a weak argument message in the current study allows for the observation that the persuasion effect found by Tykocinski et al. may not simply have been a persuasion effect, but rather half of a processing effect. In the current research, the pattern of means in the strong argument conditions mimics the Tykocinski et al. findings, with the self-discrepancy matched message leading to less favorable attitudes.
toward Fast-Break (for women) and less favorable attitudes to both the presentation and
the content of the presentation (for all participants) than the self-discrepancy mismatched
message. However, an examination of the complete pattern of means, including both
strong and weak argument conditions, suggests that the effect is not actually one of
decreased persuasion for self-discrepancy matched messages but decreased processing of
self-discrepancy matched messages.

As noted above, the current study does not clearly suggest mediators of the
decreased processing effect for self-discrepancy matches. However, the data do suggest
that something about a self-discrepancy match leads to the avoidance of thoughtful
processing. Although negative moods have sometimes been found to increase thoughtful
processing (see Schwartz & Clore, 1996), it is possible that mild emotional distress due to
the activation of one’s self-discrepancy could lead to decreased motivation to engage in
thoughtful processing if increased message elaboration is expected to lead to greater
emotional distress (Wegener & Petty, 1996). However, current mood state was not found
to be a mediator of the argument quality effect on attitudes in Experiment 2. It is possible
that the current mood state measure was not sensitive enough to measure slight
differences in affect. Alternatively, emotional distress may not mediate the relationship.
If people with self-discrepancies expect that the thoughtful processing of a self-
discrepancy matched message would make them feel bad due to the activation of their
self-discrepancies, that expectation may deter them from thinking carefully about the
message. If extremely thoughtful processing has been successfully avoided, then the
negative affect, or emotional distress, that would have resulted from extremely thoughtful
processing has also been successfully avoided. Research investigating people’s naïve
theories about the affect generated as a result of the thoughtful processing of self-discrepancy matched messages would help to sort out this issue.

An additional possibility is that if a self-discrepancy match activates an individual's self-discrepancy, bringing to mind the ways in which he or she falls short of his or her ideal or ought self-guide, then the individual may begin to engage in ruminative thought regarding discrepancy reduction. These recurrent thoughts regarding ways to reduce one's discrepancy may be distracting and may thus interfere with message processing. This interference may then lead to the decreased processing of messages that are framed in ways that match one's stronger self-discrepancy (see Petty, Jarvis, & Evans, 1996 for an elaboration likelihood perspective on recurrent thought). Future research examining mediators of the self-discrepancy matching effect should also include measures or manipulations of recurrent thought and distraction.

Other Issues Related to Self-Guide Matching and Self-Discrepancy Matching

The gender differences in the thoughtful processing of self-guide matched and self-discrepancy matched messages were an interesting discovery. Although no gender differences were obtained in Experiment 1, the data from Experiment 2 suggest that the self-guide matching effects were the strongest for men and the self-discrepancy matching effects were the strongest for women. If the strongest effects were consistently found for men, then one might surmise that the gender effects were simply an artifact of the message topic, breakfast consumption. If women are more interested in the general topic of nutrition than men, then women may be more likely to thoughtfully process a message.

For additional background on ruminative, or recurrent, thought, see Wyer, 1996.
about a new breakfast product than men, regardless of the self-guide framing of the
message. However, the fact that self-guide matching and self-discrepancy matching had
different effects on men and women suggests that the gender effects may be due to more
than just the topic of the message.

It is possible that women are more affected by self-discrepancies and men are more
affected by self-guides. However, Higgins and his colleagues have not reported gender
differences in self-guide strength or the magnitude of self-discrepancies, and recent mass
surveys using Higgins’ paper and pencil “Selves Questionnaire” to assess self-
discrepancies did not reveal any gender differences in the magnitude of self-discrepancies
(Dibble, L. E., 1998; Evans, L. M, 1997). An examination of the Experiment 2 data
suggest, though, that gender differences in self-guide strength and the magnitude of self-
discrepancies may have been present. Although ideal self-discrepancy scores did not
vary by gender, women’s ought self-discrepancy scores were marginally higher ($M =
3.36$) than men’s ($M = 2.80$), $F (1, 192) = 2.54, p = .11$. In addition, men’s ideal and
ought self-guides did appear to be slightly stronger than women’s. Men’s ideal response
times were marginally faster ($M = -76.10$) than women’s ($M = -76.93$), $F (1, 192) = 2.50,
p < .12$, and men’s ought response times were marginally faster ($M = -76.21$) than
women’s ($M = -77.00$), $F (1, 192) = 2.80, p < .10$. If the men and women in Experiment
2 were more strongly affected by self-guides and self-discrepancies, respectively, the
gender differences observed in thoughtful processing of self-guide matches and self-
discrepancy matches could result. Future research is needed to determine whether such
gender differences are reliable and meaningful.
A second interesting phenomenon was observed in the self-guide matching and self-discrepancy matching main effects on participants' recall of their own typical breakfast consumption. Participants in the self-guide match and self-discrepancy match conditions reported that they ate breakfast significantly more often than did participants in the self-guide mismatch and self-discrepancy mismatch conditions. At first glance, this might appear to be a failure of random assignment. However, because stronger self-guide and stronger self-discrepancy were not correlated ($r = -0.08, p = .24$), the self-guide match and self-discrepancy match conditions did not contain the same participants. Thus, it appears that either type of matched message, a self-guide match or a self-discrepancy match, may lead to inflated recall of one's own breakfast consumption.

This phenomenon may be similar to the widespread finding by Ross and colleagues that individuals tend to reconstruct their memories for past behavior in line with their current attitudes (Conway & Ross, 1984; Ross, 1989; Ross & Conway, 1986; Ross, McFarland, & Fletcher, 1981). The self-guide matching and self-discrepancy matching main effects on breakfast consumption do not themselves suggest that matched messages led to greater processing of the arguments in the message. Rather, the data suggest that matched messages promoted general thought about the topic of the message. This increased thought about the benefits of eating breakfast may then have inflated participants' recall of their own typical breakfast consumption. Increased thought about the benefits of eating breakfast may have been rewarding to participants in the self-guide match condition, as positive self-guide relevant thoughts may have been prevalent. In this way, self-guide matches may have encouraged more thoughtful processing of the message. However, increased thought about the benefits of eating breakfast may have
been punishing to participants in the self-discrepancy match condition, as negative self-
discrepancy relevant thoughts may have been prevalent. In this way, self-discrepancy
matches may have encouraged the avoidance of more thoughtful processing.

A final issue concerns the strength of the attitudes that result from self-guide
matching and self-discrepancy matching. If self-guide matches and mismatches lead to
different levels of processing, such that self-guide matches lead to more careful
processing and self-guide mismatches lead to less careful processing, then self-guide
matches and mismatches should lead to different levels of attitude strength. Likewise, if
self-discrepancy matches and mismatches lead to different levels of processing, such that
self-discrepancy matches lead to less careful processing and self-discrepancy mismatches
lead to more careful processing, then self-discrepancy matches and mismatches should
also lead to different levels of attitude strength. The more effortful processing associated
with the central route to persuasion typically leads to stronger attitudes than the less
effortful processing associated with the peripheral route to persuasion (Petty, Haugtvedt,
& Smith, 1995). Strong, central route attitudes are more persistent across time, more
resistant to counterpersuasion, and more predictive of behavior than weak, peripheral
route attitudes. If self-guide matches increase processing compared to self-guide
mismatches, then self-guide matches should lead to stronger attitudes than self-guide
mismatches. If self-discrepancy matches decrease processing compared to self-
discrepancy mismatches, then self-discrepancy matches should lead to weaker attitudes
than self-discrepancy mismatches. These possibilities should be investigated in future
research by examining attitude persistence and resistance, as well as attitudinal effects on
behavior.
The Multiple Roles of Self-Guide Framing

As Petty and Wegener (1998) found with levels of self-monitoring and image-oriented versus quality-oriented advertisements, matching individuals’ stronger self-guides and the ideal or ought self-guide framing of a persuasive message appears to increase thoughtful processing. However, matching individuals’ stronger self-discrepancies and the ideal or ought self-guide framing of a persuasive message appears to decrease thoughtful processing. When self-guide framing is considered within the framework of the elaboration likelihood model of persuasion (ELM; Petty & Cacioppo, 1981, 1986), it becomes clear that self-guide framing could play any of several different roles in a persuasion situation.

The ELM suggests that any one variable, such as self-guide framing, can take on multiple roles in persuasion situations depending upon the level of elaboration likelihood. When elaboration likelihood is low, self-guide framing may be used as a peripheral cue. Individuals may have more favorable reactions to messages that are framed in ways that match their stronger self-guides and thus be more persuaded due to the simple cue that was provided by the framing. On the other hand, individuals may have more unfavorable reactions to messages that are framed in ways that match their stronger self-discrepancies and thus be less persuaded due to the simple cue that was provided by the framing.

When elaboration likelihood is high, self-guide framing may bias the direction of the thoughts that individuals have in response to the message. Individuals may engage in more elaboration of messages that are framed in ways that match their stronger self-guides; however, their thoughts may be biased in a favorable direction due to their favorable reactions to the framing. On the other hand, if elaboration likelihood is high
and individuals encounter messages that are framed in ways that match their stronger self-discrepancies, their thoughts may be biased in an unfavorable direction due to their unfavorable reactions to the framing.

When elaboration likelihood is moderate, self-guide framing may increase the amount of thought that individuals engage in when the framing matches individuals' stronger self-guides but decrease the amount of thought that individuals engage in when the framing matches individuals' stronger self-discrepancies, as was shown in this dissertation. Individuals may think more carefully and more objectively about messages that are framed in ways that match their stronger self-guides because the matched framing is more self-relevant than the mismatched framing. This increased elaboration under moderate levels of elaboration likelihood could be due to either increased motivation to think carefully or increased ability to think carefully. Motivation may be increased because individuals may find a message that is framed to match their stronger self-guides more interesting and involving due to the message's self-relevance. Ability may be increased because individuals' strong self-guides serve as available and accessible ways of organizing information, and a message that is framed to match their strong self-guides may thus be easier for individuals to understand.

Matches between self-guide framing and individuals' stronger self-discrepancies are also more likely to be self-relevant than mismatches; however, in a self-discrepancy match, the self-relevant information may serve to activate the unpleasant awareness of a gap between an individual's actual self and his or her ideal or ought self. This unpleasant awareness may lead to motivation to avoid thinking carefully about the message, even though the message may suggest a way to reduce the gap. Further examination of the
mechanisms behind individuals' decreased motivation to process self-discrepancy matched messages will lead to greater understanding of the effect of self-discrepancy matching under conditions of moderate elaboration likelihood.

Conclusions

This dissertation investigated the effects of matches between self-guide strength, self-discrepancies, and a new type of message variable, self-guide framing. Self-guide matches led to enhanced processing of persuasive messages; however, self-discrepancy matches led to decreased processing of persuasive messages. Although self-guide framing was shown to affect thoughtful processing in the current research, the potential other roles of self-guide framing in persuasion situations were also addressed. An examination of the multiple roles that self-guide framing can play in persuasion situations is necessary for a complete understanding of how self-guide matching and self-discrepancy matching affect persuasion and message processing. Further research on self-guide framing will expand our understanding of the manner in which self-guide strength and self-discrepancies affect persuasion and message processing and of the effects that self-guide strength and self-discrepancies have on factors such as attitude strength. Extensive investigation of additional factors of the self-concept that might affect processing remain necessary in order to reach a full understanding of how an individual’s self-concept affects the way that he or she interprets, evaluates, and processes persuasive messages.
References


98


Today you will be participating in two experiments. The first study is being conducted by the psychology department. Researchers there are interested in how people’s standards change over time. The second study is being conducted in conjunction with the journalism department. In the second study, We’re interested in getting feedback from students regarding the layout and design of a publicity flyer for a new book.

First, I’ll pass out a page containing the first study. Please read the instructions very carefully and spend about five minutes writing your answer to the question that is asked. After you are finished writing, please bring that page up to me and I will give you the packet for the second experiment. Again, please read the instructions very carefully and go through the packet one page at a time (from front to back) rather than flipping around.

After you are done with the second experiment, bring the packet up. I’ll give you your card back and you’ll be free to go.

Does anyone have any questions? Does anyone need a pen or a pencil?

Thanks in advance for participating!
INSTRUCTIONS:

We are interested in how people’s standards change over time. Please briefly describe your current hopes and goals. Next, discuss how they differ from the hopes and goals that you had while you were growing up. Please spend approximately five minutes writing this essay in the space below. You may use the back of the page if necessary.
APPENDIX C

EXPERIMENT 1 OUGHT SELF-GUIDE ACTIVATION ESSAY QUESTION
INSTRUCTIONS:

We are interested in how people’s standards change over time. Please briefly describe your current sense of duty and obligation. Next, discuss how this differs from the sense of duty and obligation that you had while you were growing up. Please spend approximately five minutes writing this essay in the space below. You may use the back of the page if necessary.
APPENDIX D

EXPERIMENT 1 IDEAL SELF-GUIDE FRAMING INSTRUCTIONS
INSTRUCTIONS:

With the help of the Psychology Department, the Journalism Department is interested in getting feedback from students regarding the layout, design, and content of a publicity flyer for a new book.

Please look over the flyer on the next page and form an impression of the layout, design, and content of the flyer. After looking over the flyer, please answer the questions on the pages that follow. If you have any questions, please ask the experimenter.

The publicity flyer that you will be reviewing is for a new book entitled Recycling: It's Our Dream to Preserve Our World's Resources. This book "addresses our optimal dreams, desires, aims, and intentions - for ourselves and for the world we live in."
APPENDIX E

EXPERIMENT 1 OUGHT SELF-GUIDE FRAMING INSTRUCTIONS
INSTRUCTIONS:

With the help of the Psychology Department, the Journalism Department is interested in getting feedback from students regarding the layout, design, and content of a publicity flyer for a new book.

Please look over the flyer on the next page and form an impression of the layout, design, and content of the flyer. After looking over the flyer, please answer the questions on the pages that follow. If you have any questions, please ask the experimenter.

The publicity flyer that you will be reviewing is for a new book entitled Recycling: It’s Our Responsibility to Preserve Our World’s Resources. This book “addresses our responsibilities; those things we ought to do and should do - for ourselves and for the world we live in.”
APPENDIX F

EXPERIMENT 1 OUGHT SELF-GUIDE FRAMING,
NEGATIVE OUTCOME FRAMING,
STRONG ARGUMENT PUBLICITY FLYER
High praise for Joseph S. Dixon's *Recycling: It's Our Responsibility to Preserve Our World's Resources*...

"Like few books in this decade have ever done, Dr. Dixon's masterpiece makes individuals feel that they should get up and do something about global environmental problems. Even the most "intractable" environmental problems march toward a solution when everyone exercises his or her responsibility to get involved. *Recycling: It's Our Responsibility to Preserve Our World's Resources* presents a picture of responsibility that we should not ignore. Dixon's book addresses our responsibilities; those things we ought to do and should do – for ourselves and for the world we live in."

---

**JOHN D. FULWEATHER**

Executive Director of the National Resources Defense Council

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**An Excerpt from the Acclaimed Book:**

"There are many ways that you ought to help prevent the decline of our natural environment. Perhaps the simplest, least expensive, most responsible thing you should do is to recycle. It is very easy to do, and the costs of not doing so are great. First, failing to recycle increases the burden on our nation's landfills, which are already close to capacity in most areas. Second, not recycling will bankrupt over 2,500 U.S. businesses that rely completely on recycled goods. Third, by failing to recycle products such as aluminum cans and newspapers, we increase the need for mining new natural resources, the cost of which adds trillions annually to worldwide expenditures. And for every item we fail to recycle, we increase the amount of air pollution generated by manufacturing industries that must then replace that item – usually at more than twice the cost of recycling it. Finally, if you do not recycle you are sending a negative message to future generations who depend on us to maintain the planet they will inherit. Thus, it is our duty to prevent a poorer world by recycling."
APPENDIX G

EXPERIMENT 1 IDEAL SELF-GUIDE FRAMING,
NEGATIVE OUTCOME FRAMING,
STRONG ARGUMENT PUBLICITY FLYER
JOSEPH S. DIXON

Recycling: It's Our Dream to Preserve Our World's Resources

High praise for Joseph S. Dixon's *Recycling: It's Our Dream to Preserve Our World's Resources*...

"Like few books in this decade have ever done, Dr. Dixon's masterpiece empowers individuals to get up and do something about global environmental problems. Ideally, everyone will get involved and even the most "intractable" environmental problems will march toward a solution. *Recycling: It's Our Dream to Preserve Our World's Resources* presents a picture of hope that we all can aspire to achieve. Dixon's book addresses our optimal dreams, desires, aims, and intentions – for ourselves and for the world we live in."

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An Excerpt from the Acclaimed Book:

“There are many ways that you can help prevent the decline of our natural environment. Perhaps the simplest, least expensive, most optimal thing you can do is to recycle. It is very easy to do, and the costs of not doing so are great. First, failing to recycle increases the burden on our nation's landfills, which are already close to capacity in most areas. Second, not recycling will bankrupt over 2,500 U.S. businesses that rely completely on recycled goods. Third, by failing to recycle products such as aluminum cans and newspapers, we increase the need for mining new natural resources, the cost of which adds trillions annually to worldwide expenditures. And for every item we fail to recycle, we increase the amount of air pollution generated by manufacturing industries that must then replace that item – usually at more than twice the cost of recycling it. Finally, if you do not recycle you are sending a negative message to future generations who hope that we will maintain the planet they will inherit. Thus, it is our goal to prevent a poorer world by recycling."
APPENDIX H

EXPERIMENT 1 OUGHT SELF-GUIDE FRAMING,

POSITIVE OUTCOME FRAMING,

STRONG ARGUMENT PUBLICITY FLYER
JOSEPH S. DIXON

Recycling: It's Our Responsibility to Preserve Our World's Resources

High praise for Joseph S. Dixon's Recycling: It's Our Responsibility to Preserve Our World's Resources...

"Like few books in this decade have ever done, Dr. Dixon's masterpiece makes individuals feel that they should get up and do something about global environmental problems. Even the most "intractable" environmental problems march toward a solution when everyone exercises his or her responsibility to get involved. Recycling: It's Our Responsibility to Preserve Our World's Resources presents a picture of responsibility that we should not ignore. Dixon's book addresses our responsibilities; those things we ought to do and should do – for ourselves and for the world we live in."

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APPENDIX I

EXPERIMENT 1 IDEAL SELF-GUIDE FRAMING,
POSITIVE OUTCOME FRAMING,
STRONG ARGUMENT PUBLICITY FLYER
High praise for Joseph S. Dixon's *Recycling: It's Our Dream to Preserve Our World's Resources*...

"Like few books in this decade have ever done, Dr. Dixon's masterpiece empowers individuals to get up and do something about global environmental problems. Ideally, everyone will get involved and even the most "intractable" environmental problems will march toward a solution. *Recycling: It's Our Dream to Preserve Our World's Resources* presents a picture of hope that we all can aspire to achieve. Dixon's book addresses our optimal dreams, desires, aims, and intentions — for ourselves and for the world we live in."

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APPENDIX J

EXPERIMENT 1 OUGHT SELF-GUIDE FRAMING,
NEGATIVE OUTCOME FRAMING,
WEAK ARGUMENT PUBLICITY FLYER

120
High praise for Joseph S. Dixon's *Recycling: It's Our Responsibility to Preserve Our World's Resources*

"Like few books in this decade have ever done, Dr. Dixon's masterpiece makes individuals feel that they should get up and do something about global environmental problems. Even the most "intractable" environmental problems march toward a solution when everyone exercises his or her responsibility to get involved. *Recycling: It's Our Responsibility to Preserve Our World's Resources* presents a picture of responsibility that we should not ignore. Dixon's book addresses our responsibilities; those things we ought to do and should do – for ourselves and for the world we live in."

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An Excerpt from the Acclaimed Book:

"There are many ways that you ought to help prevent the decline of our natural environment. Perhaps the simplest, least expensive, most responsible thing you should do is to recycle. It is somewhat of a hassle, but the costs of not doing so are great. First, failing to recycle increases the burden on our nation's garbage collectors, who are already overworked as it is. Second, not recycling will bankrupt five different U.S. businesses that rely somewhat on recycled goods. Third, by failing to recycle products such as newspapers and magazines, we increase the need for new advertisements, as the old ones are thrown away. And for every item we fail to recycle, we increase the amount of air pollution generated by garbage trucks that must then haul that item away – usually at about the same cost as recycling it. Finally, if you do not recycle you are sending a negative message to your own self-esteem, as recycling usually makes people feel good about themselves. Thus, it is our duty to prevent a poorer world by recycling."
APPENDIX K

EXPERIMENT 1 IDEAL SELF-GUIDE FRAMING,
NEGATIVE OUTCOME FRAMING,
WEAK ARGUMENT PUBLICITY FLYER
JOSEPH S. DIXON

Recycling: It's Our Dream to Preserve Our World's Resources

High praise for Joseph S. Dixon's Recycling: It's Our Dream to Preserve Our World's Resources...

"Like few books in this decade have ever done, Dr. Dixon's masterpiece empowers individuals to get up and do something about global environmental problems. Ideally, everyone will get involved and even the most "intractable" environmental problems will march toward a solution. Recycling: It's Our Dream to Preserve Our World's Resources presents a picture of hope that we all can aspire to achieve. Dixon's book addresses our optimal dreams, desires, aims, and intentions – for ourselves and for the world we live in."

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APPENDIX L

EXPERIMENT 1 OUGHT SELF-GUIDE FRAMING,

POSITIVE OUTCOME FRAMING,

WEAK ARGUMENT PUBLICITY FLYER
High praise for Joseph S. Dixon’s *Recycling: It’s Our Responsibility to Preserve Our World’s Resources*...

"Like few books in this decade have ever done, Dr. Dixon’s masterpiece makes individuals feel that they should get up and do something about global environmental problems. Even the most "intractable" environmental problems march toward a solution when everyone exercises his or her responsibility to get involved. *Recycling: It’s Our Responsibility to Preserve Our World’s Resources* presents a picture of responsibility that we should not ignore. Dixon’s book addresses our responsibilities; those things we ought to do and should do – for ourselves and for the world we live in."

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APPENDIX M

EXPERIMENT 1 IDEAL SELF-GUIDE FRAMING,
POSITIVE OUTCOME FRAMING,
WEAK ARGUMENT PUBLICITY FLYER
JOSEPH S. DIXON

Recycling: It's Our Dream to Preserve Our World's Resources

High praise for Joseph S. Dixon's Recycling: It's Our Dream to Preserve Our World's Resources...

"Like few books in this decade have ever done, Dr. Dixon's masterpiece empowers individuals to get up and do something about global environmental problems. Ideally, everyone will get involved and even the most "intractable" environmental problems will march toward a solution. Recycling: It's Our Dream to Preserve Our World's Resources presents a picture of hope that we all can aspire to achieve. Dixon's book addresses our optimal dreams, desires, aims, and intentions – for ourselves and for the world we live in."

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APPENDIX N

EXPERIMENT 1 ATTITUDE MEASURES
INSTRUCTIONS:

Because your opinions on recycling may have an effect on your evaluation of the publicity flyer, we would first like for you to indicate your opinions on recycling. Do you think that recycling is a good idea or a bad idea? Please rate the issue of recycling on each of the following scales. Circle the number that best represents your opinion on the topic of recycling on each scale.

<table>
<thead>
<tr>
<th>Score</th>
<th>Opinion</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4</td>
<td>extremely unfavorable</td>
</tr>
<tr>
<td>-3</td>
<td>extremely foolish</td>
</tr>
<tr>
<td>-2</td>
<td>extremely harmful</td>
</tr>
<tr>
<td>-1</td>
<td>extremely bad</td>
</tr>
<tr>
<td>0</td>
<td>neutral</td>
</tr>
<tr>
<td>+1</td>
<td>extremely positive</td>
</tr>
<tr>
<td>+2</td>
<td>extremely beneficial</td>
</tr>
<tr>
<td>+3</td>
<td>extremely wise</td>
</tr>
<tr>
<td>+4</td>
<td>extremely good</td>
</tr>
</tbody>
</table>
INSTRUCTIONS:

Now, we are interested in your evaluation of the publicity flyer. What do you think of the design, layout, and content of the flyer? Please rate the design, layout, and content of the flyer on the following scales. Circle the number that best represents your opinion on the design, layout, and content of the flyer.

<table>
<thead>
<tr>
<th>Extreme</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unfavorable</td>
<td>extremely unfavorable</td>
<td>neutral</td>
<td>extremely favorable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unpleasant</td>
<td>extremely unpleasant</td>
<td>neutral</td>
<td>extremely pleasant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>extremely good</td>
<td>neutral</td>
<td>extremely bad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harmful</td>
<td>extremely harmful</td>
<td>neutral</td>
<td>extremely beneficial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>extremely positive</td>
<td>neutral</td>
<td>extremely negative</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
APPENDIX O

EXPERIMENT 1 ARGUMENT QUALITY RATING SCALES

(EXAMPLE FROM THE IDEAL SELF-GUIDE FRAMING,
POSITIVE OUTCOME FRAMING, STRONG ARGUMENT CONDITION)
INSTRUCTIONS:
Each of the points from the excerpt of the new book are listed below. Circle the number that best represents your opinion of the merits of these arguments on the scales that follow.

1. Recycling decreases the burden on our nation's landfills, which are already close to capacity in most areas.

   1  2  3  4  5  6  7  8  9
   very strong neutral argument for argument for
   NOT recycling recycling

2. Recycling will support over 2,500 U.S. businesses that rely completely on recycled goods.

   1  2  3  4  5  6  7  8  9
   very strong neutral argument for argument for
   NOT recycling recycling

3. By recycling products such as aluminum cans and newspapers, we decrease the need for mining new natural resources, the cost of which adds trillions annually to worldwide expenditures.

   1  2  3  4  5  6  7  8  9
   very strong neutral argument for argument for
   NOT recycling recycling

4. For every item we recycle, we decrease the amount of air pollution generated by manufacturing industries that must otherwise replace that item – usually at more than twice the cost of recycling it.

   1  2  3  4  5  6  7  8  9
   very strong neutral argument for argument for
   NOT recycling recycling

5. If you recycle you are sending a positive message to future generations who hope that we will maintain the planet they will inherit.

   1  2  3  4  5  6  7  8  9
   very strong neutral argument for argument for
   NOT recycling recycling
INSTRUCTIONS:

We are now interested in what you were thinking about while you were reading the publicity flyer for the book on recycling. You might have had ideas all favorable to the book or to recycling, all opposed, all irrelevant, or a mixture of the three. Any case is fine; simply list what it was that you were thinking while reading the publicity flyer for the book. The next page contains the form we have prepared for you to use to record your thoughts and ideas. Simply write down the first idea that comes to mind in the first box, the second idea in the second box, etc. Please put only one idea or thought in a box. You should try to record only those ideas that you were thinking while reading the publicity flyer for the book on recycling. Please state your thoughts and ideas as concisely as possible. . . a phrase is sufficient. Ignore spelling, grammar, and punctuation. Please spend about 2 minutes writing down your thoughts. We have deliberately provided more space than we think most people will need to ensure that everyone would have plenty of room to write the ideas they had while reading the information. So don't worry if you don't fill every space. Just write down whatever your thoughts were while you read the publicity flyer for the book on recycling. Please be completely honest and list all of the thoughts that you had.
APPENDIX Q

EXPERIMENT 1 POST-EXPERIMENTAL QUESTIONNAIRE
POST EXPERIMENTAL QUESTIONNAIRE

For the following items, please provide the answer that best represents your opinion.

1. How often do you recycle?

   1  2  3  4  5  6  7  8  9
   never always

2. Are you a member of any environmental preservation groups?

   Yes ____  No ____

3. The author of the book described in the flyer thinks...

   a) "It’s our responsibility to recycle."
   b) "It’s our decision to recycle."
   c) "It’s our dream to recycle."

4. Do you think there is another purpose to the experiment not told to you by the experimenter? If yes, what?

5. Any comments?
DEBRIEFING

First, thank you for participating in this experiment today. You should recognize that your contribution was important! Many of the studies you read about in your psychology textbook were done with students such as yourself. We could not do research without your participation. Thank you!

The purpose of this research was to examine people's impressions of a persuasive message. This research falls within a broader category of psychology called attitude change or persuasion research. The general idea behind this specific experiment is to test the hypothesis that aspects of a persuasive message, such as the arguments in the message, may make people more or less likely to be persuaded by that message. That is, if the persuasive message contains strong arguments, then you should be more persuaded. On the other hand, if the persuasive message contains weak arguments, then you should be less persuaded.

The purpose given to you at the beginning of the experiment was offered as a rationale for why you were looking over a flyer about a book. The Journalism Department and the Psychology Department are not working together in this capacity. Nobody that participated was expected to guess the true purpose of the experiment.

In order to preserve the scientific merit of the research, it is important that you do not discuss this research with anyone who may participate or may know someone who will participate. This will assure that future results are not contaminated by people being aware of the hypotheses.

This concludes your research session. We thank you again for taking part and invite your comments, suggestions, and questions. Please ask the experimenter any questions that you have.
APPENDIX S

EXPERIMENT 2 SESSION 1 VERBAL INSTRUCTIONS
Today's experiment is actually two separate studies. You'll do one today and another next week. We've found that people sometimes have trouble remembering to come back for the second study. So, as a special favor since it's the first week of classes, if you'll write down your phone number by your name, I'll call you the day before to remind you to come back.

[pause for phone number recording]

Today's experiment has to do with your opinions about yourself. All of the information that you type into the computers is completely anonymous. Your name is never attached to anything that you type in.

Typically, you'll be typing in your responses and then pressing enter, or you'll be pressing a number key as your response. When you use the number keys, please use the top row of numbers just above the letters (the 1 to 9 keys that go straight across) rather than the number keys that are off to the side. Also, please don't use the mouse to click on numbers on the screen. You should just be using the keyboard to enter your responses.

Now, sometimes you will need to use the mouse to click to continue to the next screen. You'll see a little box in the bottom right corner that tells you to click here to continue. In that case, of course you can use the mouse, but other than that you should just be using the keyboard.

Please be sure to read the instructions very carefully, and if you have any questions at all, feel free to ask me quietly so that you don't disturb each other. So, you can pick a computer and start working whenever you're ready. When you're done with the computer part, you're done for the day, so you can leave and come back next week. Thanks a lot!
APPENDIX T

SELF-GUIDE STRENGTH MEASURE
Welcome to Experiment SP-1.

In today’s session, you will be answering questions about yourself. All of your responses will be confidential and anonymous. Read the instructions carefully. Please use the keyboard to enter your responses.

Please answer the questions
AS QUICKLY AND ACCURATELY AS YOU CAN.

Screen 2
What are the last four digits of your social security number?

Screen 3
What are the last four digits of your phone number?

Screen 4
What is your favorite color?

Screen 5
For the color you listed, please rate the extent to which you favor this color over other colors:

1  Slightly
2  Moderately
3  A Great Deal
4  Extremely

143
Screen 6

You will now be asked to list:

1. Attributes that describe how you HOPE TO BE
   (the attributes of the type of person you would ideally like to be; the attributes of the type of person you wish or desire to be)

2. Attributes that describe how you OUGHT TO BE
   (the attributes of the type of person you should be; the attributes of the type of person you believe it is your duty or responsibility to be)

You will be asked to provide these attributes ONE AT A TIME.

Screen 7

In addition to listing the attributes, you will also be asked to determine:

1. The EXTENT to which YOU WOULD IDEALY LIKE TO POSSESS each attribute that you hope to be.

2. The EXTENT to which YOU FEEL YOU OUGHT TO POSSESS each attribute that you ought to be.

3. The EXTENT to which YOU ACTUALLY POSSESS each of the attributes.

Screen 8

DO NOT LIST ANY OF THE ATTRIBUTES MORE THAN ONCE IN THIS SESSION

Please limit the description of each attribute to ONE WORD.

Please list each attribute and answer each extent question, using the numbers on the keyboard, AS QUICKLY AND ACCURATELY AS YOU CAN.
If you have any questions, please find the experimenter now.

Otherwise, you may continue.

Remember!

Please answer these questions

AS QUICKLY AND
ACCURATELY AS YOU CAN.

Please list an attribute of the type of person you HOPE TO BE

For the last attribute, rate the extent to which you would IDEALLY LIKE TO possess the attribute:

(Participant’s attribute listed here)

1 Slightly
2 Moderately
3 A Great Deal
4 Extremely
Screen 13

For the last attribute, rate the extent to which you believe you ACTUALLY possess the attribute:

(Participant’s attribute listed here)

1  Slightly
2  Moderately
3  A Great Deal
4  Extremely

Screen 14

Please list an attribute of the type of person you OUGHT TO BE

Screen 15

For the last attribute, rate the extent to which you believe you OUGHT TO possess the attribute:

(Participant’s attribute listed here)

1  Slightly
2  Moderately
3  A Great Deal
4  Extremely

Screen 16

For the last attribute, rate the extent to which you believe you ACTUALLY possess the attribute:

(Participant’s attribute listed here)

1  Slightly
2  Moderately
3  A Great Deal
4  Extremely
Screens 17-34: Attribute listings and extent ratings continue until four ideals and four oughts have been listed (Order: Ideal, Ought, Ought, Ideal, Ought, Ideal, Ideal, Ought)

Attribute listing wording:

Please list another attribute of the type of person you HOPE TO BE
(Do NOT list an attribute that you have already listed)

OR

Please list another attribute of the type of person you OUGHT TO BE
(Do NOT list an attribute that you have already listed)

Screen 35

Thank you for participating in this study on self-concept!
Your participation is greatly appreciated.

Please be sure to sign up for your second session before leaving this session.

Thanks again!!
APPENDIX U

EXPERIMENT 2 SESSION 2 VERBAL INSTRUCTIONS
EXPERIMENT 2 SESSION 2 VERBAL INSTRUCTIONS

In today’s experiment you’ll be using the computers in much the same way as you did last week – using the keyboard to enter your opinions, and sometimes using the mouse to click to continue to the next screen.

The main difference is that today you may need to use negative numbers, and those aren’t on the keyboard. Sometimes you’ll see a scale that goes from -4 to +4 on the screen. When you see that scale, you can refer to the card directly above the horizontal 1-9 keys on the computer keyboard that lists the numbers -4 to +4. The card refers to the number keys just below. So if your opinion is -3, you’d press the 2 key, because it’s directly below the -3 on the card. Sometimes you’ll see only positive numbers on the screen, in scales that go from 1-4 or 1-9. In that case, you should just use the regular 1-9 keys to enter your opinions – then the 2 key is just a 2.

Do you have any questions?
APPENDIX V

EXPERIMENT 2 TRUSTWORTHY COMPANY DESCRIPTION
Important information about the producer of Fast-Break -- a new breakfast product

Leeds Foods has been producing outstanding breakfast products for the European market since 1949. Their broad range of products has been widely accepted in European homes, schools, and restaurants for nearly fifty years. The company has been a respected name in the European market and consumers have long trusted the company to provide healthy, high-quality products. Leeds Foods' products invariably score high in taste testing, and the company has yet to produce a product that does not live up to expectations.

Both the US Food and Drug Administration and the American Heart Association support the introduction of the Leeds Foods' products into the United States as soon as possible. Dr. Steven Greene, head of the AHA, says of Leeds Foods, "This company has a reputation for being a trustworthy producer of outstanding breakfast products. American consumers should have the opportunity to sample these unsurpassed products."

Please look over the presentation on the next two screens and form an impression of the presentation.
APPENDIX W

EXPERIMENT 2 IDEAL SELF-GUIDE FRAMING
Even the most "intractable" breakfast problems will march toward a solution. Those who have tried Fast-Break present a picture of hope that we all can aspire to achieve. This product addresses our optimal dreams, desires, aims, and intentions — for ourselves and for the world we live in.

-- Commissioner John A. Kessler, M.D., US FDA
APPENDIX X

EXPERIMENT 2 OUGHT SELF-Guide FRAMING
Ever since Fast-Break hit the market, individuals felt that they should get up and do something about their own health and nutrition. Even the most intractable breakfast problems march toward a solution when everyone exercises his or her responsibility to try Fast-Break. Those who have tried Fast-Break present a picture of responsibility that we should not ignore. This product addresses our responsibilities; those things we ought to do and should do — for ourselves and for the world we live in."

-- Commissioner John A. Kessler, M.D., US FDA
APPENDIX Y

EXPERIMENT 2 STRONG ARGUMENT, IDEAL SELF-GUIDE FRAMING PERSUASIVE MESSAGE
Studies have shown that this combination gives your body a boost in the morning so that you’ll be able to perform better in classes throughout the day. In carefully conducted studies performed by independent laboratories, researchers found that students who consumed Fast-Break the morning performed better on intelligence (IQ) tests and showed better recall of lectures given at the beginning of the day than students who had consumed a traditional breakfast.

Fast-Break comes in a variety of different flavors, so everyone can find a favorite or two. Fast-Break even contains the 100% Recommended Daily Allowance of 22 essential vitamins and minerals, with extra Vitamin C to help boost your immune system. Fast-Break is pre-packaged in a special unbreakable, leakproof, recyclable container—similar to a soda bottle, but made of a patent-pending aluminum-based alloy. The container chills quickly and is easy to transport, so your breakfast is ready to go when you are! As an added benefit, Fast-Break is reasonably priced—one meal sells for less than a cup of coffee. To top it all off, Fast-Break comes with a money-back guarantee. If you don’t like it, take your empty container back to the store where you purchased it. You can either exchange it and try a new flavor or just get your money back—your choice!
APPENDIX Z

EXPERIMENT 2 WEAK ARGUMENT,

ought self-guide framing persuasive message
give you an energy boost. The initial jolt of sugar and glucose in the morning helps give your brain a jump start and a brief boost in "brain power," helping you feel alert for the morning classes. However, these students felt more sleepy later in the day and often experienced side effects such as headaches.

\textit{Fast-Break} has an earthy "health nut" flavor. Studies show that 4 out of 10 students find this flavor to be moderately pleasant-tasting. \textit{Fast-Break} even contains trace amounts of a few vitamins and minerals. \textit{Fast-Break} comes in pre-measured packets which can be mixed with water and ice and run through a blender. Taking time in the morning to prepare \textit{Fast-Break} gives students a relaxing pause in an otherwise hectic day. As an added benefit, \textit{Fast-Break} is reasonably priced – one meal sells for less than you would pay for a six-pack of soda. To top it all off, the makers of \textit{Fast-Break} are interested in getting customer feedback. If you don't like it, just mail your empty packet and the UPC code back to them, along with information regarding the date and place of purchase. They'll note your displeasure and send you information on other products in their line that you might prefer. Finally, 3 out of 10 college students said that \textit{Fast-Break} was a good breakfast for them – it's easy, tastes pretty good, and doesn't take that much time to prepare.
DEBRIEFING

Thank you for participating in this experiment today. Your contribution was very important! Many of the studies you read about in your psychology textbook involved students such as yourself. We could not do research without your participation.

Please read the information on the following screens to learn more about today's research project.

The purpose of this research was to examine people's impressions of a persuasive message. This research falls within a broader category of psychology called attitude change or persuasion research. The general idea behind this specific experiment is to test the hypothesis that aspects of a persuasive message, such as the headline of the message, may make people more or less likely to pay attention to the arguments in the message. That is, the headline may motivate you to think carefully about the arguments in the message. If that is the case, then you should end up being more persuaded if the arguments in the message are strong and less persuaded if the arguments in the message are weak.

The purpose given to you at the beginning of the experiment was offered as a rationale for why you were viewing a presentation about a breakfast product. Fast-Break was actually made up for the purposes of this experiment and does not actually exist. Nobody that participated was expected to guess the true purpose of the experiment.

In order to preserve the scientific merit of the research, it is important that you do not discuss this research with anyone who may participate or may know someone who will participate. This will assure that future results are not contaminated by people being aware of the hypotheses.

This concludes your research session. We thank you again for taking part and invite your comments, suggestions, and questions. Please ask the experimenter any questions that you have.