In Need of a Favorable Conclusion:
The Role of Goal-Motivated Reasoning in Consumer Judgments and Evaluations

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Note: this is a summarized version of my dissertation manuscript. An alternative, 48-page version is also available that provides more detailed information on the theoretical background and experimental design. More specific descriptions of the stimuli used in the experiments are available upon request.
Basic models of consumer evaluation and choice tie an individuals’ involvement with a product to the degree to which they objectively gather and process product information in order to assess its virtues and decide on its purchase and use. Normally, higher levels of product relevance and consumer involvement are associated with more systematic, objective and thorough product information search and evaluation (e.g., Borgida and Howard-Pitney 1983, Burnkrant and Sawyer 1983): put simply, the more important a decision is for us, the closer to a truthful evaluation we want to get—what Kruglanski (1996) termed a “motivation for accuracy.” On the other hand, both anecdotal evidence and experimental research have made us aware of the fact that we—in our roles as consumers or otherwise as decision makers—often behave in ways that suggest the existence of subjectivism, prejudice, partiality, and other such biases that tend to lead us to a favored conclusion. This is clear in cases where prior attitudes color our cognitions: for example, existing attitudes towards a brand bias the evaluation of information presented about such brand in such a way as to preserve attitude consistency (e.g., Ahluwalia, Burnkrant and Unnava 2000, Jain and Maheswaran 2000).

In this dissertation, I propose that certain forms of consumer motivated reasoning stem from strong drives derived from the pursuit of personally relevant goals, and that these motivated cognitions manifest themselves in the searching for and processing of product information, and in the formation of product attitudes. In particular, my research shows that these motivated cognitions help explain sometimes paradoxical behaviors—instances in which consumers make decisions that are not necessarily warranted by the information
available to them in their environment. Consider the following: A 2002 study of the Federal Trade Commission (FTC) concluded that of surveyed 300 ads promoting products and services that purportedly help consumers lose weight, 40% made at least one blatantly false claim, and 55% made claims that were unsubstantiated (Cleland, et al. 2002). Still, and despite the lack of supporting evidence for these claims, millions of consumers seem to conclude that such products are effective: recent reports estimate the annual consumer expenditures on products claiming to “knock off pounds” at $35 billion. The “alternative medicine” industry, estimated at $18 billion a year, also thrives on optimistic but unsubstantiated promises to deliver remedies, cures, and solutions to anything a consumer may desire: beauty, health, and even spiritual harmony. This massive consumption of controversial products is not limited to traditionally “vulnerable” segments such as uneducated or lower-income level individuals; indeed, most users of alternative medicines are affluent and well-educated (Francese 2003). Clearly, the quality of consumption decisions is not a simple and direct function of consumers’ education or their degree of market sophistication.

This dissertation posits that the quality of consumers’ evaluations and judgments is not necessarily a question of “smarts.” Instead, I propose a situational factor that affects consumer cognitive processes: the pursuit of a goal, and more specifically, the inherent desire individuals have to perceive their goals as attainable. I show that, when placed in situations where goal attainability is put into question, consumers resort to purchasing products that claim to make the target goal achievable. Then, the more critical the product is for goal attainment (i.e., the fewer alternative pathways to goal attainment the individual has) the more motivated the consumer is to evaluate the product as potentially effective. In order to
reach this favorable product evaluation, the consumer gathers and processes product
information in a biased manner\(^1\), so as to arrive at the desired conclusion of goal attainability.

The pursuit of a favored conclusion fits squarely within the motivated reasoning
paradigm (Kunda 1990), in which individuals are driven by a need for specific closure
(Kruglanski 1990). In the present model, goal-pursuing consumers—particularly those
lacking confidence regarding the attainability of their goals—engage in goal-motivated
reasoning in order to arrive at the conclusion that their goal is attainable. These consumers
select cognitive processing strategies and generate beliefs that help them convince
themselves that their behavior (i.e., purchasing and consuming a product or service that
supposedly is a means to goal attainment) is justified. Three studies that have been
conducted so far provide supporting evidence for the advanced hypotheses.

Study 1 provides evidence suggesting that, even in the presence of minimum product
information, consumers who lack confidence regarding goal attainability (vs. those who have
higher confidence) develop more favorable attitudes toward products that present themselves
as means to goal attainment. Furthermore, it shows that this difference in evaluation patterns
between goal-motivated and non-motivated consumers is particularly pronounced when the
numbers of available alternative means is small vs. large. Study 2 delves into the information
search and evaluation process, and provides evidence suggesting that goal-motivated
consumers assign lesser diagnosticity to negative goal-related product information than do
non-motivated consumers. Lastly, Study 3 shows that goal-motivated individuals exhibit a
bias towards sources of information that they perceive to be supportive of their favored
conclusion (namely, that the product in question is effective).

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\(^1\) In this dissertation, I use the definition of bias advanced by Kruglanski and Ajzen (1983): “a subjectively-

-based preference for a given conclusion or inference over possible alternative conclusions” (p. 19).
Figure 1 outlines the research program. In the next sections, I first provide a brief background of the motivated reasoning phenomenon. Then, I discuss each of the three studies conducted so far. Finally, I offer conclusions and discuss future research.

Motivated reasoning and consumer behavior

*Biased processes* are those in which the individual’s cognitions are tainted by contextual factors, information structure, previously held attitudes, preferences, and moods. In such cases, the term “biased” is an overarching label that includes all cognitive processes that are not strictly “balanced” or “evenhanded.” Two broad types of biased processes can be distinguished: *cognitive* biases, and *motivational* biases (Kruglanski and Ajzen 1983).

*Cognitive biases* arise because of people’s inability to attend to and process all the information that is available to them (Kruglanski and Ajzen 1983, p. 7). Factors that may
cause these biases are salience and availability, preconceptions, and anchoring and perseverance.

Motivational biases, on the other hand, are tied to specific needs or desires of the individual, and are not necessarily related to one’s cognitive (in)ability to process information. Cognitive psychologists have identified two types of motivation that affect information processing: motivation for accuracy, and motivation to arrive at a particular conclusion. Notice that the former, albeit “motivated,” need not be biased reasoning: in fact, motivation for accuracy should lead one to reach quite an objective conclusion. It is the latter, however—also termed need for a specific closure (Kruglanski 1996) or outcome dependency (Kunda 1999)—the type of motivated reasoning that constitutes the focus of this dissertation.

A look at the past research on motivated reasoning reveals three major themes that can be identified as drivers of motivated processes: (a) ego enhancement, (b) the need to see oneself as free from risk or disease, and (c) the need to safeguard cognitive consistency. These themes are characteristic of one of the most basic human traits: the desire to attain and sustain a feeling of well-being. Indeed, research has shown that hedonically relevant psychological processes, such as social comparison, dissonance reduction, and self-evaluation are closely related to the pursuit and the enhancement of subjective well-being (Lyubomirsky 2001).

The present research advances a fourth relevant psychological process that is linked to subjective well-being, and is also a driver of motivated reasoning: the pursuit of personally meaningful goals. Previous research has shown that a fit between the goals individuals feel committed to attaining and the opportunities, constraints and affordances inherent in themselves and their environments is a necessary condition for subjective well-being.
(Brunstein, Schultheiss and Maier 1999). More particularly, studies suggest that three dimensions of personal goals—attainability, commitment, and progress—are predictive of individuals’ subjective well-being (Brunstein 1993). The first of these dimensions is of particular interest to the present research for two reasons: (1) the attainability of a goal is a situational assessment liable to subjective cognitions, and (2) products and services on the market are often presented as means to enhance the attainability of goals. I thus focus on assessments of goal attainability (i.e., confidence), and their role in consumers’ motivated cognitive processes.

**Definition of Goal-motivated reasoning**

I use the term *goal-motivated reasoning* to describe a set of cognitive processes and strategies that are driven by a directional motive. This is a special case of motivated reasoning, a term recently incorporated to the marketing literature (e.g., Jain and Maheswaran 2000, Keller and Block 1999). As defined here, directional motives are those of arriving at a particular conclusion (Kunda 1999). Motivation, in this context, is “any wish, desire, or preference that concerns the outcome of a given reasoning task” (Kunda 1990, italics added). The tasks under discussion are those involved in the process of reasoning: gathering information, generating beliefs and attitudes, evaluating evidence, and making decisions. In sum, I define goal-motivated reasoning as the process of gathering, organizing, interpreting and evaluating information in such a way as to form or reinforce attitudes, support beliefs, or justify decisions in accordance with the individuals’ preferred conclusion that their personal goals are attainable.

In summary, the main factor in explaining goal-motivated reasoning’s deviation from traditional processing behaviors is that, in “normal” cases, relevance and involvement activate an *accuracy* motivation, which leads to unbiased message elaboration. In the case of
goal-motivated processes, I propose that relevance activates a *directional* motive, where the personal relevance of the matter drives individuals to favor one conclusion over another, and to strategically choose cognitive styles (ranging from and including deep/systematic to peripheral/heuristic). These cognitive style choices, given the peculiarities of the situation, are more likely to result in the favored conclusion that a goal is attainable.

In goal pursuit, goal attainability is a function of means-end chain assessments. For example, in order to perceive that their ultimate goal of being fit and attractive is attainable, consumers must see all intermediate subgoals as attainable as well. This motivation makes consumers partial to information agreeable with the attainability of their goals. Products that present themselves as means to goal attainment afford consumers a higher level of confidence that they may attain such goal. Consumers’ motivation to see such means (products) to attain their goal as “effective” will be more important the more “unsubstitutable” a particular means is: in other words, the fewer alternative means (products) a consumer has available, the more critical any particular one of them becomes. Because of this, it will become more important for the consumer to believe that the product in question is an effective means to goal attainment. Based on the above, we advance our first hypothesis:

**H1:** When evaluating a goal-relevant product, consumers low in goal attainment confidence will develop more positive product attitudes than high confidence consumers.

It is proposed that the main reason why low confidence consumers have a tendency to form positive evaluations of products that present themselves as means to goal attainment is that they what to perceive that their goal is actually achievable. Because the product in question is one possible pathway to goal attainment, the achievability of their goal is indeed a function of the effectiveness of this pathway.
**Moderating role of pathways.** Perceptions of goal attainability are, among other factors, a function of the awareness of alternative pathways that lead to goal achievement (Curry, et al. 1997). This is particularly interesting in our case because products that present themselves as means to goal achievement are, indeed, potential pathways to goal attainment. Because perceptions of goal attainability are also a function of how many pathways to goal achievement the individual is aware of (i.e., the more alternative possible ways to achieve a goal, the more confident one will be about attaining it), we should expect goal biases to be exacerbated when the individual sees very few (vs. many) possible pathways to goal achievement. If there is only one product that may assist the consumer in goal attainment, the purported effectiveness of such product becomes critical in the consumer’s evaluation of goal attainability.

It is interesting to note that the number of products making a similar claim also influences the perceived credibility of such claims: that is, when a particular claim is made by many competing products the claim becomes more believable or less subject to skepticism, compared to a claim that is made only by one or very few products. In the latter case, an uncommon claim is more likely to be seen as extraordinary, and thus less credible\(^2\). This is closely related to the common heuristic, “if many believe it, it must be true” (see, for example, Axsom, Yates and Chaiken 1987)\(^3\).

Based on the above, we have two opposing effects of the number of products making a claim on the product’s believability: for non-goal motivated consumers, more products making the same claim should translate into more believability for such claims. In the case of

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\(^2\) Consider the believability of rumors, based on the number of sources spreading the rumor. Keeping the credibility of the source constant, a rumor received from many different sources appears as more credible than a rumor received from only one source.

\(^3\) To assess the validity of this assumption, a pilot study was conducted that tested the relationship between the number of products making a claim, and the claim’s believability. The results of this pilot study corroborated the assumption that product claims are more believable, and consumers are less skeptic, when the claim is made by many vs. only one product on the market. Detailed results are available upon request.
goal-motivated consumers, on the other hand, fewer products making a claim means that product effectiveness is more critical, and thus claims should self-servingly be assessed as more believable.

The two points made above lead to the following prediction: consumers’ confidence in goal attainability should interact with the number of goal-related products making a claim so that: (a) for high confidence consumers, as the number of products on the market that claim to provide a benefit (e.g., make a goal attainable) decreases, the product claims become less believable, and product attitudes become less positive; for low confidence consumers, on the other hand, as the number of products making a claim decreases, the claims should become more believable, and product attitudes more positive. The rationale behind this effect is that as goal-related products become more scarce, it becomes more critical for consumers to conclude that any specific product is actually effective. Because of this counterbalancing effects, we should expect low confidence consumers to be more insensitive to the common inference that “claims shared by few are less credible than those shared by many.” Thus,

**H2:** There will be an interaction between attainment confidence and number of available products such that the difference in product attitudes described in H1 will be larger when there is only one product claiming to provide the goal-related benefit than when there are many alternative products claiming to do so.

**Study 1**

To test these hypotheses, I analyzed how consumers differing in their confidence to attain a desired end-state (high academic performance) evaluated both a goal-relevant (a memory and mental focus booster) and a goal-irrelevant product (a stain remover) when the only information available about the product was that it claimed to either boost brain performance or remove stains, respectively. Additionally, participants were told either that
the product was “the only one on the market” vs. “one of many on the market” making such claims.

Method

The study employed a 2x2x2 mixed factorial design. Attainability confidence (low vs. high) and number of product alternatives (one vs. many) were manipulated as between-participant factors. Each participant evaluated a goal-relevant and a goal-irrelevant product. The order of presentation of the relevant and irrelevant products was counterbalanced. Analyses revealed that order of presentation did not affect the results. Eighty-one undergraduate students participated in the study for course credit.

Attainability confidence manipulation. The goal of choice for the experiment was good academic performance. This goal was chosen because it is a chronic and relevant aspiration for the majority of the population from which the sample was taken. Participants’ confidence to achieve a good performance was manipulated by having them complete a “survey of writing styles.” They were asked to read an article excerpt that presented “research findings” linking stress, work load, and work pressure (common conditions for students as the end of the semester approaches) with either impaired (low confidence condition) or improved (high confidence condition) brain performance.

Procedure. The first task asked the participants to evaluate the readability and quality of writing of the “article excerpt.” Next, after a filler task and as a separate study, participants were asked to sequentially consider two products that were in the process of being launched on the market. The information provided about the products was minimal: in the case of the goal-relevant product participants were just told that this product claimed to boost memory and mental focus; in the case of the goal-irrelevant product participants were simply told that the product claimed to remove grease stains. Additionally, and depending on the “number of
alternatives” condition, participants were told that a thorough search of the market determined that the product was “the only one” vs. “one of many” on the market making such claims. Participants were then asked questions regarding the effectiveness of the product. At the end of the experiment participants were debriefed and dismissed.

Results

Manipulation check. Manipulation checks confirmed that participants in the “low confidence” condition felt less confident (M=5.50) and less capable (M=6.12) to attain a good academic performance by the end of the semester than did those in the high confidence condition (Mconfident=6.36, F(1, 79)=5.74, p<.05; Mcapable=7.18, F(1, 79)=10.08, p<.01).

Attitude toward the product. Participants’ attitude toward the product was the composite of two items: item one asked participants “how good” they thought the product was, and item 2 inquired “how effective” the product was. Both items were combined into a measure of “attitude toward the product.” Results supported hypothesis 1: that is, even in the presence of minimum product information, low confidence participants exhibited more favorable attitudes toward the goal-relevant product than did high confidence participants. A one-way ANOVA, with attainment confidence as a between-participants factor, yielded that low confidence participants had a more favorable attitude toward the goal-relevant product (M=4.30) than did high confidence participants (M=3.45, F(1,77) = 5.31, p<.05). No differences in attitude toward the product between confidence conditions was observed for the goal-irrelevant product (Mlow=5.57, Mhigh=5.51, F(1,76) < 1, n.s.). These results provide evidence suggesting that differences in evaluation stem from goal-related biases.

A more interesting picture appears when we look at the interaction between goal attainability confidence and how many alternative means to attainment (products) there are. A two-way ANOVA was conducted to determine the combined effects of attainability
confidence and number of products making the claim on the attitude towards of each of the two products. In the case of the goal-relevant product, the results for the ANOVA indicated a significant interaction between attainability confidence and number of products making the claim, $F(1, 77)=4.42, p<.05$. This analysis suggests that the bias in attitude formation caused by low attainability confidence is particularly strong when there is only one goal-relevant product claiming to facilitate goal attainment: at this level of analysis, the difference in product attitudes between low confidence ($M=4.50$) and high confidence participants ($2.87$) is strong ($F(1,78)=9.54, p<.01$), while there was not a significant difference between confidence conditions when there were many alternative products on the market making the claim. This result supports hypothesis 2. No significant interactions were observed in the evaluation of the goal-irrelevant product.

Having found evidence for biased evaluations based on consumers perceived ability to attain their desired end-states, the next step was to uncover some of the cognitive processes that may further explain these differential evaluations of goal-relevant products. In particular, it became important to learn how goal-motivated processes affect the search for and assignment of diagnosticity to product information.

Because goal-motivated consumers have a preference for concluding that means (products) to goal attainment are effective, I propose that arriving at an undesirable conclusion (i.e., the product is ineffective) will require a larger amount of product-unfavorable information for goal-motivated consumers than for those who do not have this motivation. Notice that this is in contraposition to the “negativity effect” (Fiske and Taylor 1991). Indeed, research in consumer behavior has shown that negative information carries more diagnostic value than positive information (e.g., Folkes and Kamins 1999, Herr, Kardes and Kim 1991). In our case, because low confidence consumers have a bias toward a
preferred conclusion, they should place less value or “diagnosticity” on preference-inconsistent information than the negativity effect would predict. This is in agreement with research by Edwards and Smith (1996), who argue that when information does not support the occurrence of the goal-congruent outcome or supports the occurrence of a goal-incongruent outcome, individuals might search longer, probably due to their motivated “skepticism” of goal-incongruent information, or perhaps to find information that will support it.

Based on the above, I anticipate an interaction of attainment confidence and valence of information, such that:

**H3**: Compared to high attainment confidence participants, and when evaluating a goal-relevant product, low attainment confidence participants will require more pieces of unfavorable information to conclude that the goal-related product is not worth a try.

**Study 2**

The second study also presented participants with a product evaluation task. In order to track the amount of information needed to reach a conclusion, a computer program was designed that recorded the number of pieces of information looked up by participants. The computer interface presented participants with product information that was either product-favorable or unfavorable, depending on the condition. This design obeyed to the need to create conditions whereby participants were led to conclude that the product was effective in one condition, or ineffective in the other. That is, in this case the final judgment’s valence was manipulated, in order to trace how participants arrived at it.

**Method**

The study employed a 2x2x2 full-factorial design, with attainability confidence (low vs. high), information valence (favorable vs. unfavorable), and product goal-relevance (goal
relevant vs. goal irrelevant) manipulated as between-participant factors. While the goal-related product was the same as in Study 1, the goal-unrelated product was in this case a “joint pain reliever.” One hundred and ninety-nine undergraduate students participated in the study for course credit.

Procedure. The manipulation of goal attainment uncertainty was the same as the one used in Study 1. After completing a filler task and measures for manipulation check, participants were introduced to a “separate study” in which they were presented with a product (a memory booster or a joint pain reliever, depending on the goal relevance condition). The only descriptive information about the product was what the product claimed to do, as in Study 1. Then, participants were told that they had to evaluate whether the product may be effective or not, based on information made available to them in the next section. They were free to request as many or as few pieces of product information as they deemed necessary in order to evaluate the product. The instructions specified that they were to look at the available information one item at a time, and as soon as they felt they had seen enough items to make a decision, to press the “ready to decide” button, after which they would indicate whether the product was worth a try or not.

After reading these instructions, participants proceeded to a screen were they had two buttons: one to request a product information item, and one to indicate that they were ready to pass evaluation. In the “favorable information” condition, all the product information that was presented to the participants was favorable, so as to “lead” participants to conclude that the product was effective. In the “unfavorable information” condition, all the product information was negative, leading participants to conclude that the product was ineffective. Once they had seen as many pieces of information as they deemed necessary, participants stopped the information search and indicated whether the product was “worth trying” or not.
The critical dependent variable of this study was the amount of information looked up by participants before arriving to the conclusion.

**Results**

*Manipulation check.* Manipulation checks confirmed that the attainability confidence manipulation was effective: low confidence condition participants were less confident that they would achieve a good academic performance (M=5.75) than were high confidence participants (M=6.79, F(1, 197)=27.42, p<.01). Similarly, low confidence participants felt less capable to attain a good academic performance (M=6.89) than did their high confidence counterparts (M=7.75, F(1, 197)=16.51, p<.01).

*Product evaluation.* The first step was to assess the effects of our manipulations on the assessment of whether the product under evaluation was “worth a try.” On a 9-point scale, participants assessed whether the product was “not worth a try at all” (-4), or “definitely worth a try” (+4). This evaluation was done by the participants at the end of the information search task, but is presented here first because, as per the instructions given to participants, information search was to end as soon as they had seen enough information items to make a decision. Also, the evaluation of the product serves as a manipulation check for the “information valence” condition, as we should expect participants in the “unfavorable information” condition to conclude that the product is not worth a try, and vice versa. A 2 (attainment confidence) x 2 (information valence) x 2 (product goal relevance) analysis of variance (ANOVA) on product evaluation was conducted. Analyses revealed the expected main effect for information valence (F(1,191) = 302.66, p<.01). Indeed, participants in the unfavorable information condition assessed the product as less worthy of trial (M=-2.20) than did participants in the favorable information condition (M=1.63). This result serves as a manipulation check for information valence condition.
Also, analyses revealed a main effect of attainability confidence ($F(1, 191) = 6.43, p<.05$). Participants in the high confidence condition assessed the product as less worthy of trial ($M=-.63$) than did participants in the low confidence condition ($M=.00$). While I had not made predictions as to the main effect of this manipulation, the analyses presented later will suggest that it is driven by the strong interaction between the confidence and product relevance manipulations. Indeed, the analyses revealed significant two-way interactions for attainability confidence x product relevance ($F(1, 191) = 8.11, p<.01$), and for attainability confidence x information valence ($F(1, 191) = 2.97, p<.05$). Interestingly, and as expected, contrasts analyses revealed that attainability confidence affected evaluations of the memory product, such that low confidence participants assessed the memory booster as “worthier of a try” ($M = .36$) than did high confidence participants ($M = -.94$, $F(1, 196) = 6.96, p<.01$). These results are particularly interesting when we consider the fact that low confidence participants looked up more pieces of unfavorable information than did high confidence participants, as will be reported below. On the other hand, attainability confidence had no effect on the evaluation of the joint pain reliever ($M_{\text{Low}} = -.36$, $M_{\text{High}} = -.29$, $F(1, 196) <1$). This lends support to the contention that, in the present phenomenon, motivated reasoning stems from and affects goal-related processes.

**Information search.** A 2 (attainment confidence) x 2 (information valence) x 2 (product goal relevance) analysis of variance (ANOVA) was conducted on the number of pieces of information looked up by participants before making an evaluation. There was a significant main effect of Information Valence, $F(1, 191) = 39.95, p < .01$. In general, participants looked up more pieces of product information when such information was favorable ($M = 7.00$), than when it was unfavorable ($M = 4.40$). This result is not surprising, as unfavorable information is seen as more diagnostic than favorable information (Fiske and
Taylor 1991). Also, there was a main effect for Product Goal Relevance ($F(1,191) = 6.10, p<.05$). In general, participants looked up more information in the goal relevant condition ($M=6.14$) than in the goal irrelevant condition ($M=5.20$). Again, this result is not surprising, as the subject population was made up of undergraduate students who should be more interested in products that could aid them in academic performance, than in medicines for arthritis. This main effect also serves as a manipulation check for product goal relevance. Finally, the analysis did not reveal a main effect of attainability confidence on total information search.

Giving support to hypothesis 3, the analyses revealed a significant 3-way Attainment Confidence x Information Valence x Product Goal Relevance interaction, $F(1, 191) = 7.26, p < .01$. In a detailed analysis of this interaction, contrasts showed that attainability confidence and information valence affected information search for participants evaluating the goal-relevant product (but not for the goal-irrelevant product): participants evaluating the “memory booster” required more pieces of unfavorable information to conclude that the product was not worth trying in the low confidence condition ($M=6.88$) than did participants in the high confidence condition ($M=2.89, F(1, 98) = 22.04, p<.01$). Notice that this absence of a negativity effect only occurred for low confidence participants: indeed, high confidence participants displayed the characteristic “negativity effect,” by requiring fewer pieces of negative information ($M=2.89$) than of positive information ($M=8.04, F(1, 98) = 40.60, p<.01$) to pass judgment. Taken together, this suggests that individuals low in attainment confidence have different valuation (weight or diagnosticity) patterns for negative information than high attainment confidence individuals. Specifically, it appears that unfavorable product information is less diagnostic of product ineffectiveness for low confidence participants than it is for high confidence participants. Because of this, low
attainability confidence individuals demand more pieces of unfavorable information before concluding that the product is not worth a try, than do high attainability confidence participants. This “biased devaluation” of unfavorable information is also apparent in the formation of product effectiveness assessments, and considerations of how much the product is worth a try, as shown in the previous analyses.

Study 2 did not give participants a chance to choose the source of product information. This issue was addressed in the third study. Because low attainment confidence individuals want to find hypothesis-confirming evidence (i.e., “this product is effective, and thus my goal is attainable”), they will be biased in their product information search, favoring sources of information that are more likely to have favorable information. On the other hand, consumers who have a high confidence of goal attainability have less of a motivation to bias their information search because they already believe that their desired end state is within their grasp. Thus, these individuals can afford to be objective, and should reflect this objectivity in their pattern of information search by seeking both favorable and unfavorable information about the goal-relevant product to be evaluated.

**H4:** *In a goal-relevant product evaluation task, low attainment confidence participants will search for more information from product- favorable than from product- unfavorable sources of information, regardless the perceived reliability of the source.*

**H5:** *In a goal-relevant product evaluation task, low attainment confidence participants will search for more information from the product- favorable source than will high attainment confidence participants.*

**Study 3**

The design of the third study closely resembled that of Study 2: the same manipulation of attainment confidence was employed, and the target products were the same. The objective was to observe the pattern of information search used by participants in different attainability confidence conditions, particularly in terms of the type and quantity of
information from different sources (i.e., partial vs. impartial). Thus, all participants had total access to information from two sources: a partial source (i.e., the product’s brochure), and an impartial source (i.e., a newspaper article about the product). In order to track the information search process, a computer program was designed that allowed participants to access product information at will, while it kept a record of the number of pieces of information looked up from each source.

**Method**

The study employed a 2x2 factorial design. Attainability confidence (low vs. high) and product goal relevance (relevant vs. irrelevant) were manipulated as between-participant factors. One hundred and eighty-seven undergraduate students participated in the study for course credit.

**Procedure.** The manipulation of goal attainment uncertainty was the same as the one used in Study 2. After completing the manipulation task, which was again presented as a separate study, participants did a filler task and completed measures for manipulation check. After this, they were introduced to another “separate study” in which they were presented with a product (a memory booster or a joint pain reliever, depending on the goal relevance condition), and asked to evaluate it. The product presentation screen contained only minimal information about the product, limiting the description to a statement of what the product claimed to do. Then, participants were told that they would be free to search for as much or as little product information as they deemed necessary in order to evaluate the product. Participants proceeded to a screen where they could access product information from two different sources: the product’s brochure, and a newspaper article about the product. Participants were free to look up as many pieces of information about the product, from either or both sources, and in any order as they deemed necessary to make their evaluation.
The critical dependent variable to this study was the amount of information looked up from each source. At the end of the experiment participants were debriefed and dismissed.

**Results**

*Manipulation check.* Manipulation checks confirmed that the attainability confidence manipulation was effective: low confidence condition participants were less confident that they would achieve a good academic performance (M=5.08) than were high confidence participants (M=6.23, F(1, 187)=22.58, p<.01). Similarly, low confidence participants felt less capable to attain a good academic performance (M=6.89) than did their high confidence counterparts (M=7.73, F(1, 187)=18.92, p<.01).

*Information search.* In order to test hypothesis 4, a series of t-tests were conducted. Results show support for this hypothesis: indeed, when searching information about the goal-relevant product, low confidence participants looked up more information from the partial source (product brochure, M=8.35) than from the impartial source (newspaper article, M=6.78, t(48)=2.52, p<.05).

To test hypothesis 5, a 2-way ANOVA, with attainability confidence (high vs. low) and goal relevance (relevant vs. irrelevant) as between-participant factors was conducted for amount of information searched from the product’s brochure, and from the newspaper article. In the case of the information searched from the product’s brochure, analyses revealed a main effect of product relevance (F(1,185) = 4.25, p<.05). Indeed, participants evaluating the goal relevant product looked up more pieces of information from the product brochure (M=7.36) than did participants evaluating the goal irrelevant product (M=6.08). This result is not surprising, and it replicates a similar finding reported in study 2: clearly, our student population is more interested in products that relate in some way to academic performance (e.g., a memory booster), than to products that relieve arthritis.
Delving deeper into the results, the analyses revealed a significant interaction for attainability confidence x goal relevance (F(1,185) = 4.55, p<.05). The contrasts analyses showed that, when evaluating the goal relevant product, participants in the low confidence condition looked up more information from the product’s brochure (M=8.35) than did high confidence participants (M=6.40, F(1,186) = 4.89, p<.05). This result gives support to hypothesis 5. Corroborating the proposition that this bias obeys to goal-related motivations, there was no significant difference between confidence conditions when participants evaluated the goal irrelevant product (M_{Low} = 5.71; M_{High} = 6.44; F(1, 186)<1, n.s.).

Summarizing, while participants evaluating the joint pain reliever did not exhibit any difference in information search patterns between confidence conditions, those evaluating the memory and mental focus booster displayed a more biased information search strategy. Results show that while non-motivated participants abide by the principle that outside sources (i.e., newspaper articles) provide more reliable and impartial product information, and therefore favor these sources in their information search, that is not the case when consumers are searching for information about a goal-relevant product, and they have a low confidence regarding goal attainability (i.e., goal-motivated consumers). In fact, participants lacking in goal attainability confidence appear to care more about the product-favorability of the source, than about the reliability or impartiality of the source⁴.

Discussion

All in all, this evidence suggests that consumers who are pursuing a goal, and who lack confidence about the attainability of this goal, bias their search for product information so as to substantiate their preferred belief that the product is effective, thus making their goal

⁴ In order to control for a confound in this study (i.e., source partiality x information valence) a follow-up study was conducted in which the impartial source also contained favorable information. This follow-up further demonstrates that goal-motivated consumers are driven to gather product-favorable information first, and concern themselves with the quality of the source second. A description of this study is included in the longer version of this paper, or upon request.
more attainable. The fact that this bias is only observed for goal-relevant products further suggests that it stems from goal-related processes. Study 1 showed that low confidence about goal attainability motivates consumers toward the formation of positive attitudes regarding products that present themselves as means to goal attainment, particularly when the consumer has few alternative means to goal attainment. Study 2 showed that goal-motivated consumers place lesser diagnosticity on product-unfavorable information than do non-motivated consumers, and for that reason they require larger amounts of negative evidence to conclude that a goal-related product is ineffective. Study 3 provided evidence suggesting that low confidence consumers also display a bias in their search for product information, and that they willingly expose themselves to information that is more likely to substantiate their preferred conclusion that, indeed, the goal-relevant product they are evaluating is an effective means to goal attainment; more importantly, they do this even if it entails using less reliable sources of information.

**Study 4 (Fall 2004)**

One additional study is in the process of being designed to be run in the Fall, 2004. Study 4 will look at how information is processed and assessed by goal-motivated consumers, specifically in terms of (a) the assignment of valence to ambiguous product information; (b) the assessment of strength / quality for favorable vs. unfavorable product information; (c) the generation of support- and counter-arguments; and (d) the recall of information. A basic description of these studies is provided next.

*Assessment of valence and strength.* While previous studies focused on information search and the impact of valenced (favorable vs. unfavorable) information on the amount of information gathered, the fourth study will analyze how consumers assign valence to ambiguous or neutral information. Interestingly, while several studies suggest that adding
nondiagnostic information has positive effects on product attitudes (e.g., Hoch and Ha 1986), others have found that irrelevant information can actually have negative effects (e.g., Meyvis and Janiszewksi 2002). I propose that a factor that may affect whether irrelevant information is evaluated positively vs. negatively is the need for a specific closure: in the particular case of goal-motivated consumers, irrelevant information should be assessed as diagnostic and favorable so as to justify the desired conclusion that the product is effective.

Along the same lines, when goal-motivated consumers encounter clearly valenced information (i.e., patently favorable or unfavorable towards the product), they should assess its quality or strength in such a way so as to compel their preferred conclusion, namely that the product might be effective. Indirect evidence of this was obtained in study 2, in which goal-motivated participants required more pieces of negative information before arriving at an unfavorable evaluation of the product: the absence of the “negativity effect” suggests that negative information is seen as “weaker” or of lesser quality by goal-motivated vs. non-motivated consumers. One of the objectives of study 4 is to provide more direct evidence of this phenomenon, as well as to show that goal-motivated consumers deem product-favorable information as stronger than do non-motivated consumers.

Information elaboration and recall. Because goal-motivated consumers want to perceive that their goals are attainable, and in the case of low confidence individuals, the effectiveness of a goal-related product may be critical to goal attainment, these consumers should be motivated to (a) support arguments that are indicative of product effectiveness, and (b) counter-argue statements that are indicative of product ineffectiveness. These hypotheses are founded on evidence from social psychology (e.g., Kunda 1987) and marketing (e.g., Jain and Maheswaran 2000) suggesting that individuals defend their preferred conclusions by
generating support (counter) arguments in response to conclusion-favorable (-unfavorable) information.

**Method and procedure.** The method and procedure will resemble that of the previous studies: low- and high goal attainability conditions will be created, and participants will be presented with a product evaluation task. Then, previously tested pieces of product information will be shown to the participants, who will assess each product argument in terms of its valence (e.g., positive, negative, or neutral), its diagnosticity (e.g., diagnostic or not diagnostic of product effectiveness), and argument strength. It is hypothesized that low confidence participants will assess neutral information as (a) more positive, (b) more diagnostic, and (c) stronger than will high confidence participants. These results would provide further evidence of the biased effects of the motivation to perceive goals as attainable on product evaluation.

In verbal protocol tasks, participants will be asked to list as many pieces of information as they can recall, and to react to this information by expressing their thoughts about it. Participants’ responses will be analyzed in terms of the amount of product information recalled, comparing recall of favorable vs. unfavorable product arguments. The verbal protocols will be analyzed for the number of support vs. counter-arguments generated in response to favorable and unfavorable information.

Together with studies 1, 2 and 3, study 4 will provide a systematic analysis of the effects and role played by goal-motivated reasoning throughout the product evaluation process, from the acquisition of information, its processing and evaluation, through the judgment and intention formation stages.
Conclusion

This research makes five main contributions to the marketing, consumer behavior, and social psychology literatures: first, it describes instances in which consumer attitude formation is top-down (i.e., driven by personally relevant goals) rather than bottom-up (i.e., driven by product information). Second, the goal-motivated reasoning model can lead to predictions that are quite different from what would be expected from traditional information processing models that assume impartial or non-motivated processing. Third, it identifies a novel set of antecedents to motivated reasoning: goal relevance, and a priori confidence that the goal can be achieved. Fourth, it advances a systematic analysis of the role of motivated reasoning throughout the product evaluation process, from the stages of information acquisition, evaluation, and elaboration processes through the stages of forming judgments and intentions to purchase products and services. Finally, it generates knowledge that can be implemented in the design of marketing communications for consumer goods and services. In particular, it suggests that the role of goal-motivated reasoning as a coping mechanism when goal attainability is uncertain entails the strategic search for goal-affirming information. This behavior can have adaptive consequences, as would be the case when consumers engage and persevere in extensive search for goal-relevant products (e.g., when such products or information about them are hard to find), but it could also lead to maladaptive behaviors that compromise the quality of decisions, as would be the case when the need to conclude that a goal is attainable colludes with a perceived scarcity of goal pathways, and the perceived cost of faulty decisions is understated.

The long-term plan of research will address limitations of the present studies (e.g., generalizability of contexts, both in product area and consumer population), and explore boundary conditions for the phenomenon. It is necessary to delve deeper into the cognitive
processes involved in goal-motivated reasoning, and to explore how moderating factors may affect it. Such moderators include product type (i.e., search, experience, and credence), type of consumption (public vs. private), time horizon of the goal in question (short- vs. long-term), and accountability of the purchase decision.
References


